Environmental Assessment
Determinations and Compliance Findings for HUD-assisted Projects
24 CFR Part 58

Project Information

Project Name: Cliffmore Park

Project Location: 5133 Identity Lane, Fayetteville, Cumberland County, North Carolina 28314

Federal Agency: U.S. Department of Housing & Urban Development (HUD)

Responsible Entity: North Carolina Office of Recovery and Resiliency (NCORR)

Project Administrator: North Carolina Housing Finance Agency (NCHFA)

Grant Recipient: Cliffmore Park LLC

State/Local Identifier: B-19-DV-37-0001 and B-19-DV-37-0002

Preparer: Andrea Gievers, Environmental SME, NCORR

Certifying Officer Name and Title: Laura H. Hogshead, Director, NCORR

Consultant: Atlantic Shores Environmental Services Ltd.

Direct Comments to:

Andrea Gievers
Environnemental SME
NCORR – Community Development
Andrea.L.Gievers@Rebuild.NC.gov
(845) 682-1700

Project Location:

The proposed project site is located at 5133 Identity Lane, Fayetteville, Cumberland County, North Carolina 28314. The proposed project site consists of an approximate 4.1-acre tract of land, and is a portion of the Cumberland County tax parcel ID # 9487-45-3559 (see **Attachment 1**).

Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]:

Cliffmore Park ("proposed project") is a new construction project that will result in 72-unit senior living apartment community for residents aged 55 years and older located in Fayetteville, Cumberland County, North Carolina. The single-building design consists of three floors with two elevators, and a unit mix of 36 one-bedroom units and 36 two-bedroom units. The building incorporates a variety of community amenities throughout each floor and includes multiple seating and lounge areas, multi-purpose room with a kitchenette, computer area, exercise room, tenant storage units, large balconies and a laundry room. Office space for on-site management and maintenance staff, as well as the mailbox kiosk, are to be located within the building. A covered drive-through drop off area is provided at the main entrance. The building will have a secured, controlled access system at the entry along with security cameras. Outdoor amenities will feature a covered porch, patio with picnic tables and grills, a gazebo and seating areas.

Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]:

The Cliffmore Park project will provide affordable, elderly housing to the residents of Fayetteville, North Carolina. More affordable housing options are needed to address the shortage in inventory exacerbated by the effects of the landfall of Hurricanes Matthew (October 8, 2016) and Florence (September 14, 2018). The availability of housing affordable to lower income seniors was reduced by flooding effects of the storms which disproportionately affected older, more affordable housing stock, leaving it uninhabitable. The proposed units will help fulfill the affordable, housing needs of the senior population of the Fayetteville community.

Existing Conditions and Trends [24 CFR 58.40(a)]:

The proposed project site consists of an approximate 4.1-acre tract of land and is a of a portion of Cumberland County tax parcel ID # 9487-45-3559. The proposed project site is primarily vacant, vegetated land located south of Identity Lane. However, an abandoned residence is located on the southwestern side of the site, and is scheduled to be removed by the Seller before acquisition of the property by the Applicant. Based on aerial photographs, this structure has been present on the site for less than three years. Based on visual observations, it appears that this structure was moved to the site from another property. The age of the structure is not known. The proposed project site was used as an agricultural field as far back as 1938. Agricultural activities appeared to cease at the site sometime between 1983 and 1993, when the site became increasingly vegetated. By 2006, the site was cleared of vegetation and a likely former retention pond was present on the southern portion of the site for a short time in 2010. This corresponds to the construction of the southern

adjoining Parkstone Apartments, and is likely a temporary storm water control for the construction.

The adjacent properties to the west and south of the proposed project site consist of multifamily and single-family residential uses. Before the residential construction, the land was primarily used for farming or vacant land. Property north of the proposed project site was formerly agricultural or residential. Currently, a gas station is located off of the northwestern corner of the site. However, groundwater flow in the areas of the proposed project site is expected to flow in a westerly direction. Therefore, releases from this gas station are not likely to impact the proposed project site.

Funding Information

Grant Number	HUD Program	Funding Amount
B-19-DV-37-0001 and B-19-DV-37-0002	CDBG-DR	$5,285,700.00
(Separate 24 CFR 58 Review)	*HOME Match RPP Loan*	*$1,963,000.00*

Estimated Total HUD Funded Amount: $7,248,700.00

Non-HUD Funding Source: Bank Loan
Non-HUD Funding Amount: $1,775,000.00
Non-HUD Funding Source: Federal LIHTC
Non-HUD Funding Amount: $5,332,501.00
Non-HUD Funding Source: Local Government Loan
Non-HUD Funding Amount: $200,000.00
Non-HUD Funding Source: Deferred Developer Fees
Non-HUD Funding Amount: $483,968.00

Estimated Total Non-HUD Funded Amount: $7,791,469.00

Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]**:** $15,040,169.00

Compliance with 24 CFR 50.4, 58.5, and 58.6 Laws and Authorities

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.6		
Airport Hazards 24 CFR Part 51 Subpart D	Yes ☐ No ☒	The proposed project site is not located within 2,500 feet of a civilian, commercial service airport or 15,000 feet of a military airfield. The proposed project is in compliance with this section. *See **Attachment 2** – NEPAssist Map with 15,000-foot buffer showing Airports.*
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes ☐ No ☒	This proposed project is not located in or in proximity to a Coastal Barrier Resource System (CBRS) Unit or Otherwise Protected Area (OPA). Therefore, this proposed project has no potential to impact a CBRS Unit or OPA and is in compliance with the Coastal Barrier Resources Act. *See **Attachment 3** – CBRS Map.*
Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]	Yes ☐ No ☒	According to the FEMA Flood Insurance Rate Map (FIRM) Panel Number 3710948700J dated 1/5/2007, the proposed project site and surrounding area are located in Zone X, outside of the Special Flood Hazard Area. The proposed project site does not include any areas of regulatory floodway. There are no Preliminary FIRMs available at the FEMA Flood Map Service Center for the proposed project site. Thus, flood insurance will not be required for the proposed project because all insurable structures will be located in Zone X. While flood insurance may not be mandatory in this instance, HUD recommends that all insurable structures maintain flood insurance under the NFIP. The proposed

		project is in compliance with flood insurance requirements. *See **Attachment 4** – FEMA FIRM and FIRMette.*
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5		
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes ☐ No ☒	According to the EPA Greenbook, the proposed project site is not located in a county in nonattainment or maintenance status for any criteria pollutants. The construction and operation of the facility is exempted from NC State air quality permit requirements under 15A NCAC 02Q.0102(d) since emissions will be below the established thresholds. Thus, the proposed project's emissions are automatically considered de minimis (40 CFR § 93.153(c)(2)) and the proposed project is considered compliant with the State Implementation Plan. The proposed project would not exceed de minimis emissions levels for federal general conformity purposes (40 CFR § 93.153(c)(2)). The proposed project constructs a senior, affordable housing structure with amenities. The proposed project will not generate significant levels of vehicular traffic. Construction-related activities (land clearing, grading) can cause short-term exposures to sensitive receptors from particulate matter (PM 10) such as fugitive dust and emissions from construction equipment. Mitigation measures for dust control will be implemented to reduce potential impacts to air quality during construction. The proposed project will conform to NC Air Quality Management regulations during and following construction. The contractor will use Best Management Practices (BMPs) to reduce fugitive dust generation and diesel emissions. BMPs can include wetting the grading site during dry conditions; maintaining vegetative cover as much as possible around cleared areas; a water truck to stabilize potential dust during high traffic times or high wind days on heavily-travelled access roads and storage areas; and construction vehicles and machinery operating at reduced speeds to reduce soil disturbance and fugitive dust potential. BMPs to mitigate the generation of emissions during construction include limiting use of vehicles and other machinery to construction hours only and removal once construction is completed.

		Based on the EPA's Radon Zone Map, the proposed project site is located within Zone 3 with predicted average indoor radon screening levels less than 2 pCi/L (Low Potential) (see Attachment). Due to the low potential for elevated indoor radon levels, no additional steps are required for radon mitigation. Therefore, there will be no significant impact to air quality from the proposed project. The operation of the proposed project following the completion of construction activities will not increase emissions. Any air quality impacts would be short-term and localized during construction, and no significant adverse impacts to air quality are anticipated. Thus, the proposed project is in compliance with this section. *See **Attachment 5** – EPA Greenbook and EPA NC Radon Zone Map. See also, Recent Updates: Federal Register Notices Published or Effective After October 31, 2022 | Green Book | US EPA https://www3.epa.gov/airquality/greenbook/adden.html.*
Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)	Yes ☐ No ☒	The proposed project involves new construction and is located in a coastal zone, but it has been determined to be consistent with the State coastal management program. The attached coastal zone map depicts the proposed project site location relative to the nearest coastal zone. Therefore, the NC Division of Coastal Management (NC DCM) was contacted to determine whether the proposed project is consistent with the State coastal zone management program's consistency criteria. NC DCM reviewed the proposed project information submitted pursuant to the management objectives and enforceable policies of Subchapters 7H and 7M of Chapter 7 in Title 15A of the North Carolina Administrative Code, and concurred that the proposed activity is consistent with North Carolina's approved coastal management program. NC DCM's correspondence and email determination are attached. The proposed project is in compliance with the Coastal Zone Management Act.

		*See **Attachment 6** – Coastal Zone Management Maps and DCM Correspondence including response from Daniel Govoni, Federal Consistency Coordinator, dated 1/28/22.*
Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes ☐ No ☒	A site inspection was performed on the proposed project site and no hazards were identified. The site is primarily vacant, vegetated land located south of Identity Lane. However, an abandoned residence is located on the southwestern side of the site. Based on aerial photographs, this structure has been present on the site for less than three years. Based on visual observations, it appears that this structure was moved to the site from another property. The age of the structure is unknown, but it is scheduled to be removed by the Seller before acquisition of the property by the Applicant. The structure should be inspected and tested for Lead-based Paint (LBP) and asbestos-containing materials (ACM) prior to removal/ demolition. All LBP and ACM debris will be properly disposed of in a NC DWM approved landfill facility in accordance with applicable regulations. Lead-based Paint (LBP) inspection and abatement must be done by NC HHCU certified LBP firms and professionals. The activities must conform with all applicable federal, State and local laws, regulations and procedures regarding LBP including, but not limited to, HUD's LBP regulations in 24 CFR Part 35; OSHA (29 CFR 1926.62); EPA regulations (40 CFR Part 745); and LBP Hazard Management Program (Article 19, N.C. Gen. Stat. § 130A-453; 10A NCAC 41C .0800). A NC LBP Abatement Permit Application might be required. The NC Department of Health and Human Services and Asbestos Hazard Management Program handles asbestos control and NC asbestos abatement procedure. Asbestos inspection and the removal of regulated ACM must be done by NC-accredited asbestos professionals in accordance with all applicable federal, State and local laws, regulations and procedures. The activities must conform to Article 19, N.C. Gen. Stat. § 130A-444-451, the National Emission Standard for Hazardous Air Pollutants (NESHAP, 40 CFR Part 61, Subpart

		M) pertaining to demolition and renovation in 40 CFR 61.145, NESHAP pertaining to waste disposal in 40 CFR 61.150, Occupational Safety and Health Act of 1970, Pub. L. 91-596, 84 Stat. 1590, 29 U.S.C. § 651, et seq., as amended (OSHA), Asbestos Standard for Construction 29 CFR 1926.1101, OSHA 29 CFR 1910, NC OSHA 13 N.C.A.C. 7C .0101, Transportation under 49 CFR 173.1090, and North Carolina Solid Waste Laws. An Asbestos Permit Application and Demolition Notification (DHHS 3768) must be submitted to the Health Hazards Control Unit (HHCU) of the NC Department of Health & Human Services Division of Public Health, prior to demolition in compliance with 15 A NCAC 20.1110 (a)(1). If the ACM removal is greater than 3,000 square feet, 1,500 linear feet, or 656 cubic feet in a public area, then a design, project monitoring plan, and (transmission electron microscopy) TEM clearance might be required under 10A NCAC 41C .0607. The proposed project site is not identified on a list of Superfund National Priorities or Comprehensive Environmental Response Superfund National Priorities or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) List, or equivalent State list compiled by the US EPA. There are no federal Superfund sites, Brownfield sites, Toxic Release Inventory sites, water dischargers (NPDES) or air emission facilities located within a one-mile radius of the proposed project site according to NEPAssist. The NC Division of Waste Management (DWM) Site Locator Tool does not identify a toxic or solid waste landfill (including pre-regulatory landfill sites) within 3,000 feet of the proposed project site (see **Attachment 7**). According to NC DEQ DWM comment, there are two Superfund Section sites located within one mile of the proposed project site which are Pre-regulatory Landfills (see **Attachment 7**). The Cumberland County Cliffdale Landfill (ID# NCD980502900) was a municipal landfill closed in 1983 and located at 7583 Lowell Harris Road near residential housing. In 1995, the Cliffdale Landfill was removed from CERCLIS by EPA. It is located approximately 4,250 feet southwest of the proposed project site. The Bones Creek Cumberland County Landfill (ID#

		NONCD0000733) was closed in 1975 and is situated near residential housing. It is located approximately 4,250 feet east of the proposed project site, near Town Creek Drive. According to the NC DEQ DWM Site Locator Tool, there are several facilities listed within a one-mile radius of the proposed project site. Two (Walmart and Anderson Cleaners) are Hazardous Waste Sites (RCRA) in NEPAssist located within a one-mile radius of the proposed project site. The Refuel 151 Active UST Site located at 8385 Cliffdale Road is reviewed in the Phase I ESA as *Alco Food Store,* and according to DWM does not have a reported petroleum release. Releases from this property would not be expected to impact the subject site based on a westerly groundwater flow direction in the site area. The Walmart Neighborhood Market 3411 is located approximately 0.52 mile west of the proposed project site is noted as an Active UST site, and Hazardous Waste Site (RCRA) in NEPAssist. Walmart is categorized as a Very Small Quantity Generator (VSQG) with no violations identified in the last three years according to the ECHO Facility Report. Thus, Walmart as a VSQG is not expected to impact the proposed project site. UST Incidents were noted at The Pantry 456 and The Pantry 3031 which are reviewed in detail in the Phase I ESA. The Pantry 456 (aka Circle K) Active UST and UST Incident site is located approximately 1,220 feet east/ northeast of the proposed project site, is not expected to impact the proposed project site based on the distance, and the DEQ File Review is discussed further in the Phase I ESA. A Land Use Restriction is noted for The Pantry 3031, located approximately 930 feet east/ northeast of the proposed project site, has a No Further Action Status and is discussed in the Phase I ESA. The Pantry 3031 is currently the A&A New and Used Tire Shop and three 12,000-gallon single-walled tanks were removed on April 12, 2005. The Anderson Dry Cleaners is located approximately 2,000 feet east of the proposed project site, and Hazardous Waste Site (RCRA) in NEPAssist. Based on documented groundwater flow, releases from this dry cleaner are not expected to impact the site and is addressed further in the Phase I ESA. In addition, this proposed project will connect to a municipal water supply and sewer service.

		Also, according to NC DWM Underground Storage Tank (UST) Division, a search of the UST Section databases found no reported petroleum releases known to exist at this location nor any records of registered USTs at this location. The closest known UST facility is the Refuel 151 which has no reported petroleum releases. Applicant will notify the proper regional office if "orphan" USTs are discovered during any excavation operation. (See **Attachment 25** State Environmental Clearinghouse [SCH] Comments.) The Phase I ESA report identified and evaluated other potential hazards and concluded that there are no on-site recognized environmental conditions (RECs). Based upon the site inspection, NEPAssist and NC DWM search results, and the Phase I ESA, there were no hazards identified that could affect the health and safety of occupants or conflict with the intended utilization of the subject property. The proposed project is in compliance with contamination and toxic substances requirements. *See **Attachment 7** – Phase I ESA, NC DEQ DWM Maps and Reports, NEPAssist EPA Facilities Maps and Reports, and **Attachment 25** – State Environmental Clearinghouse Comments.*
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes ☐ No ☒	The proposed project site consists of vacant, former agricultural land with an abandoned residence (see site photos and Phase I ESA). According to the USFWS Information for Planning and Consultation (IPaC) Official Species List prepared for the proposed project site, there are a total of eight threatened, endangered, or candidate species identified that may be present in the proposed project area. However, based on the USFWS IPaC and Critical Habitat Mapper results, there are no critical habitats identified within the proposed project area. Cumberland County is not identified as a Northern Long-eared Bat known presence county. In addition, the NC Natural Heritage Program (NC NHP) database query documented element occurrences within a one-mile radius of the proposed project site. A query of the NC NHP database resulted in no records for important

		natural communities, natural areas, and/ or conservation/ managed areas within the proposed project boundary. No additional species (than in the IPaC) were listed on the NC NHP Database Query Report. ASE did not observe any of the above-listed species during the site visit. In addition, the proposed project site does not contain suitable habitat for these species and is located near a densely developed area. Therefore, ASE has determined that the project will have No Effect on all of the above-listed species. A Self-certification Letter and 10-step Project Review Package were prepared and submitted to the USFWS Raleigh Ecological Services Field Office on July 13, 2022. USFWS has not contacted NCORR for additional information. **The Grant Recipient will update this determination annually for multi-year activities**. The Self-Certification Letter dated June 23, 2022 states that "we concur with the 'no effect' *or* 'not likely to adversely affect' determinations for proposed and listed species and proposed and designated critical habitat; the 'may affect' determination for Northern long-eared bat; *and/or* the 'no Eagle Act permit required' determinations for eagles. Additional coordination with this office is not needed" (see **Attachment 8**). *See **Attachment 8** – USFWS Raleigh FO Self-certification Letter, 10-step Project Review Package, and NCORR Correspondence.*
Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	Yes ☐ No ☒	The Phase I ESA conducted at the proposed project site did not identify explosive or flammable hazards at the site or in the vicinity of the site. Additionally, the site reconnaissance did not identify such hazards. Above-ground Storage Tanks (ASTs) were not identified within one mile of the proposed project site during the site visit or review of aerial maps and photographs. A completed Thermal and Explosives Hazards Worksheet indicates that such hazards are not associated with the proposed project site or surrounding properties. The proposed project is in compliance with explosive and flammable hazard requirements.

		*See **Attachment** 7 – Phase I ESA site visit photographs, aerial maps, NEPAssist documentation, NC DEQ DWM documentation, and EDR in Phase I Appendix. See **Attachment 9** Thermal and Explosive Hazards Worksheet.*
Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	Yes ☐ No ☒	The proposed project includes activities that could potentially convert agricultural land to a non-agricultural use, but an exemption applies. According to 7 CFR Part 658.2(a) "[f]armland does not include **land already committed to urban development**." Further, the regulation defines "[f]armland already in urban development" as land "identified as an 'urbanized area' (UA) on the Census Bureau Map." According to NEPAssist, the proposed project site is located in an UA according to data derived from the 2019 U.S. Census Bureau TIGER/Line Urban Areas. Urbanized Areas are contiguous areas of populations greater than 50,000. The proposed project is exempt from the Farmlands Protection Act and is in compliance with this section. *See **Attachment 10** – NEPAssist Urban Areas Map and USDA NRCS Soil Survey.*
Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	Yes ☐ No ☒	According to the FEMA Flood Insurance Rate Map (FIRM) Panel Number 3710948700J dated 1/5/2007, the proposed project site and surrounding area are located in Zone X, outside of the Special Flood Hazard Area. The proposed project site does not include any areas of regulatory floodway. There are no Preliminary FIRMs available at the FEMA Flood Map Service Center for the proposed project site. Thus, the proposed project is in compliance with this section. *See **Attachment 11** – FEMA FIRM and FIRMette.*
Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800	Yes ☐ No ☒	The North Carolina State Historic Preservation Office (NC SHPO) was consulted if the proposed project would have adverse effects on historic or archeological resources at the site. NCORR submitted the proposed project to the NC SHPO on March 22, 2022, and the NC SHPO responded on May 4, 2022 "that the project as proposed will not have an effect on any historic structures" and there are "no known archaeological sites within the proposed project area."

		According to the HUD Tribal Directory Assessment Tool (TDAT), the Catawba Indian Nation is the only federally-recognized tribe with interests in Cumberland County, North Carolina. On January 13, 2022, NCORR consulted with the Catawba Indian Nation for discussion of historic properties in the proposed project area that may have religious and cultural significance. On February 22, 2022, the Catawba Indian Nation's Tribal Historic Preservation Office (THPO) responded that "[t]he Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**" The proposed project is in compliance with Section 106. On January 28, 2022, NCORR sent a project notification letter to the State-recognized Lumbee Tribe of North Carolina. A response was not received. *See **Attachment 12** – SHPO Response, NCORR SHPO Submission, Catawba Indian Nation Response, NCORR Catawba Indian Nation Submissions, and Lumbee Tribe Project Notification Letter.*
Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B	Yes ☐ No ☒	The proposed project does not involve siting a noise generating facility. During a Noise Screening, noise generators were identified near the proposed project site. According to the NEPAssist Map, there are three airports, P K Airpark, Pope Army Airfield, and Fayetteville Regional Airport within a 15-mile buffer from the proposed project site. According to the operations data from the Federal Aviation Administration (FAA) 5010 airport records, P K Airpark (5W4) is not considered a noise source with the potential to affect the proposed project site. Fayetteville Regional Airport (FAY) has more than 9,000 air carrier operations annually (9,541), so a noise contour map was reviewed. Pope Army Airfield (POB) did not have operations data, so a noise contour map was reviewed. The noise contour maps show the proposed project site is not affected by these noise sources (FAY and POB).

		As also shown on the National Transportation Noise Map, the proposed project site is well outside of the radius of noise exposure from airports. The FAA 5010 airport records, distance maps, and applicable Airport Noise Worksheets and Noise Contour maps are included in **Attachment 13**. According to the NEPAssist Map, there are no railroads within 3,000 feet of the proposed project site. According to the NEPAssist Map and the NC DOT Annual Average Daily Traffic (AADT) Mapping Application, Cliffdale Road is the only "major" road with NC DOT AADT data available located within 1,000 feet of the proposed project site. A noise assessment was completed for the site using a Noise Assessment Location (NAL) for the closest part of the residential building (353 feet conservatively). Using the HUD Day/Night Noise Level (DNL) Calculator, the highest noise level for the closest NAL was 65 decibels (dB). According to Mr. Keith Dixon, NC DOT State Traffic Forecast Engineer, there is no growth projected between 2022 and 2045, and likely a decrease when the Fayetteville Loop opens. According to HUD regulation 24 CFR 51.103(c), a DNL equal to or less than 65 dB is within the **Acceptable** range. Short-term construction work will adhere to local noise control standards/regulations. Construction noise will be limited to daytime hours, Monday through Friday, except in emergency situations. Construction equipment will be required to meet local sound control requirements. *See **Attachment 13** – Noise Assessment documentation.*
Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	Yes ☐ No ☒	There are no Sole Source Aquifers located in the state of North Carolina, according to the EPA. The proposed project is in compliance with Sole Source Aquifer requirements. *See **Attachment 14** – EPA Sole Source Aquifer Map.*
Wetlands Protection	Yes ☐ No ☒	According to the USFWS National Wetland Inventory (NWI) Mapper there are no wetlands on

Executive Order 11990, particularly sections 2 and 5		the proposed project site. During the site visit, no wetlands (including HUD-defined wetlands) were identified within the boundaries of the proposed project site. The proposed project is in compliance with this section. *See **Attachment 15** – USFWS NWI Map and **Attachment 1.5** Site Visit Photographs.*
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes ☐ No ☒	According to the attached U.S. National Park Service Nationwide Rivers Inventory (NRI) Map and National Wild and Scenic River System Map, the proposed project site is not located in proximity (within 1 mile) to wild and scenic rivers. The proposed project is in compliance with this section. *See **Attachment 16** – Nationwide Rivers Inventory Map and National Wild and Scenic River System Map.*
ENVIRONMENTAL JUSTICE		
Environmental Justice Executive Order 12898	Yes ☐ No ☒	According to the NCDEQ Community Mapping System, the proposed project site is located within NC DEQ's Potentially Underserved Block Groups 2019. According to the EPA Environmental Justice Screening and Mapping Tool (EJSCREEN), within one-mile of the proposed project site there is a 76% minority population and 41% low-income population which are both higher than State and national averages. The proposed project does not facilitate development which would result in disproportionate adverse environmental impacts on low-income or minority populations. Rather, the proposed project will develop the site with affordable housing for low-income seniors in the local area. No adverse environmental impacts were identified in the proposed project's environmental review. The proposed project is in compliance with EO 12898. *See **Attachment 17** – NCDEQ Community Mapping, EJSCREEN Summary Report, EJSCREEN ACS Summary Report, EJSCREEN Census 2010 Summary Report, and CDC Report.*

Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27]

Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

Impact Codes: Use an impact code from the following list to make the determination of impact for each factor.

(1) Minor beneficial impact
(2) No impact anticipated
(3) Minor Adverse Impact – May require mitigation
(4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

Environmental Assessment Factor	Impact Code	Impact Evaluation
LAND DEVELOPMENT		
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	2	A zoning confirmation letter for the proposed project site was received from Heather Eckhardt, Fayetteville Zoning Administrator. According to the letter, "[t]his property is currently zoned NC – Neighborhood Commercial and MR-5/CZ – Mixed Residential/Conditional Zoning. Section 30-4.A.2 of the City of Fayetteville Unified Development Ordinance allows for multi-family dwellings in the MR-5 zoning district. The southern portion of the property (approximately 4.1 acres) was rezoned to MR-5/CZ to allow a 72 unit apartment building to be built on the southern portion of the property." According to the City of Fayetteville website, the MR-5 zoning district "[a]ccommodates a wide variety of residential housing types at moderate to high densities." The rezoning of the proposed project site was completed in prior years, and no recent City zoning meetings were required. The June 2020 Future Land Use Plan includes as LU-7 Encourage a Mix of Housing Types for All Ages and Incomes and under 7.3 Work with Non-profits to Increase Affordable and Workforce Housing. The proposed project will be in conformance with the City's overall land use, and zoning and plan goals for the site and neighborhood. *See **Attachment 18** – Zoning Confirmation Letter and Zoning Map.*

Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	2	As determined from the USGS Topographic Map, Cliffdale, North Carolina Quadrangle dated 2013, the proposed project site is generally flat and lies at an approximately elevation of 250 feet above the National Geodetic Vertical Datum (NGVD). Erosion was not noted. A Geotechnical Engineering Report was completed by Terracon Consultants, Inc. Since the site appears generally flat, grading is assumed to include 3 foot or less cuts and fills. Subsurface conditions consist of existing fill (likely a backfilled former retention pond) within the southern portion of the site containing sandy lean clay or silty sand with trace organics (roots, odor) overlying loose to medium dense silty/clayey sand and intermediate layers of medium stiff to very stiff sandy lean clay. Earthwork is anticipated to include clearing and grubbing, excavations, and fill placement. Any fill required will come from a permitted North Carolina quarry from virgin material. Further discussion on the recommended earthwork is in the Geotechnical Engineering Report in **Attachment 19**. The proposed project will have a stormwater permit, erosion and sedimentation control plan, and a Stormwater Pollution Prevention Plan (SWPPP). The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion and sedimentation control plan will be required if one or more acres are to be disturbed. Plan must be filed with and approved by applicable Regional Office (Land Quality Section) at least 30 days before beginning activity. A NPDES Construction Stormwater permit (NCG010000) is also usually issued should design features meet minimum requirements. According to NC DEQ, "NPDES - permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters. The proposed project will comply with 15A NCAC 2H .0126 - NPDES Stormwater Program which regulates three types of activities: Industrial, Municipal Separate Storm Sewer System and Construction activities that disturb over or equal to one acre. A Sedimentation and Erosion Control Plan was approved (**Attachment 19**), and a Certificate of Coverage will be obtained prior to initiating the project. *See **Attachment 19** Erosion Control Plan Approval, Geotechnical Engineering Report, and USDA NRCS Soil Survey, and **Attachment 25** – State Environmental Clearinghouse Comments.*
Hazards and Nuisances including Site Safety and Noise	2	A site inspection was performed on the proposed project site and no hazards were identified. The site is primarily vacant, vegetated land located south of Identity Lane. However, an abandoned residence is located on the southwestern side of the site. Based on aerial photographs, this structure has been present on the site for less than three years. Based on visual observations, it appears that this structure was moved to the site

		from another property. The age of the structure is unknown, but it is scheduled to be removed by the Seller before acquisition of the property by the Applicant. The structure should be inspected and tested for LBP and ACM prior to removal/ demolition. All LBP and ACM debris will be properly disposed of in a NC DWM approved landfill facility in accordance with applicable regulations (see Contamination and Toxic Substances section). The Phase I ESA report identified and evaluated other potential hazards and concluded that there are no on-site recognized environmental conditions (RECs). Based upon the site inspection, NEPAssist and NC DWM search results, and the Phase I ESA, there were no hazards identified that could affect the health and safety of occupants or conflict with the intended utilization of the subject property. The proposed project is in compliance with contamination and toxic substances requirements. Construction-related activities (land clearing, grading) can cause short-term exposures to sensitive receptors from particulate matter (PM 10) such as fugitive dust and emissions from construction equipment. Mitigation measures for dust control will be implemented to reduce potential impacts to air quality during construction. The proposed project will conform to NC Air Quality Management regulations during and following construction. The contractor will use BMPs to reduce fugitive dust generation and diesel emissions. BMPs can include wetting the grading site during dry conditions; maintaining vegetative cover as much as possible around cleared areas; a water truck to stabilize potential dust during high traffic times or high wind days on heavily-travelled access roads and storage areas; and construction vehicles and machinery operating at reduced speeds to reduce soil disturbance and fugitive dust potential. BMPs to mitigate the generation of emissions during construction include limiting use of vehicles and other machinery to construction hours only and removal once construction is completed. (See Clean Air Act section and **Attachment 5**.) According to the analysis completed by using the HUD DNL Calculator for the project data, noise abatement is not required. Short-term construction work will adhere to local noise control standards/regulations. Construction noise will be limited to daytime hours, Monday through Friday, except in emergency situations. Construction equipment will be required to meet local sound control requirements. (See Noise Abatement and Control section.) *See **Attachment 7** – Phase I ESA, NC DEQ DWM Map and Reports, NEPAssist EPA Facilities Map and Report, **Attachment 5** – Clean Air documentation, **Attachment** 13 –*

		Noise Assessment documentation, and ***Attachment 25*** *– State Environmental Clearinghouse Comments*
Energy Consumption	2	The proposed project will be constructed to meet Energy Star certifications pursuant to NCHFA requirements. The proposed project will have minimum energy consumption requirements. The proposed project will cause an increase in energy use as compared to the current vacant use. However, the proposed project will be connected into an existing grid and will not require additional infrastructure. Therefore, the proposed project is anticipated to have minimal impact to energy consumption.
Environmental Assessment Factor	**Impact Code**	**Impact Evaluation**
SOCIOECONOMIC		
Employment and Income Patterns	2	Completion of the proposed project will create seventy-two (72) senior living apartment units and associated infrastructure. New jobs will be created during operations and temporary construction as a result of this development. Increased commerce will be generated from the occupants for local merchants. Senior residents of the proposed Cliffmore Park will be generally past the income-earning age. The proposed project will not adversely impact traffic during construction or operation.
Demographic Character Changes, Displacement	2	The proposed project will not deny any population within the local community potential for growth. The proposed project will not act as an isolation feature within the local area or community. The proposed project will not significantly impact the demographics of the local community. Local institutions (churches, community centers, elderly centers, etc.) will not be adversely impacted by the development. The facility will aid in providing housing options to the elderly. The site contains vacant land with an abandoned residence. Therefore, involuntary displacement of persons/ populations will not occur.

Environmental Assessment Factor	**Impact Code**	**Impact Evaluation**
COMMUNITY FACILITIES AND SERVICES		
Educational and Cultural Facilities	2	Since the proposed project is a senior living facility restricted to residents age 55 and older, it will not have an adverse impact on educational facilities. In addition, many residents are expected to come from within the community. Cultural facilities within the community should not be adversely impacted by this 72-unit senior housing development.
Commercial Facilities	1	The proposed project will not have an adverse effect on local commercial facilities. A grocery store is located approximately 1,500 feet east of the proposed project site. Additional commercial and retail establishments are located within one mile of the proposed project site. The Cliffdale Road/

		Enforcement Drive Shell Station Public transportation stop is located approximately 300 feet north of the proposed project site. There are ample commercial facilities located in the proposed project site vicinity to meet the day-to-day needs of prospective residents. An increase of the local population in the area will bring economic value to the neighboring businesses. *See **Attachment 20** – Commercial Facilities Map.*
Health Care and Social Services	2	The proposed project is not likely to have an adverse effect on the local health care and social services of the area. The proposed project is located within close proximity to several local health care and social service providers, including Hoke Hospital less than five miles to the southwest (see **Attachment 21**). An increase in tax base will support this and other services. A Social Services Certification, dated December 15, 2021 was completed by Cumberland County DSS Director, Heather Skeens. Ms. Skeens states appropriate social services are available and adequate for the proposed project and will not (assumed intended) be adversely affected by this project. It is anticipated that many residents of the proposed project will come from within the community and are potentially already served by these health care and social services. Therefore, there should only be a negligible increase in demand for services. *See **Attachment 21** – Health Care and Social Services Map and Social Services Certification.*
Solid Waste Disposal / Recycling	2	Solid waste disposal and recycling will be available to the site by GFL Environmental Inc. An appropriate quantity of dumpsters will be provided to meet the proposed project's demands. The certification letter has not been received from the solid waste department, but if a response is received it will be added to the environmental review record. Construction debris will be taken to an appropriate, legally compliant landfill. The NC DEQ DWM Solid Waste Section (Section) notes that "for any planned or proposed projects, it is recommended that during any land clearing, demolition and construction, the responsible party and/or its contractors would make every feasible effort to minimize the generation of waste, to recycle materials for which viable markets exist, and to use recycled products and materials in the development of this project where suitable. Any waste generated by and of the projects that cannot be beneficially reused or recycled must be disposed of at a solid waste management facility permitted by the Division. The Section strongly recommends that the responsible party require all contractors to provide proof of proper disposal for all generated waste to permitted facilities." In the State Environmental Clearinghouse Comments, the NC

		DEQ notes that "[a]ny open burning associated with subject proposal must be in compliance with 15 A NCAC 2D.1900." Thus, the proposed project is unlikely to have an adverse effect on the solid waste and recycling services in the area. *See **Attachment 25** – State Environmental Clearinghouse Comments.*
Wastewater / Sanitary Sewers	2	Municipal sewer lines are present in the proposed project site area. The proposed project will connect to the municipal sewer. According to the City of Fayetteville Public Works Commission (PWC) Letter, the PWC sanitary sewer system is available to serve this proposed development and the Rockfish Water Reclamation Facility currently has sufficient treatment capacity (see **Attachment 22**). According to NC DEQ through the State Environmental Clearinghouse, a permit is required, if applicable, to construct and operate, sewer extensions involving gravity sewers, pump stations and force mains discharging into a sewer collection system. In addition, a permit to construct and operate wastewater treatment facilities, non-standard sewer system extensions and sewer systems that do not discharge into state surface waters. The necessary permits are being obtained. Thus, the proposed project is unlikely to have an adverse effect on the waste water/ sanitary sewers services in the area. *See **Attachment 22** – City of Fayetteville PWC Letter. Also, see **Attachment 25** – State Environmental Clearinghouse Comments.*
Water Supply	2	Municipal water lines are present in the site area. The proposed project will connect to the municipal water supply. The proposed project will use lead-free pipes, fittings, fixtures and/ or solder. According to the City of Fayetteville PWC, the PWC water system is available to serve this proposed development. The following comments were received from the NC DEQ through the State Environmental Clearinghouse: "Plans and specifications for the construction, expansion, or alteration of a public water system must be approved by the Division of Water Resources/ Public Water Supply Section prior to the award of a contract or the initiation of construction as per 15A NCAC 18C .0300 et. seq." Also, all public water supply systems must comply with state and federal drinking water monitoring requirements. If existing water lines will be relocated during the construction, plans for the water line relocation must be submitted to the Division of Water Resources/ Public Water Supply Section. NC DEQ also mentions a well construction permit might be required, and any abandonment of wells must be done in accordance with Title 15A. Subchapter 2C.0100. The necessary permits are being obtained. Thus, the proposed project is unlikely to have an adverse effect on the water supply services in the area.

		*See **Attachment 22** – Architect Letter on lead-free items and City of Fayetteville PWC Letter. Also, see **Attachment 25** – State Environmental Clearinghouse Comments.*
Public Safety - Police, Fire and Emergency Medical	2	An Emergency Medical Service Certification, dated November 29, 2021, was completed by John Bowen, Battalion Chief of the Fayetteville Fire Department. Mr. Bowen stated that emergency medical service is available and adequate for the proposed project as the average response time of 2 minutes falls within the average community response time of 5 minutes, 12 seconds. Mr. Bowen expressed concern that the proposed project may interfere with apparatus access to those apartment complexes if the intersection of Deer Trail/ Identity or Enforcement/ Identity are blocked *during construction*. An Emergency Medical Certification, dated November 29, 2021, was completed by David Grovdahl, Cumberland County EMS Chief. Mr. Grovdahl stated that Fire Protection is available and adequate for the project as the average response time of 8 minutes falls within the average community response time of 10 minutes and will not be adversely affected by this proposed project (assumed intended). Mr. Grovdahl also stated that multi-floor dwellings need a minimum of one service/ commercial elevator to accommodate patient transfer to ground level. The site plans indicate that the proposed single building will have two elevators to accommodate residents. The Onslow County Sheriff's Office stated in a Law Enforcement Certification that they have no objection to the construction project and police service is available and adequate. It is anticipated that many residents of the proposed project will come from within the community and there will be a negligible increased demand for services. These services are available and adequate for the proposed project. Based on the users of the project being elderly, public safety is not anticipated to be adversely impacted as result of the proposed project. *See **Attachment 23** – Emergency Medical Certifications and Law Enforcement Certification.*
Parks, Open Space and Recreation	2	There are currently over 35 parks, open space, and recreational areas in Fayetteville. The closest park is Lake Rim Park located approximately 1.8 miles south of the proposed project site. The site development will not adversely impact any local parks, open space or recreational facilities. The proposed development has outdoor amenities including a covered porch, patio with picnic tables and grills, a gazebo and seating areas. Since most of the residents are expected to come from within the community and given the small size of the development, it is not anticipated that the proposed senior living facility will adversely impact parks, open space and recreation areas.

Transportation and Accessibility	2	Public transportation (Fayetteville Area Transit System - FAST) is available along Cliffdale Road. The closest stop to the site is the Cliffdale Road/ Enforcement Drive Shell Station located approximately 300 feet north of the site. The proposed project is not anticipated to adversely impact traffic during temporary construction or operation. Further, there will likely be group transportation available to the residents through the facility.

Environmental Assessment Factor	Impact Code	Impact Evaluation
NATURAL FEATURES		
Unique Natural Features, Water Resources	2	According to the NC NHP Database Query Report, there is one Natural Area (Fort Bragg central section) and three Managed Areas located within one mile of the proposed project location. The three Managed Areas include: City of Fayetteville Open Space, Cumberland County Open Space, and Fort Bragg Military Reservation. Due to the distance from these Natural and Managed Areas to the proposed project site, there are no impacts anticipated from the proposed project. No unique natural features are located on or near the proposed project site that will be adversely affected by the proposed development (see **Attachment 8**). According to the USFWS NWI Mapper, there are no wetlands on the proposed project site. During the site visit, wetlands were not identified within the boundaries of the proposed project site. According to NC DEQ DWR, "[c]ompliance with the T15A 02H .0500 Certifications are required whenever construction or operation of facilities will result in a discharge into navigable water as described in 33 CFR part 323" (see **Attachments 15** and **25**). The proposed project will have a stormwater permit, erosion and sedimentation control plan, and a SWPPP. The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion and sedimentation control plan will be required if one or more acres are to be disturbed. Plan must be filed with and approved by applicable Regional Office (Land Quality Section) at least 30 days before beginning activity. A NPDES Construction Stormwater permit (NCG010000) is also usually issued should design features meet minimum requirements. According to NC DEQ, "NPDES - permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters. The proposed project will comply with 15A NCAC 2H .0126 - NPDES Stormwater Program which regulates three types of activities: Industrial, Municipal Separate Storm Sewer System and Construction activities that disturb over or equal to one acre. A Sedimentation and Erosion Control Plan was approved, and a

		Certificate of Coverage will be obtained prior to initiating the project. (See **Attachments 19** and **25**.) The proposed project activities will be completed in accordance with all applicable federal, State, and local laws, regulations, and permit requirements and conditions. Permits required for this proposed project shall be obtained before commencing work and appended to the environmental review record when received from the permitting agencies. *See **Attachment 8** – ESA, **Attachment 15** – Wetlands Protection, **Attachment 19** – Soil Suitability documentation, and **Attachment 25** – State Environmental Clearinghouse Comments.*
Vegetation, Wildlife	2	Based on review of species and habitats, the proposed project is not likely to adversely affect any federally listed endangered or threatened species, their formally designated critical habitat, or species currently proposed for listing under the Endangered Species Act of 1973. ASE has determined that the project will have No Effect on all of the IPaC and NC NHP identified species. A Self-certification Letter and 10-step Project Review Package were prepared and submitted to the USFWS Raleigh Ecological Services Field Office on July 13, 2022. USFWS has not contacted NCORR for additional information. Native plants will be utilized during grass planting and landscaping activities at the site and follow the City of Fayetteville guidelines (see Landscaping Plan in **Attachment 1**). *See **Attachment 8** – Endangered Species documentation,*
Environmental Justice EA Factor	2	According to the NC DEQ Community Mapping System, the proposed project site is located within NC DEQ's Potentially Underserved Block Groups 2019. According to the EPA EJSCREEN Report, within one-mile of the proposed project site there is a 76% minority population and 41% low-income population which are both higher than State and national averages. The proposed project will not subject the community to environmental conditions that may have disproportional effects on low-income or minority populations. Rather, this proposed project will provide much needed safe, affordable housing options within the community following a decrease in housing inventory after Hurricanes Matthew and Florence. The proposed project does not site a nuisance or hazard in a potential environmental justice area, but rather provides affordable housing to seniors who need it. Thus, the proposed project does not contribute to or promote environmental injustice.

		*See **Attachment 17** – Environmental Justice documentation and **Attachment 7** – Contamination and Toxic Substances documentation.*
Air Quality EA Factor	2	According to the EJSCREEN Report for the proposed project in **Attachment 17**, the site is: 18% in US for Particulate Matter 2.5 (ug/m3), 41% for Ozone (ppb), under 50% for 2017 Diesel Particulate Matter (ug/m3), and 80-90% for 2017 Air Toxics Cancer Risk (lifetime risk per million) and 2017 Air Toxics Respiratory HI. Air quality is not a significant concern at the site even with exacerbation of effects from Climate Change. According to the EPA, "[c]limate change can impact air quality and, conversely, air quality can impact climate change. Changes in climate can result in impacts to local air quality. Atmospheric warming associated with climate change has the potential to increase ground-level ozone in many regions, which may present challenges for compliance with the ozone standards in the future. The impact of climate change on other air pollutants, such as particulate matter, is less certain, but research is underway to address these uncertainties. Emissions of pollutants into the air can result in changes to the climate. Ozone in the atmosphere warms the climate, while different components of particulate matter (PM) can have either warming or cooling effects on the climate. For example, black carbon, a particulate pollutant from combustion, contributes to the warming of the Earth, while particulate sulfates cool the earth's atmosphere." (See https://www.epa.gov/air-research/air-quality-and-climate-change-research.) There will be no significant impact to air quality from the proposed project. The operation of the proposed project following the completion of construction activities will not increase emissions. Any air quality impacts would be short-term and localized during construction, and no significant adverse impacts to air quality are anticipated. *See **Attachment 17** – Environmental Justice documentation and **Attachment 5** and Clean Air Section.*
Climate Change EA Factor EO 14008	2	According to NOAA, climate change is likely increasing the intensity of tropical cyclones. The proposed project building site is not located within a Special Flood Hazard Area or a coastal area. No portions of the site are located within 100- or 500-year floodplain. According to the EJSCREEN website's Climate Change Data, the proposed project site has a 0.67 average change in drought (5-year SPEI), no projected coastal flood hazards, no projected 100-year floodplain, no projected sea level rise, the census block group contains 95% properties at wildfire risk in 2022 and 95% properties at wildfire risk in 2052, and the census block group contains 65% properties at flood risk in 2022 and

		69% properties at flood risk in 2052. The data from the EJSCREEN is representative for the area, and lower risk percentiles than some portions of the surrounding area. According to the Climate Mapping For Resilience and Adaptation (CMRA) Tool data for the proposed project site's census tract, there is a relatively moderate risk (National Risk Index Ratings) of Extreme Heat, very low risk of Drought, relatively low risk for Wildfire, relatively moderate risk for Flooding, and very low risk for Coastal Inundation (**Attachment 24**). Thus, the reviewed data does not present any additional significant site concerns. The proposed development will provide much needed senior, affordable housing options within the community. Due to the increased frequency of high intensity storms and the resultant housing inventory shortage, the proposed project site was determined most suitable and necessary for providing the community with new, safe, senior, affordable housing. *See **Attachment 24** – CMRA Hazard Report, https://www.climate.gov/news-features/understandingclimate/climate-change-probably-increasing-intensitytropical-cyclones, https://ejscreen.epa.gov/mapper/, and https://livingatlas.arcgis.com/assessment-tool/home.*
Other Factors	2	No other factors were identified which would be impacted by the proposed project.

Additional Studies Performed:

- *Phase I Environmental Site Assessment, Proposed Cliffmore Apartments, 5133 Identity Lane, Fayetteville, North Carolina,* dated November 18, 2021. Prepared by Atlantic Shores Environmental Services Ltd (ASE).
- *Geotechnical Engineering Report,* dated January 17, 2022. Prepared by Terracon Consultants, Inc.

Field Inspection (Date and completed by)**:**
November 16, 2021, by Cheryl Moody of ASE.

List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]

Attachments:

- US Fish and Wildlife Letter dated January 26, 2022
- US Fish and Wildlife Official Species list
- CAMA Consistency email dated January 28, 2022

- SHPO letter dated January 28, 2022
- Certifications
    - City of Fayetteville Fire and EMS – December 1 and November 29, 2021
    - Cumberland County Health Department – December 15, 2021
    - Cumberland County Social Services – December 15, 2021
    - Onslow County Sheriff's Office – November 29, 2021
- Email from Fayetteville Transit dated November 29, 2021
- Email from Wenonah G. Haire of the Catawba Nation dated February 22, 2022
- Cliffmore Park Apartments Preliminary Drawings
- Tight Line Designs Certification of no lead pipes – dated December 30, 2021
- Firm Map 3710948700J dated January 5, 2007
- USDA Cumberland County Custom Soils Report
- EJ Screen Report (Version 2020)
- HUD DNL Calculator
- Thermal Explosive Worksheet
- Cliffmore Park Phase 1 Environmental Site Assessment dated November 18, 2021
- Morton & Morton Design Services, PLLC. Traffic Study

Sources:

- City of Fayetteville Sheriff's Office
    - Tabitha Sportsman tabithasportsman@fayettevillenc.gov
- EMS Cumberland County
    - Garry Crumpler gcrumpler@co.cumberland.us
- EMS City of Fayetteville
    - Scott Bullard scottbullard@fayettevillenc.gov
- Fayetteville Fire
    - Mike Hill Michaelhill@fayettevillenc.gov
- County Zoning
    - Not in jurisdiction and deflected to the City. This letter has been sent and the email chain for the County has been saved as the response.
- City Zoning
    - Zoning Confirmation Letter dated March 17, 2021
    - https://www.fayettevillenc.gov/city-services/development-services/planning-zoning/udo-administrative-manual/zoning-regulations
    - https://www.fayettevillenc.gov/city-services/development-services/planning-zoning/planning-zoning/studies-and-plans/2040-comprehensive-plan
    - Future Land Use Plan (fayettevillenc.gov) June 2020
- Transit
    - FAST is only the public transit provider and cannot answer the questions we have submitted
- Cumberland County Health Dept
    - Dr. Jennifer Green jgreen@co.cumberland.nc.us

- Catawba Nation
    - Wenonah G. Haire, Tribal Historic Preservation Officer
- Solid Waste
    - Amanda Badger abadger@co.cumberland.nc.us
- County Social Service County
    - director@ccdssnc.com
- Cumberland Parks and Recreation
    - michaelgibson@fayettevillenc.gov
- County School Board
    - aliciachisolmboe@ccs.k12.nc.us
- Water and Sewer
    - whansen@jacksonvillenc.gov
- City Zoning
    - taurusfreeman@fayettevillenc.gov
- Cumberland Transit
    - ifarrakhan@co.cumberland.nc.us
- Fayetteville Transit
    - Randy Hume randyhume@fayettevillenc.gov
- ASTM Standard E1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.
- Aerial Photographs dated 2018 and 2020. Google Earth Maps.
- Aerial Photograph dated 2021. Cumberland County GIS.
- The EDR Aerial Photo Decade Package (years 1938, 1940, 1950, 1964, 1966, 1971, 1976, 1983, 1993, 1999, 2006, 2010, 2014) prepared by Environmental Data Resources, Inc., dated September 29, 2021.
- The EDR Radius Map Report with Geocheck, prepared by Environmental Data Resources, Inc. dated September 29, 2021
- Email Interview: Fayetteville Clerks Office/Fayetteville Fire Department
- Cumberland County Assessor's Office
- Cumberland County Registry of Deeds.
- City of Fayetteville Public Works Center.
- Aqua Water Services of Fayetteville.
- EJSCREEN, https://www.epa.gov/ejscreen
- EPA Green Book, https://19january2017snapshot.epa.gov/green-book_.html
- https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=f5e463a929ed430095e0a17ff803e156
- City of Fayetteville.
- City of Fayetteville Affordable Housing Study dated June 28, 2021, https://www.fayettevillenc.gov/home/showpublisheddocument/18296/637613441485217450
- NCDEQ Records Laserfiche.
- United States Fish and Wildlife Service
- Fayetteville Police Department

- Fayetteville Solid Waste & Landfill
- Fayetteville Public Transportation
- Fayetteville Parks and Recreation
- Fayetteville Planning & Permitting
- Cumberland County Emergency Medical Services
- Cumberland County Department of Health
- Cumberland County Schools
- Cumberland County Social Services
- Water and Sewer Authority
- CAMA
- National Wetland Online mapping
- SHPO

List of Permits To Be Obtained (later identified permits will be added to the ERR)**:**

All applicable federal, State and local permits will be identified and obtained prior to starting construction. Permits that might be required include, but are not limited, to:

NPDES Construction Stormwater permit (NCG010000) – *In Process*
NC DEQ Erosion Control Permit – *Approved Plan 11/1/22*
City of Fayetteville, Storm Water permit – *Submitted to City*
City of Fayetteville, Planning approval – *Submitted to City*
PWC, Potable Water system extension permit – *Submitted 7/13/22*
PWC, Sanitary Sewer system extension permit – *Submitted 7/13/22*
NC DOT, Driveway permit – *Submitted 7/13/22*

Public Outreach [24 CFR 50.23 & 58.43]**:**

The FONSI/NOI-RROF will be published in the Fayetteville Observer on December 1, 2022 and sent via Federal Express and email to Interested Agencies, Parties and Individuals.

A NEPA Scoping Package with project details was submitted by NCORR and NCHFA to the NC State Environmental Clearinghouse for agency review from March 18, 2022 to April 18, 2022, see **Attachment 25**. The FONSI/NOI-RROF was also submitted to the NC State Environmental Clearinghouse for agency review and comment. (All comments received are uploaded with this review under the EA Factors section.)

Cumulative Impact Analysis [24 CFR 58.32]**:**

The proposed project will be a senior, affordable housing complex that will provide new, safe housing that is needed in the area according to the City of Fayetteville Affordable Housing Study dated June 28, 2021. The proposed project will assist the City of Fayetteville in providing affordable housing for seniors in the local community. The proposed project site was found to be a very suitable site for the development with no on-site or nearby recognized environmental conditions that would adversely affect the proposed project use or its occupants. No negative cumulative impacts to the environment were discovered as part of this Environmental Assessment. This site was found to be appropriate for much needed senior, affordable housing with minimal adverse environmental impacts and close proximity to community services. This project will have positive cumulative socioeconomic and aesthetic impacts on the neighborhood by promoting a neighborhood with mixed-income residents. It is expected that the proposed project will increase the City's tax base and improve a vacant lot with an abandoned residence. There are no adverse cumulative impacts identified for this proposed project on natural resources, socioeconomic conditions, cultural/ historic resources, or quality of life for residents of these neighborhoods. The proposed project will be in conformance with the City's overall land use, zoning and plan goals for the site and neighborhood. The benefits of this proposed project to the local economy and low-income, senior community cannot be understated.

Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]:

No suitable alternative sites were identified in the target area that met the specific needs of the proposed development. This chosen site was determined to be suitable since it was already zoned correctly to build affordable senior housing. In addition, the proposed project site has close proximity and availability of existing utility services, and nearby access to basic goods and services.

No Action Alternative [24 CFR 58.40(e)]:

The No Action Alternative means that the proposed project would not be undertaken. Under the No Action Alternative, affordable senior housing would not be constructed at this vacant site. This affinity group of the City of Fayetteville would remain unserved or underserved with respect to affordable housing options. The City would need to find other options to address the shortage in senior housing inventory, which has been exacerbated by the effects of recent hurricanes.

Summary of Findings and Conclusions:

The preceding Statutory Checklist and Environmental Assessment Checklist, and the discussion below, document that the proposed project work will comply with regulations in 24 CFR part 58 and that there are no direct or cumulative adverse environmental impacts anticipated as a result of the proposed project.

Mitigation Measures and Conditions [40 CFR 1505.2(c)]:

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Any change to the approved scope of work will require re-evaluation by the Certifying Officer for compliance with NEPA and other laws and Executive Orders.

This review does not address all federal, state, and local requirements. Acceptance of federal funding requires recipient to comply with all federal, state and local laws. Failure to obtain all appropriate federal, state, and local environmental permits and clearances may jeopardize federal funding. Guidelines, recommendations, and requirements identified during the State Clearinghouse inter-agency review shall be considered and required, where applicable.

Law, Authority, or Factor	Mitigation Measure
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Construction-related activities (land clearing, grading) can cause short-term exposures to sensitive receptors from particulate matter (PM 10) such as fugitive dust and emissions from construction equipment. Mitigation measures for dust control will be implemented to reduce potential impacts to air quality during construction. The proposed project will conform to NC Air Quality Management regulations during and following construction. The contractor will use Best Management Practices (BMPs) to reduce fugitive dust generation and diesel emissions. BMPs can include wetting the grading site during dry conditions; maintaining vegetative cover as much as possible around cleared areas; a water truck to stabilize potential dust during high traffic times or high wind days on heavily-travelled access roads and storage areas; and construction vehicles and machinery will operate at reduced speeds to reduce soil disturbance and fugitive dust potential. BMPs to mitigate the generation of emissions during construction include limiting use of vehicles and other machinery to construction hours only and removal once construction is completed.
Unique Natural Features /Water Resources **Soil Suitability / Slope/ Erosion / Drainage and Storm Water Runoff**	According to NC DEQ DWR, "[c]ompliance with the T15A 02H .0500 Certifications are required whenever construction or operation of facilities will result in a discharge into navigable water as described in 33 CFR part 323" (see **Attachments 15** and **25**).

DocuSign Envelope ID: CBC8DACF-076B-4D9F-A987-15138D350EEB

	Earthwork is anticipated to include clearing and grubbing, excavations, and fill placement. Any fill required will come from a permitted North Carolina quarry from virgin material. The proposed project will have a stormwater permit, erosion and sedimentation control plan, and a SWPPP. The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion and sedimentation control plan will be required if one or more acres are to be disturbed. Plan must be filed with and approved by applicable Regional Office (Land Quality Section) at least 30 days before beginning activity. A NPDES Construction Stormwater permit (NCG010000) is also usually issued should design features meet minimum requirements. According to NC DEQ, "NPDES - permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters. The proposed project will comply with 15A NCAC 2H .0126 - NPDES Stormwater Program which regulates three types of activities: Industrial, Municipal Separate Storm Sewer System and Construction activities that disturb over or equal to one acre. A Sedimentation and Erosion Control Plan was approved (**Attachment 19**), and a Certificate of Coverage will be obtained prior to initiating the project. The proposed project activities will be completed in accordance with all applicable federal, State, and local laws, regulations, and permit requirements and conditions. Permits required for this proposed project shall be obtained before commencing work and appended to the environmental review record when received from the permitting agencies.

Determination:

☒ **Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]
The project will not result in a significant impact on the quality of the human environment.

☐ **Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]
The project may significantly affect the quality of the human environment.

Preparer Signature: Andrea Sievers Date: 11/28/22

Name/Title/Organization: Andrea Gievers, Environmental SME, NCORR

Certifying Officer Signature: DocuSigned by: Laura H. Hogshead D8561D53476B499... Date: 11/28/2022

Name/Title: Laura H. Hogshead, Director, NCORR

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

ATTACHMENT 1:

Proposed Project Location Maps and Site Plans

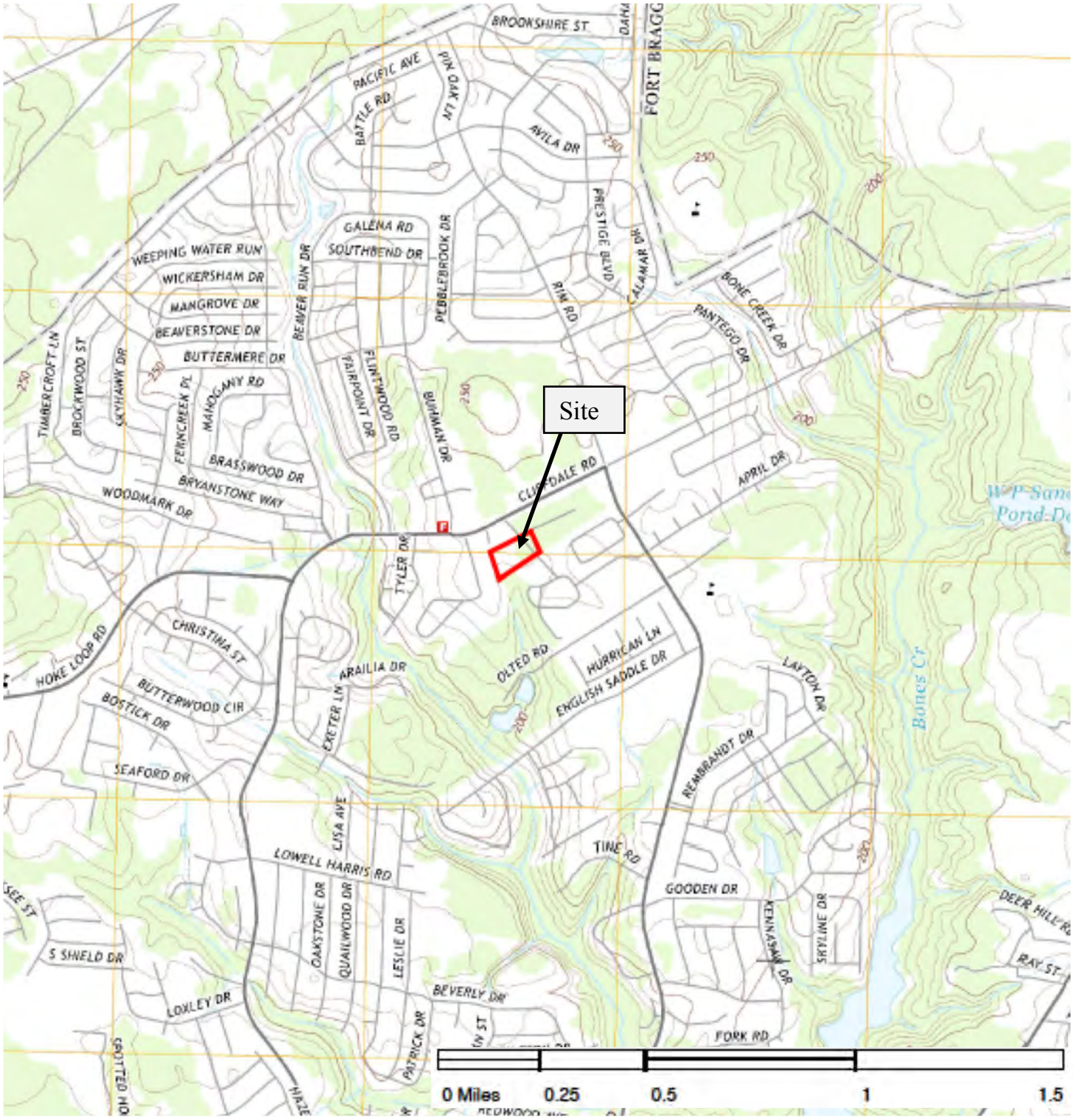


FIGURE 1: TOPOGRAPHIC MAP

Source: USGS Clifdale, North Carolina Quadrangle, 2013.

N

Phase I Environmental Site Assessment
Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
November 2021

0 50 100

FIGURE 2: AERIAL MAP

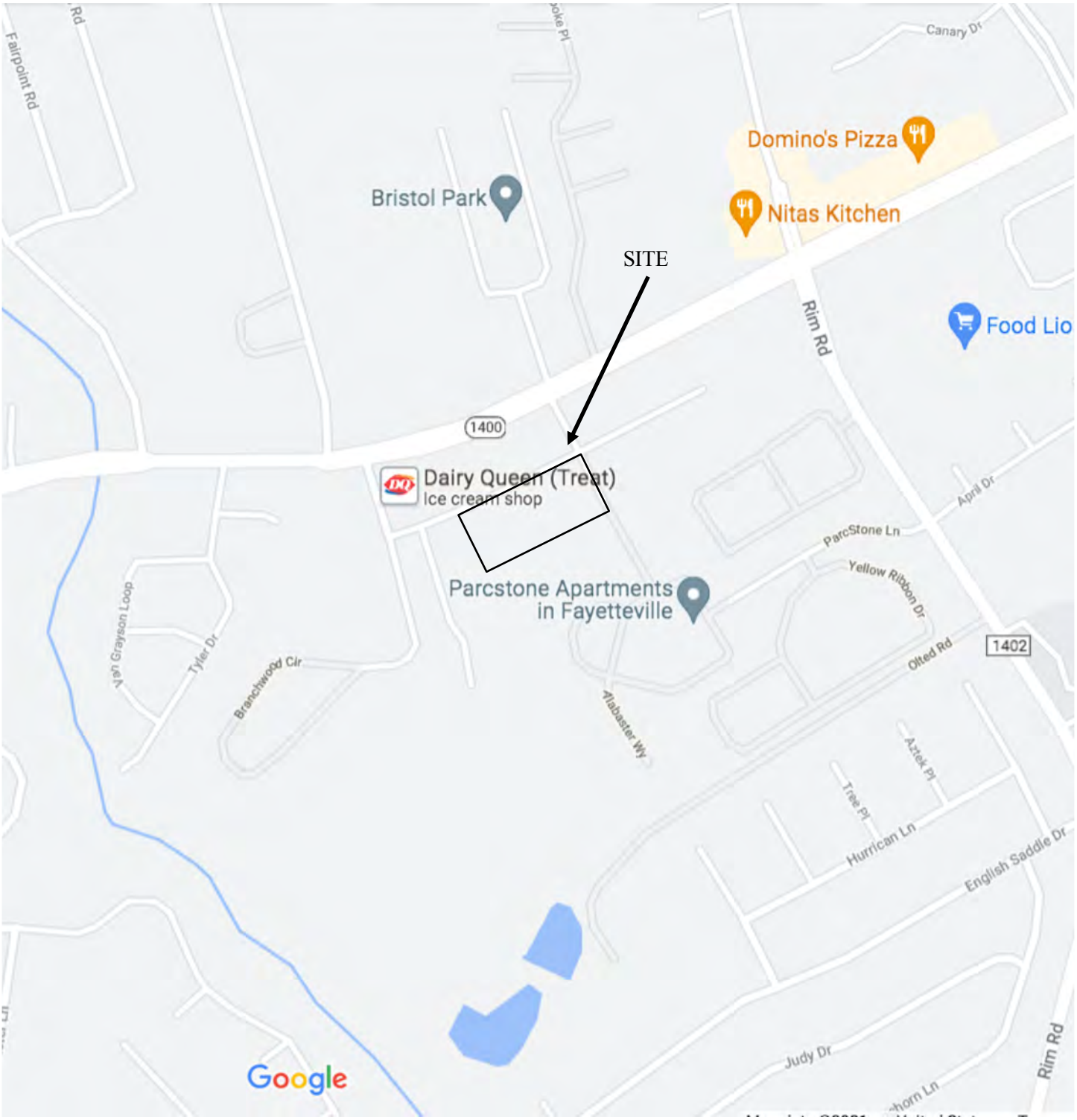
Source: Cumberland County GIS 2021 aerial

N

Phase I Environmental Site Assessment
Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
November 2021



Not to Scale

FIGURE 3: STREET MAP

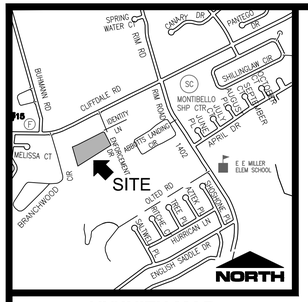
Source: Google Maps

N

Phase I Environmental Site Assessment
Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

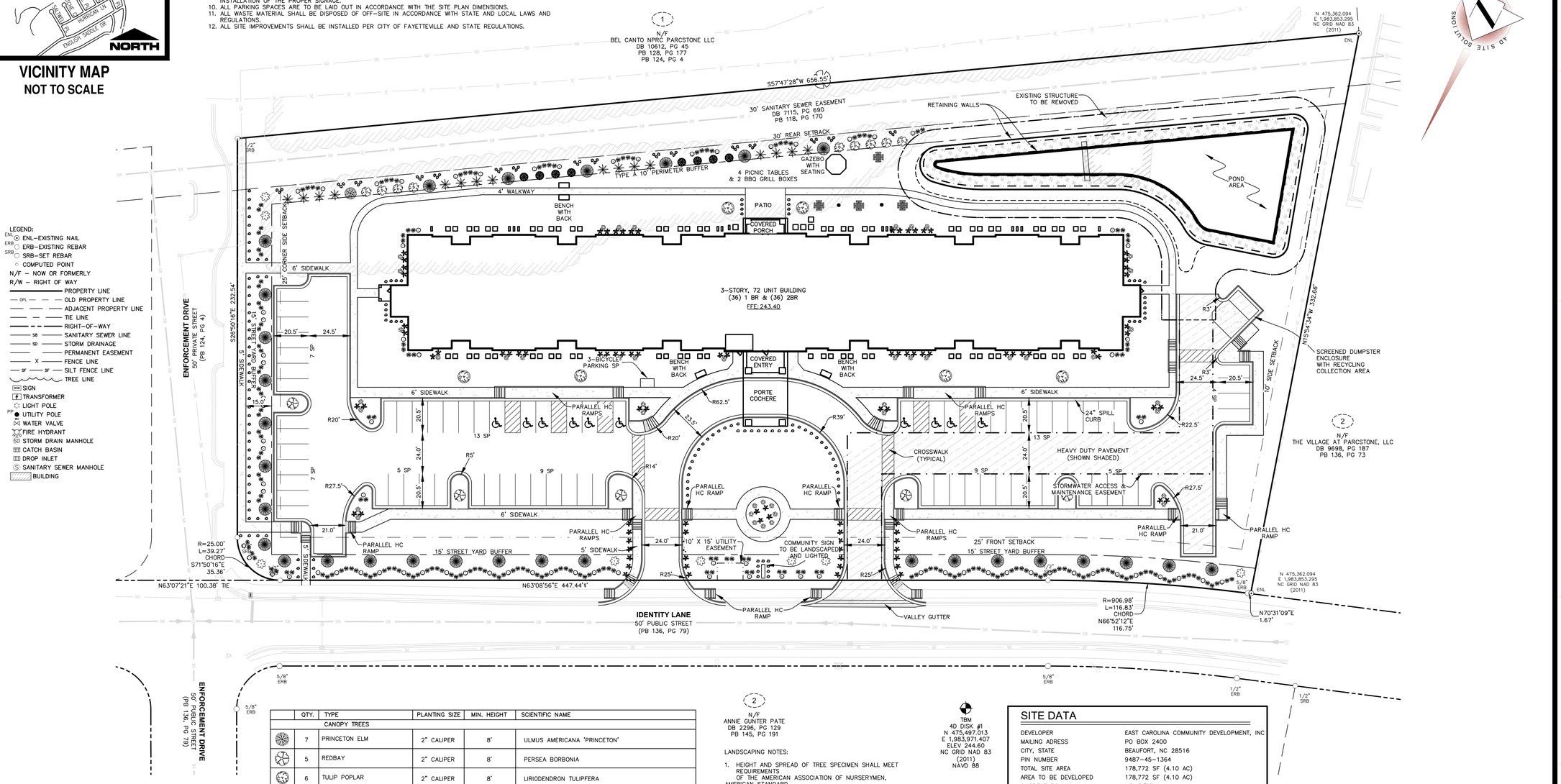
ASE Project No. 1523
November 2021



VICINITY MAP
NOT TO SCALE

SITE NOTES

1. ALL CURB ON THIS SITE IS SPILL CURB UNLESS OTHERWISE NOTED.
2. ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE BENCHMARK AND MUST BE VERIFIED BY THE GENERAL CONTRACTOR.
3. EXISTING UNDERGROUND UTILITIES ARE SHOWN ONLY WHERE EVIDENCE COULD BE FOUND TO VERIFY LOCATION. PRIOR TO CONSTRUCTION OR EXCAVATION OF THE SITE, THE GENERAL CONTRACTOR SHALL VERIFY ALL UTILITY COMPANIES TO VERIFY THE LOCATION OF THEIR RESPECTIVE UTILITIES. ALL DAMAGE INCURRED TO EXISTING UTILITIES DURING CONSTRUCTION SHALL BE REPAIRED AT THE GENERAL CONTRACTOR'S EXPENSE.
4. ASPHALT AND BASE TYPE SHALL BE PER THE DETAILS.
5. HANDICAP RAMPS, SIGNAGE AND PARKING SPACES SHALL BE PROVIDED BY THE CONTRACTOR AND INSTALLED PER FEDERAL ADA AND LOCAL REQUIREMENTS.
6. ALL DIMENSIONS ARE TO THE BACK OF CURB OR TO THE FACE OF SIDEWALK UNLESS OTHERWISE NOTED.
7. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
8. PARKING STALLS MUST BE STRIPED WITH A 4 INCH CONTRASTING STRIPE (YELLOW ON CONCRETE AND YELLOW OR WHITE ON ASPHALT PARKING LOT).
9. HANDICAP PARKING SPACES ARE TO BE DESIGNATED BY BLUE STRIPING AND EITHER A BLUE SYMBOL ON A WHITE BACKGROUND OR A WHITE SYMBOL ON A BLUE BACKGROUND. ALL HANDICAP PARKING STALLS REQUIRE THE INSTALLATION OF THE PROPER SIGNAGE.
10. ALL PARKING SPACES ARE TO BE LAID OUT IN ACCORDANCE WITH THE SITE PLAN DIMENSIONS.
11. ALL WASTE MATERIAL SHALL BE DISPOSED OF OFF-SITE IN ACCORDANCE WITH STATE AND LOCAL LAWS AND REGULATIONS.
12. ALL SITE IMPROVEMENTS SHALL BE INSTALLED PER CITY OF FAYETTEVILLE AND STATE REGULATIONS.



LEGEND:

- ENL–EXISTING NAIL
- ERB–EXISTING REBAR
- SRB–SET REBAR
- COMPUTED POINT
- N/F – NOW OR FORMERLY
- R/W – RIGHT OF WAY
- PROPERTY LINE
- OPL – OLD PROPERTY LINE
- ADJACENT PROPERTY LINE
- TIE LINE
- RIGHT-OF-WAY
- SB – SANITARY SEWER LINE
- SD – STORM DRAINAGE
- PERMANENT EASEMENT
- X – FENCE LINE
- SF – SILT FENCE LINE
- TREE LINE
- SIGN
- TRANSFORMER
- LIGHT POLE
- PP – UTILITY POLE
- WATER VALVE
- STORM DRAIN MANHOLE
- CATCH BASIN
- DROP INLET
- SANITARY SEWER MANHOLE
- BUILDING

	QTY.	TYPE	PLANTING SIZE	MIN. HEIGHT	SCIENTIFIC NAME
		CANOPY TREES			
	7	PRINCETON ELM	2" CALIPER	8'	ULMUS AMERICANA 'PRINCETON'
	5	REDBAY	2" CALIPER	8'	PERSEA BORBONIA
	6	TULIP POPLAR	2" CALIPER	8'	LIRIODENDRON TULIPFERA
	24	AMERICAN HOLLY	2" CALIPER	6'	ILEX OPACA
		UNDERSTORY TREES			
	8	JAPANESE CHERRY	1.5" CALIPER	8'	PRUNUS SERRULATA
	8	TRIDENT MAPLE	1.5" CALIPER	8'	ACER BUERGERANUM
	16	PAPERBACK MAPLE	1.5" CALIPER	8'	ACER GRISEUM
	9	FLOWERING DOGWOOD	1.5" CALIPER	8'	CORNUS FLORIDA
		SHRUBS			
	182	DWARF YAUPON	2 GAL.	18"	ILEX VOMITORIA
	210	NANDINA	2 GAL.	18"	NANDINA DOMESTICA
	79	LITTLE RICHARD ABELIA	2 GAL.	24"	ABELIA GRANDIFLORA
	94	LOROPETALUM	5 GAL.	18"	LOROPETALUM
	45	SUNSHINE LIGUSTRUM	3 GAL.	18"	LIGUSTRUM SINENSE

2
N/F
ANNIE GUNTER PATE
DB 2296, PG 129
PB 145, PG 191

LANDSCAPING NOTES:

1. HEIGHT AND SPREAD OF TREE SPECIMEN SHALL MEET REQUIREMENTS OF THE AMERICAN ASSOCIATION OF NURSERYMEN, AMERICAN STANDARD FOR NURSERY STOCK.
2. SHRUBBERY IS TO BE PLANTED AT LEAST 30" FROM CURBING AND FROM END OF PARKING SPACES TO PREVENT DAMAGE FROM CAR OVERHANG.
3. SHRUBS INSTALLED AS VEHICULAR USE SCREENING ARE TO BE MAINTAINED AT A MIN. HEIGHT OF 36"; MIN. INSTALLATION HEIGHT IS 24".
4. SITE LIGHTING PLANS REQUIRE LIGHTS TO BE A MIN. OF 15 FEET FROM TREES. ANY ADJUSTMENTS IN THE FIELD NEED TO COMPLY WITH THIS STANDARD AND BE APPROVED BY CITY STAFF.
5. EACH TREE MUST BE PLANTED SUCH THAT THE ROOT FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE ROOT FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE ROOT FLARE WITH MULCH.
6. DO NOT PLACE MULCH IN CONTACT WITH THE TREE TRUNK. KEEP MULCH A MIN. OF 4" AWAY FROM THE TRUNK BASE.
7. ANY CHANGES TO THE PROPOSED PLANT SCHEDULE MUST BE APPROVED BY THE DESIGNER OF RECORD AND THE CITY. IN CASES WHERE THE PLANT SCHEDULE ONLY INCLUDES THE PLANT TYPE AND DOES NOT INCLUDE THE PLANT SPECIES, THE CONTRACTOR SHALL BE REQUIRED TO SUBMIT TO THE CITY FOR APPROVAL A DETAILED PLANT SCHEDULE AND ASSOCIATED PLANTING PLAN PREPARED BY A PROFESSIONAL KNOWLEDGEABLE ABOUT PLANT MATERIAL AND DESIGN, PRIOR TO PROCEEDING WITH INSTALLATION.

*THIS LANDSCAPING PLAN IS THE MINIMUM REQUIRED TO MEET WITH THE CITY OF FAYETTEVILLE UDO. THE OWNER OR DEVELOPER IS ENCOURAGED TO CONSULT WITH A LANDSCAPE ARCHITECT IN ORDER TO DEVELOP A PLAN THAT IS MORE IN DEPTH THAN THE MINIMUM REQUIREMENTS. THIS PLAN IS FOR PERMITTING PURPOSES ONLY.

TBM
4D DISK #1
N 475,497.013
E 1,983,971.407
ELEV 244.60
NC GRID NAD 83 (2011)
NAVD 88

SITE DATA

DEVELOPER	EAST CAROLINA COMMUNITY DEVELOPMENT, INC
MAILING ADRESS	PO BOX 2400
CITY, STATE	BEAUFORT, NC 28516
PIN NUMBER	9487-45-1364
TOTAL SITE AREA	178,772 SF (4.10 AC)
AREA TO BE DEVELOPED	178,772 SF (4.10 AC)
CURRENT ZONING	MR-5/CZ
EXISTING USE	VACANT
PROPOSED USE	APARTMENTS
DISTURBED/DENUDED AREA	3.9 AC
OPEN SPACE	
REQUIRED (10% OF SITE)	17,877 SF (0.41 AC)
PROVIDED	21,501 SF (0.49 AC)
ACTIVE	21,501 SF (0.49 AC)
MR-5 SETBACKS REQUIRED:	
FRONT & CORNER SIDE	25 FT
SIDE	10 FT
REAR	30 FT
IMPERVIOUS:	
BUILDING	28,289 SF
PAVEMENT	49,392 SF
TOTAL	77,681 SF
PARKING:	
PROPOSED (INCLUDING HANDICAP)	72
PROPOSED BICYCLE PARKING	3

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

4Dsite solutions
civil engineering | land surveying
409 Chicago Drive, Suite 112, Fayetteville, NC 28306
office | 910-426-6777 fax | 910-426-5777 licenses number | C-2354
www.4Dsitesolutions.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027462 SCOTT BROWN
08-23-22

REVISIONS

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

PROJECT NAME

CLIFFMORE PARK APARTMENTS

SITE & LANDSCAPE PLAN

CLIENT

EAST CAROLINA COMMUNITY DEVELOPMENT, INC

PO Box 2400
Beaufort, North Carolina 28516
Phone: (252) 504-3996

PROJECT INFORMATION

DESIGNED BY:	SEAN
DRAWN BY:	BRETT
CHECKED BY:	SCOTT
PROJECT NUMBER:	1151

DRAWING SCALE

HORIZONTAL: 1"=30'

DATE RELEASED

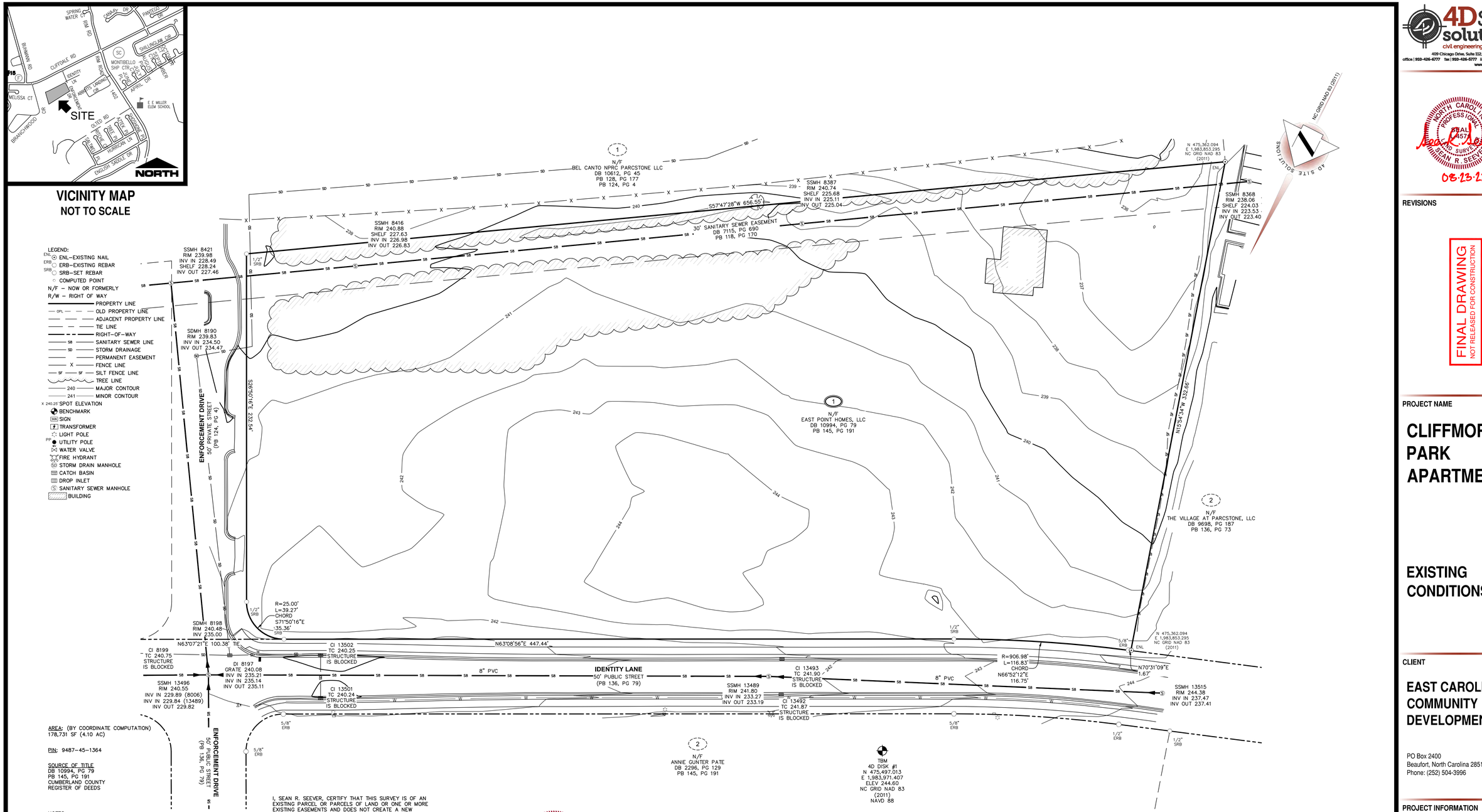
AUGUST 23, 2022

SHEET NUMBER

C-2.0

I:\Quadrant Construction\1151-Cliffmore Park Apartments\CIVIL 3D\DWG\1151-DESIGN.dwg • C2.0 SI • 10.11.2022 8:47:48 PM

VICINITY MAP
NOT TO SCALE



AREAS: (BY COORDINATE COMPUTATION)
178,731 SF (4.10 AC)

PIN: 9487–45–1364

SOURCE OF TITLE
DB 10994, PG 79
PB 145, PG 191
CUMBERLAND COUNTY
REGISTER OF DEEDS

NOTES:
1. ALL DISTANCES SHOWN ARE HORIZONTAL GROUND DISTANCES UNLESS OTHERWISE NOTED.
2. COMBINED SCALE FACTOR: 0.99987837
LOCALIZATION POINT N: 475,497.013 E: 1,983,971.407
CONTROL ESTABLISHED VIA NORTH CAROLINA GEODETIC SURVEY VIRTUAL REFERENCE SYSTEM.
3. THE HORIZONTAL AND VERTICAL CONTROL FOR THIS SURVEY WERE ESTABLISHED USING THE NORTH CAROLINA GEODETIC SURVEY VIRTUAL REFERENCE SYSTEM.
4. LINES NOT SURVEYED ARE SHOWN AS DASHED LINES FROM INFORMATION REFERENCED ON THE FACE OF THIS MAP.
5. NONCONFORMING STRUCTURES HAVE NOT BEEN CREATED BY THIS SURVEY.
6. THIS SURVEY WAS DONE WITHOUT BENEFIT OF A TITLE SEARCH AND IS BASED ON REFERENCED INFORMATION SHOWN HERE ON. OTHER DOCUMENTS OF RECORD MAY EXIST WHICH COULD AFFECT THIS PROPERTY. NO RESPONSIBILITY IS ASSUMED BY THIS SURVEYOR FOR ANY CONDITIONS WHICH MAY PRESENTLY EXIST BUT ARE UNKNOWN OR REFERENCED HERE ON, SUCH AS BUT NOT LIMITED TO HAZARDOUS WASTE MATERIALS, EASEMENTS, CEMETERIES, AND FLOOD AREAS.
7. LOCATIONS OF ALL UNDERGROUND UTILITIES LYING WITHIN THIS MAPPED AREA MAY NOT BE SHOWN ON THIS PLAN. DEVELOPERS OR CONTRACTORS SHOULD NOT ONLY MAKE SUBSURFACE INVESTIGATIONS BUT SHOULD ALSO ALLOW FOR CONTINGENCIES WHICH MIGHT ARISE BY REASON OF ENCOUNTERING UNRECORDED LINES OR OF LINES BEING IN DIFFERENT LOCATIONS THAN INDICATED ON THIS SURVEY.
8. THIS PROPERTY LIES WITHIN FLOOD ZONE "X" ACCORDING TO MAP # 3710948700J OF THE FLOOD INSURANCE RATE, DATED JANUARY 5, 2007.

I, SEAN R. SEEVER, CERTIFY THAT THIS SURVEY IS OF AN EXISTING PARCEL OR PARCELS OF LAND OR ONE OR MORE EXISTING EASEMENTS AND DOES NOT CREATE A NEW STREET OR CHANGE AN EXISTING STREET.

PROFESSIONAL LAND SURVEYOR – L–4571

I, SEAN R. SEEVER, CERTIFY THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEED DESCRIPTION RECORDED IN BOOK _____, PAGE _____ OR OTHER REFERENCE SOURCE _____); THAT THE BOUNDARIES NOT SURVEYED ARE INDICATED AS DRAWN FROM INFORMATION IN BOOK _____, PAGE _____ OR OTHER REFERENCE SOURCE _____; THAT THE RATIO OF PRECISION OR POSITIONAL ACCURACY IS 1:10,000+; AND THAT THIS MAP MEETS THE REQUIREMENTS OF THE STANDARDS OF PRACTICE FOR LAND SURVEYING IN NORTH CAROLINA (21 NCAC 56. 1600). WITNESS MY HAND AND SEAL THIS 23 DAY OF AUGUST, 2022.

PROFESSIONAL LAND SURVEYOR – L–4571

NORTH CAROLINA PROFESSIONAL SEAL 4571 LAND SURVEYOR SEAN R. SEEVER
08.23.22

I, SEAN R. SEEVER, CERTIFY THAT THE CONTROL FOR THIS SURVEY WAS ESTABLISHED FROM AN ACTUAL GPS SURVEY UNDER MY SUPERVISION. THIS GPS SURVEY WAS PERFORMED TO C–2II FGCC SPECIFICATIONS RTK GPS WITH VRS FIELD PROCEDURES WERE USED. THE COORDINATES WERE OBTAINED THROUGH A GRID TO GROUND ADJUSTMENT USING THE COMBINED SCALE FACTOR SHOWN HEREON. THIS SURVEY WAS PERFORMED ON NOVEMBER 25, 2020 USING TWO TRIMBLE 5700 RECEIVERS.

PROFESSIONAL LAND SURVEYOR – L–4571

I, SEAN R. SEEVER, CERTIFY THAT THIS CLASS "C" TOPOGRAPHIC MAP WAS DRAWN FROM AN ACTUAL SURVEY PERFORMED UNDER MY DIRECT SUPERVISION AND THAT IT MEETS OR EXCEEDS THE NORTH CAROLINA ADMINISTRATIVE CODE 21.56.1605 AND 21.56.1606. WITNESS MY HAND AND SEAL THIS 23 DAY OF AUGUST, A.D., 2022.

PROFESSIONAL LAND SURVEYOR – L–4571

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

4Dsite solutions
civil engineering | land surveying
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office | 910-426-6777 fax | 910-426-5777 licenses number | C-2354
www.4Dsitesolutions.com

NORTH CAROLINA PROFESSIONAL SEAL 4571 LAND SURVEYOR SEAN R. SEEVER
08.23.22

REVISIONS

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

PROJECT NAME

CLIFFMORE PARK APARTMENTS

EXISTING CONDITIONS

CLIENT

EAST CAROLINA COMMUNITY DEVELOPMENT, INC

PO Box 2400
Beaufort, North Carolina 28516
Phone: (252) 504-3996

PROJECT INFORMATION

SURVEYED BY:	BOBBY
DRAWN BY:	BRETT
CHECKED BY:	JIMMY
PROJECT NUMBER:	1151

DRAWING SCALE

HORIZONTAL: 1"=30'

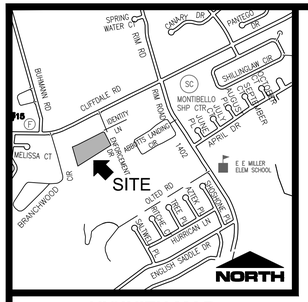
DATE SURVEYED

DECEMBER 22, 2020

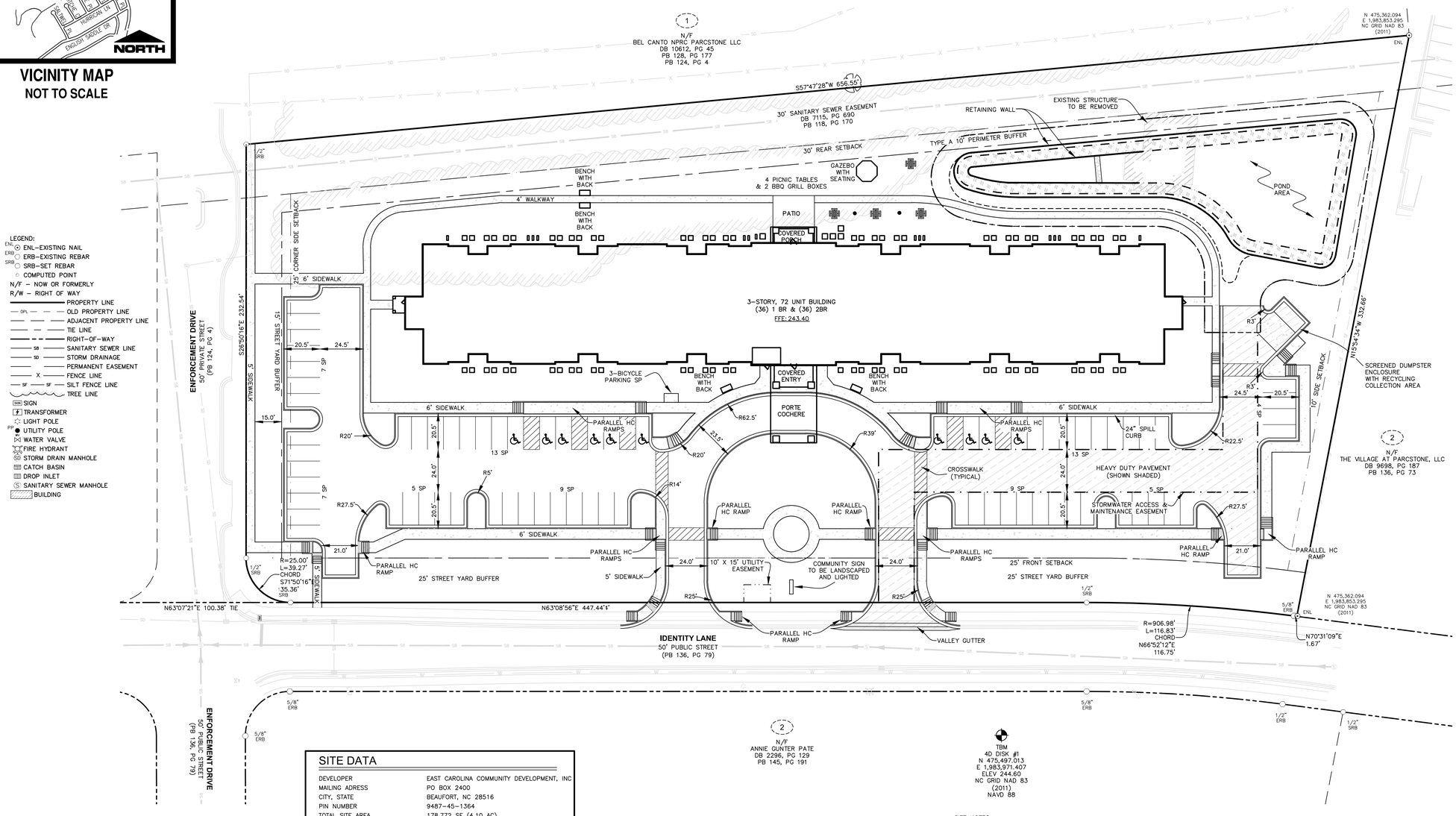
SHEET NUMBER

C-1.0

I:\Quadrant Construction\1151-Cliffmore Park Apartments\CIVIL SIGNING\1151-DESIGN.dwg • C1.0 EX • 8.23.2022 4:25:53 PM



VICINITY MAP
NOT TO SCALE



SITE DATA

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MAILING ADRESS	PO BOX 2400
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REAR	10 FT
	30 FT
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BUILDING	28,289 SF
PAVEMENT	49,392 SF
TOTAL	77,681 SF
PARKING:	
PROPOSED (INCLUDING HANDICAP)	72
PROPOSED BICYCLE PARKING	3

SITE NOTES

1. ALL CURB ON THIS SITE IS SPILL CURB UNLESS OTHERWISE NOTED.
2. ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE BENCHMARK AND MUST BE VERIFIED BY THE GENERAL CONTRACTOR.
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11. ALL WASTE MATERIAL SHALL BE DISPOSED OF OFF–SITE IN ACCORDANCE WITH STATE AND LOCAL LAWS AND REGULATIONS.
12. ALL SITE IMPROVEMENTS SHALL BE INSTALLED PER CITY OF FAYETTEVILLE AND STATE REGULATIONS.

GRAPHIC SCALE

30 0 15 30 60 120

(IN FEET)
1 inch = 30 ft.

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www.4Dsitesolutions.com

NORTH CAROLINA PROFESSIONAL SEAL 027462 ENGINEER C. SCOTT BROWN
08-23-22

REVISIONS

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

PROJECT NAME

CLIFFMORE PARK APARTMENTS

SITE PLAN

CLIENT

EAST CAROLINA COMMUNITY DEVELOPMENT, INC

PO Box 2400
Beaufort, North Carolina 28516
Phone: (252) 504-3996

PROJECT INFORMATION

DESIGNED BY:	SEAN
DRAWN BY:	BRETT
CHECKED BY:	SCOTT
PROJECT NUMBER:	1151

DRAWING SCALE

HORIZONTAL: 1"=30'

DATE RELEASED

AUGUST 23, 2022

SHEET NUMBER

C-2.0

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VICINITY MAP
NOT TO SCALE

Know what's below. Call before you dig.

EROSION CONTROL NOTES

1. ALL INLET/OUTLET PROTECTION WILL BE CHECKED FOR MAINTENANCE AND FAILURE EACH ACTIVE DAY ON SITE. SEDIMENT WILL BE REMOVED FROM THE SEDIMENT TRAP AND INLET PROTECTION DEVICES WHEN THE STORAGE CAPACITY HAS BEEN APPROXIMATELY 50% FILLED. GRAVEL WILL BE CLEANED OR REPLACED WHEN THE SEDIMENT POOL NO LONGER DRAINS PROPERLY. SEDIMENT WILL BE REMOVED FROM BEHIND THE SEDIMENT FENCE WHEN IT BECOMES ABOUT 0.5' DEEP AT THE FENCE. THE SEDIMENT FENCE WILL BE REPAIRED AS NEEDED TO MAINTAIN A PROPER BARRIER.
2. TEMPORARY EROSION CONTROL FACILITIES AND/OR PERMANENT FACILITIES INTENDED TO CONTROL EROSION OF AND EARTH DISTURBANCE OPERATION SHALL BE INSTALLED BEFORE ANY EARTH DISTURBANCE OPERATIONS TAKE PLACE OR AT THE EARLIEST POSSIBLE POINT DURING CONSTRUCTION.
3. TEMPORARY & PERMANENT EROSION CONTROL MEASURES SHALL BE CONSTRUCTED PER THE DETAILS HEREIN, OR SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.
4. THE CONTRACTOR MUST NOTIFY THE APPROPRIATE NCDEQ OFFICE A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY LAND DISTURBING ACTIVITIES. 910-433-3300
5. REMOVE ALL SOILS AND SEDIMENTS TRACKED OR OTHERWISE DEPOSITED ONTO PUBLIC AND PRIVATE PAVEMENT AREAS. REMOVAL SHALL BE ON A DAILY BASIS WHEN TRACKING OCCURS.
6. LOCATE SOIL STOCKPILES NO LESS THAN FIFTY (50) FEET FROM ANY PUBLIC OR PRIVATE ROADWAY OR DRAINAGE CHANNEL. IF REMAINING FOR MORE THAN SEVEN DAYS, STABILIZE THE STOCKPILES BY VEGETATIVE COVER, TARPS, OR OTHER MEANS. CONTROL EROSION FROM ALL STOCKPILES BY PLACING SILT BARRIERS AROUND THE PILES. TEMPORARY STOCKPILES LOCATED ON PAVED SURFACES MUST BE NO LESS THAN FIVE FEET FROM THE DRAINAGE/GUTTER LINE AND SHALL BE COVERED IF LEFT MORE THAN 24 HOURS.
7. MAINTAIN ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES IN PLACE UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED. INSPECT TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ON A DAILY BASIS AND REPLACE DETERIORATED, DAMAGED, OR ROTTED EROSION CONTROL DEVICES IMMEDIATELY.
8. TEMPORARILY OR PERMANENTLY STABILIZE ALL DENUDED AREAS WHICH HAVE BEEN FINISH GRADED, AND ALL DENUDED AREAS IN WHICH GRADING OR SITE BUILDING CONSTRUCTION OPERATIONS ARE NOT ACTIVELY UNDERWAY AGAINST EROSION DUE TO RAIN, WIND AND RUNNING WATER WITHIN 14 DAYS. USE SEEDING AND MULCHING, EROSION CONTROL MATTING, AND/OR SODDING AND STAKING IN GREEN SPACE AREAS AND OTHERWISE APPROPRIATE MEASURES. USE EARLY APPLICATION OF GRAVEL BASE ON AREAS TO BE PAVED.
9. DO NOT REMOVE ANY EROSION AND SEDIMENT CONTROL DEVICES AFTER THE PROTECTED AREA HAS UNDERGONE FINAL STABILIZATION AND PERMANENT VEGETATION HAS BEEN ESTABLISHED, IT IS RECOMMENDED THAT NCDEQ APPROVE THE ACTION PRIOR TO REMOVAL.
10. THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED CONCURRENTLY WITH THE INITIATION OF CONSTRUCTION ACTIVITY.
11. THE INSTALLATION OF EROSION CONTROL MEASURES SHALL TAKE PRECEDENCE OVER ALL OTHER CONSTRUCTION ACTIVITIES.
12. THE PERMITTEE SHALL BE HELD RESPONSIBLE FOR THE ACTIONS AND PERFORMANCE OF ANY OTHER PARTIES PERFORMING WORK ON THIS PROJECT.
13. ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY RUNOFF-PRODUCING RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
14. PURSUANT TO G.S. 113A-57(2), THE ANGLE FOR GRADED SLOPES AND FILLS SHALL BE NO GREATER THAN THE ANGLE THAT CAN BE RETAINED BY VEGETATIVE COVER OR OTHER ADEQUATE EROSION CONTROL DEVICES OR STRUCTURES. IN ANY EVENT, SLOPES LEFT EXPOSED WILL, WITHIN 7 OR 14 CALENDAR DAYS OF COMPLETION OF ANY PHASE OF GRADING, BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY OR PERMANENT GROUND COVER, DEVICES OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION. PURSUANT TO G.S. 113A-57(3), PROVISIONS FOR PERMANENT GROUND COVER SUFFICIENT TO RETAIN EROSION MUST BE ACCOMPLISHED FOR ALL DISTURBED AREAS WITHIN 90 CALENDAR DAYS FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
15. CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL EROSION CONTROL MEASURES SHOWN AND ANY ADDITIONAL MEASURES REQUIRED TO CONTROL THE SEDIMENT DURING THE COURSE OF CONSTRUCTION.
16. ALL SEEDED AREAS WILL BE FERTILIZED, RESEEDED AS NECESSARY, AND MULCHED ACCORDING TO THE DETAILS HEREIN.
17. THE CONTACT PERSON FOR EROSION CONTROL ISSUES THAT ARISE ON SITE IS KEITH WALKER. CONTACT 252-723-5580.

GROUND STABILIZATION CHART

SITE AREA DESCRIPTION	STABILIZATION TIME FRAME	STABILIZATION TIME FRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITHCES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED
SLOPES 3:1 OR FLATTER	14 DAYS	7-DAYS FOR SLOPES GREATER THAN 50 FEET IN LENGTH
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE (EXCEPT FOR PERIMETERS AND HQW ZONES)

CONSTRUCTION SEQUENCE

1. OBTAIN ALL NECESSARY PERMITS AND APPROVALS AND HOLD PRE CONSTRUCTION CONFERENCE.
2. INSTALL STONE CONSTRUCTION ENTRANCE, TEMPORARY SILT FENCE, AND DIVERSION BERMS WHERE SPECIFIED.
3. CONSTRUCT TEMPORARY SEDIMENT BASIN.
4. CLEAR AND GRUB THE SITE AS NEEDED.
5. ROUGH GRADE THE SITE AND APPLY TEMPORARY SEEDING TO AREAS TO REMAIN GRASSED.
6. INSTALL UTILITIES.
7. INSTALL INLET PROTECTION ON ALL NEW STORM WATER INLETS.
8. PERFORM FINE GRADING.
9. INSTALL AND PREPARE BASE COURSE.
10. PAVE ROADWAYS AND PARKING LOTS.
11. FERTILIZE, SEED AND MULCH ALL REMAINING DISTURBED AREAS.
12. UPON SITE STABILIZATION, SEEK NCDEQ APPROVAL TO REMOVE ALL TEMPORARY MEASURES.
13. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED AS OUTLINED IN THE DETAILS WITHIN THE PLANS AND ACCORDING TO THE NCDEQ EROSION CONTROL MANUAL.
14. TERMINATION OF COVERAGE UNDER THE NPDES GENERAL STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES MUST BE REQUESTED BY THE PERMITTEE VIA A NOTICE OF TERMINATION (NOT). THE NOT IS AVAILABLE AT: HTTPS: //EDOCS.DEQ.NC.GOV/FORMS/NCG01-TERMINATION. PLEASE NOTE THAT THE CLOSE OUT INSPECTION REPORT MUST BE UPLOADED AS PART OF COMPLETING THE NOTICE OF TERMINATION PROCESS.

GRADING NOTES

1. THE AREA OUTSIDE OF THE BUILDING AND THE AREA WITHIN THE ENTRANCE LOOP ARE TO BE OVER-EXCAVATED AND TOPSOIL PLACED AT THE DEPTHS SHOWN ON THE PLAN. EXCESS TOPSOIL IS TO BE USED IN THE SLOPES AROUND THE PERIMETER OF THE SITE.
2. ALL ELEVATIONS SHOWN ARE IN REFERENCE TO THE BENCHMARK AND MUST BE VERIFIED BY THE GENERAL CONTRACTOR.ALL SPOT ELEVATIONS ARE TO THE FINISHED GRADE OF THE CURB, UNLESS OTHERWISE NOTED.
3. ALL SIDEWALKS AND PEDESTRIAN WALKING SURFACES SHALL HAVE A CROSS SLOPE NO STEEPER THAN 2% AND LONGITUDINAL SLOPE NO STEEPER THAN 5%.
4. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ALL LAND DISTURBING ACTIVITIES AND ENSURE COMPLIANCE WITH THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN. THE CONTRACTOR SHALL INSPECT AND MAINTAIN ALL EROSION CONTROL DEVICES AND CLEAR ANY DEBRIS LEAVING THE SITE ON NEIGHBORING ROADS.
5. EXISTING GROUND UPON WHICH FILL OR BASE IS TO BE PLACED SHALL BE CLEARED OF WEEDS, DEBRIS, TOPSOIL, AND ALL OTHER DELETERIOUS MATERIALS; NO FILL SHALL BE PLACED UNTIL PREPARATION OF THE EXISTING GROUND HAS BEEN COMPLETED
6. PROTECTIVE MEASURES SHALL BE TAKEN BY THE CONTRACTOR AND THE OWNER TO PROTECT ADJACENT PROPERTY, THE PUBLIC AND UTILITIES DURING GRADING OPERATIONS. THE CONTRACTOR ASSUMES ALL LIABILITY FOR THE UNDERGROUND UTILITY PIPES, CONDUITS, OR STRUCTURES, WHETHER SHOWN OR NOT ON THE PLAN
7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION OF ALL UTILITIES OR STRUCTURES ABOVE AND BELOW GROUND, SHOWN OR NOT SHOWN ON THESE PLANS. THEY WILL BE HELD RESPONSIBLE FOR ALL DAMAGE TO ANY UTILITIES OR STRUCTURES CAUSED BY HIS OPERATION.
8. ALL CUT AND FILL SLOPES SHOULD BE INVESTIGATED BOTH DURING AND AFTER GRADING BY THE CONTRACTOR TO DETERMINE IF ANY SLOPE STABILITY PROBLEMS EXIST. IF IT IS DETERMINED THAT THERE IS A SLOPE STABILITY PROBLEM THE ENGINEER OF RECORD SHOULD BE NOTIFIED.
9. STOCKPILE AREAS THAT WILL EXCEED 10' IN HEIGHT SHOULD BE GRADED WITH 3:1 SLOPES AND SURROUNDED BY SILT FENCE.
10. APPROVED COPIES OF THE GRADING AND EROSION CONTROL PLANS SHALL BE ON THE PERMITTED SITE WHILE WORK IS IN PROGRESS.
11. ALL EXISTING DRAINAGE COURSES THROUGH THIS SITE SHALL REMAIN IN A CONDITION SUCH THAT THEY CAN TRANSPORT THE NATURAL DRAINAGE UNTIL FACILITIES TO HANDLE THE STORM WATER ARE CONSTRUCTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE DUE TO OBSTRUCTING NATURAL DRAINAGE PATTERNS.
12. ANY DEVIATION FROM THE APPROVED GRADING PLAN SHOULD BE REPORTED TO THE ENGINEER OF RECORD PRIOR TO IMPLEMENTATION OF THE CHANGE.
13. ALL SLOPES 3:1 OR STEEPER THAT EXTEND TEN FEET OR MORE SHALL BE LINED WITH NORTH AMERICAN GREEN S75 TEMPORARY EROSION CONTROL BLANKET OR EQUAL SUBSTITUTE.
14. STORM PIPE DISTANCES SHOWN ARE TO THE CENTER OF THE BOX FOR ALL STRUCTURES UNLESS OTHERWISE NOTED.
15. COORDINATE WITH THE ARCHITECTURAL PLANS TO

NOTIFICATION OF COMBINED SELF-MONITORING AND SELF-INSPECTION FORM:

THE SEDIMENTATION POLLUTION CONTROL ACT WAS AMENDED IN 2006 TO REQUIRE THAT PERSONS RESPONSIBLE FOR LAND-DISTURBING ACTIVITIES INSPECT A PROJECT AFTER EACH PHASE OF THE PROJECT TO MAKE SURE THAT THE APPROVED EROSION AND SEDIMENTATION CONTROL PLAN IS BEING FOLLOWED. RULES DETAILING THE DOCUMENTATION OF THESE INSPECTIONS TOOK EFFECT OCTOBER 1, 2010.

TO SIMPLIFY DOCUMENTATION OF SELF-INSPECTION REPORTS AND NPDES SELF-MONITORING REPORTS, DWQ AND DEMLR DEVELOPED A COMBINED FORM. THE SELF-INSPECTION PROGRAM IS SEPARATE FROM THE WEEKLY SELF-MONITORING PROGRAM OF THE NPDES STORMWATER PERMIT FOR CONSTRUCTION ACTIVITIES. THE FOCUS OF THE SELF-INSPECTION REPORT IS THE INSTALLATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROL MEASURES ACCORDING TO THE APPROVED PLAN. THE INSPECTIONS SHOULD BE CONDUCTED AFTER EACH PHASE OF THE PROJECT, AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. THE FORM CAN BE ACCESSED AT: HTTP: //PORTAL.NCDENR.ORG/WEB/LR/EROSION

IF YOU HAVE QUESTIONS OR CANNOT ACCESS THE FORM, PLEASE CONTACT THE FAYETTEVILLE REGIONAL OFFICE AT (910) 433-3300.

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

THE CONTRACTOR MUST CONTACT NORTH CAROLINA ONE CALL CENTER AT 1-800-632-4949 A MINIMUM OF 72 HOURS PRIOR TO DIGGING IN ORDER TO HAVE THE EXISTING UTILITIES LOCATED

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office | 910-426-6777 fax | 910-426-5777 license number | C-2354
www.4Dsitesolutions.com

NORTH CAROLINA PROFESSIONAL SEAL 027452 ENGINEER C. SCOTT BROWN
08-23-22

REVISIONS

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

PROJECT NAME

CLIFFMORE PARK APARTMENTS

GRADING AND EROSION CONTROL PLAN

CLIENT

EAST CAROLINA COMMUNITY DEVELOPMENT, INC

PO Box 2400
Beaufort, North Carolina 28516
Phone: (252) 504-3996

PROJECT INFORMATION

DESIGNED BY:	SEAN
DRAWN BY:	BRETT
CHECKED BY:	SCOTT
PROJECT NUMBER:	1151

DRAWING SCALE

HORIZONTAL: 1"=30'

DATE RELEASED

AUGUST 23, 2022

SHEET NUMBER

C-3.0

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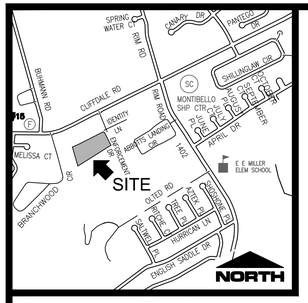
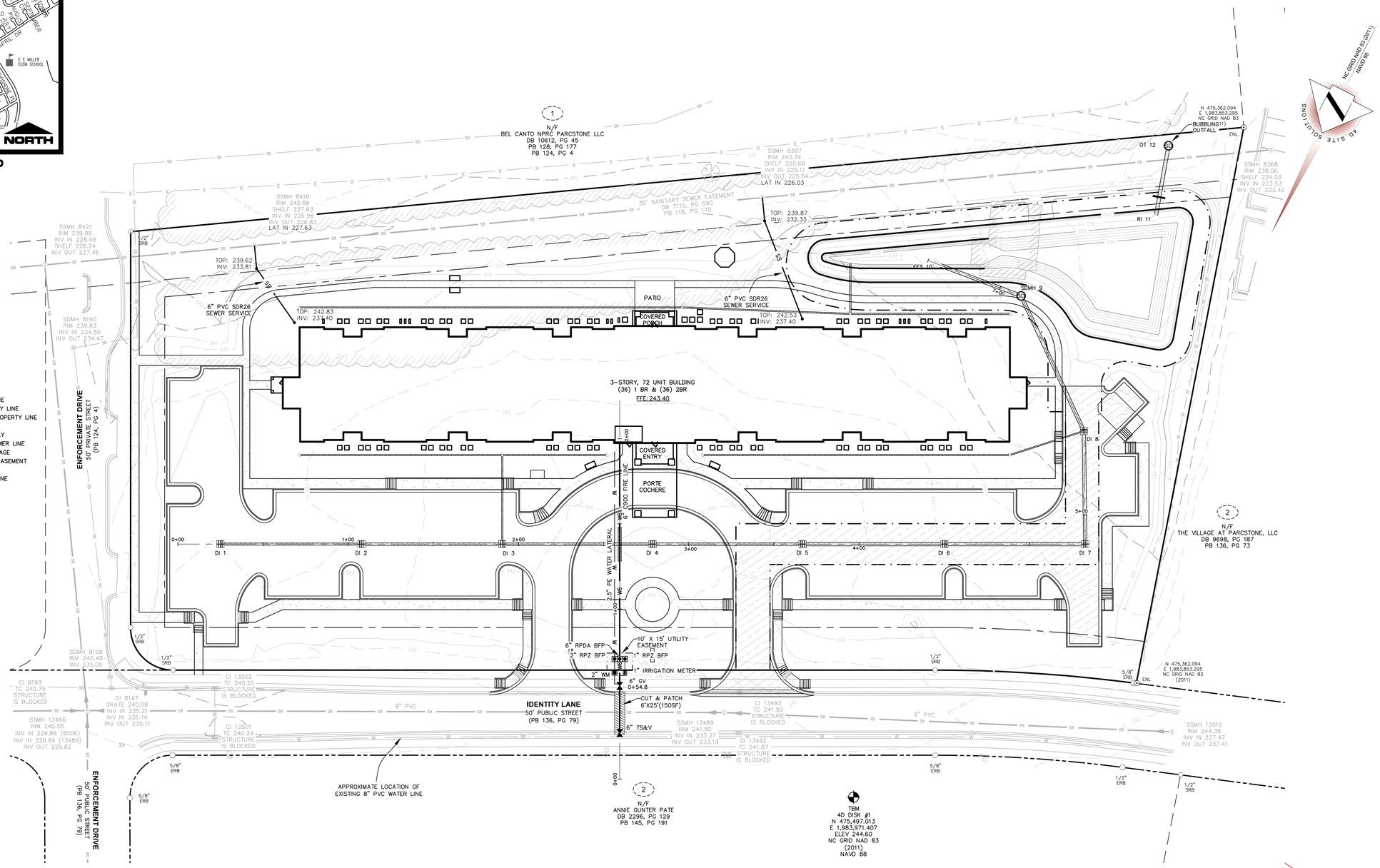


VICINITY MAP
NOT TO SCALE

LEGEND:
- ENL–EXISTING NAIL
- ERB–EXISTING REBAR
- SRB–SET REBAR
- COMPUTED POINT
- N/F – NOW OR FORMERLY
- R/W – RIGHT OF WAY
- PROPERTY LINE
- OPL – OLD PROPERTY LINE
- ADJACENT PROPERTY LINE
- TIE LINE
- RIGHT–OF–WAY
- SB – SANITARY SEWER LINE
- SD – STORM DRAINAGE
- PERMANENT EASEMENT
- X – FENCE LINE
- SF – SILT FENCE LINE
- TREE LINE
- SIGN
- TRANSFORMER
- LIGHT POLE
- UTILITY POLE
- WATER VALVE
- FIRE HYDRANT
- STORM DRAIN MANHOLE
- CATCH BASIN
- DROP INLET
- SANITARY SEWER MANHOLE
- BUILDING



Know what's **below.**
Call before you dig.

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

THE CONTRACTOR MUST CONTACT NORTH CAROLINA ONE CALL CENTER AT 1-800-632-4949 A MINIMUM OF 72 HOURS PRIOR TO DIGGING IN ORDER TO HAVE THE EXISTING UTILITIES LOCATED

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www.4Dsitesolutions.com

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027462 SCOTT BROWN
08-23-22

REVISIONS

FINAL DRAWING
NOT RELEASED FOR CONSTRUCTION

PROJECT NAME

CLIFFMORE PARK APARTMENTS

UTILITY PLAN

PIN# 9487-45-1364

CLIENT

EAST CAROLINA COMMUNITY DEVELOPMENT, INC

PO Box 2400
Beaufort, North Carolina 28516
Phone: (252) 504-3996

PROJECT INFORMATION

DESIGNED BY:	SEAN
DRAWN BY:	BRETT
CHECKED BY:	SCOTT
PROJECT NUMBER:	1151

DRAWING SCALE

HORIZONTAL: 1"=30'

DATE RELEASED

AUGUST 23, 2022

SHEET NUMBER

C-4.0

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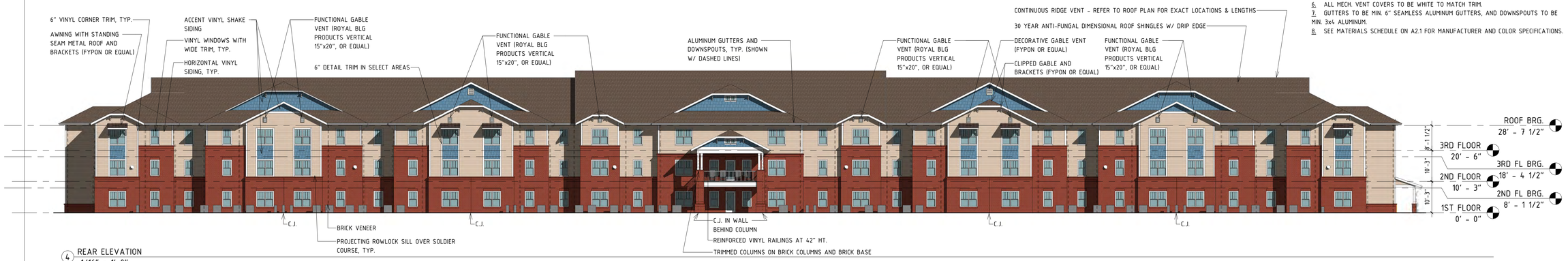
MATERIALS SCHEDULE	
MATERIAL	MANUFACTURER & COLOR
BRICK	FLASHED WIRE CUT
LAP VINYL SIDING (PRIMARY)	EXTERIOR PORTFOLIO: MARKET SQUARE- D4, "SADDLE"
SHAKE VINYL SIDING (ACCENT)	EXTERIOR PORTFOLIO: PORTSMOUTH- D7, "SADDLE"
ROOF SHINGLES	IKO: CAMBRIDGE, "DRIFTWOOD"
METAL ROOF (ACCENT)	SHEFFIELD METALS, INTERNATIONAL: "DARK BRONZE"
TYPICAL TRIM	VINYL WITH INTEGRAL J, WHITE
GUTTERS & DOWNSPOUTS	WHITE

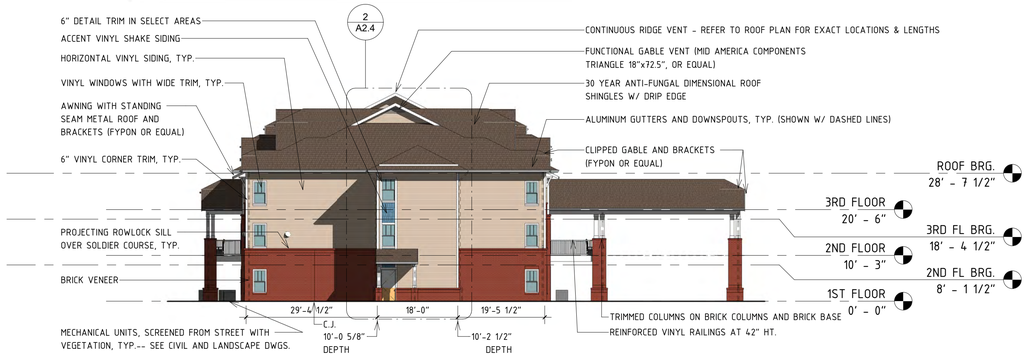
ELEVATION NOTES

1. ALL WORK TO COMPLY WITH NCHFA'S 2021 DESIGN STANDARDS & FIELD GUIDE.
2. ALL WINDOW HEAD HEIGHTS TO BE 7'-0" U.N.O.
3. INSTALL MOUNTING BLOCK FOR BUILDING SIGNAGE AND EXTERIOR LIGHTING FIXTURES; G.C. TO VERIFY EXACT LOCATION IN THE FIELD.
4. MASONRY CONTROL JOINT (C.J.) AT ALL INSIDE CORNERS,TYPICAL, AND WHERE INDICATED ON ELEVATIONS, FOR MAX. EVERY 25 FEET.
5. WHERE FIBER CEMENT IS NOTED, CONFIRM W/ OWNER IF FIBER CEMENT OR COMPOSITE IS TO BE USED.
6. ALL MECH. VENT COVERS TO BE WHITE TO MATCH TRIM.
7. GUTTERS TO BE MIN. 6" SEAMLESS ALUMINUM GUTTERS, AND DOWNSPOUTS TO BE MIN. 3x4 ALUMINUM.
8. SEE MATERIALS SCHEDULE ON A2.1 FOR MANUFACTURER AND COLOR SPECIFICATIONS.

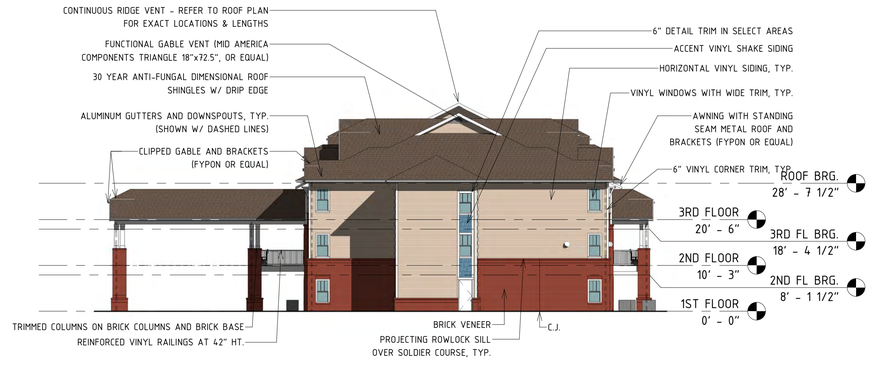


4 REAR ELEVATION
1/16" = 1'-0"

STREET-FRONTING BUILDING FACADE - SELECTED DESIGN FEATURES:
1 - COVERED PORCH
2 - PILLARS, POSTS, OR PILASTERS
3 - EAVES WITH A MINIMUM SIX-INCH PROJECTION FROM THE FACADE PLANE (1'-11" PROJECTION)
4 - MULTIPLE WINDOWS WITH A MINIMUM FOUR-INCH-WIDE TRIM

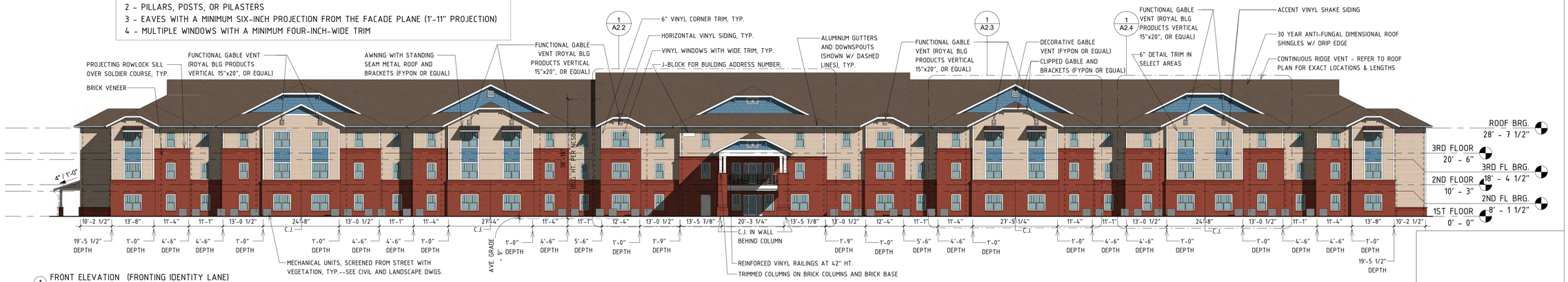


3 LEFT ELEVATION (FRONTING ENFORCEMENT DRIVE)
1/16" = 1'-0"



2 RIGHT ELEVATION
1/16" = 1'-0"

STREET-FRONTING BUILDING FACADE - SELECTED DESIGN FEATURES:
1 - COVERED PORCH
2 - PILLARS, POSTS, OR PILASTERS
3 - EAVES WITH A MINIMUM SIX-INCH PROJECTION FROM THE FACADE PLANE (1'-11" PROJECTION)
4 - MULTIPLE WINDOWS WITH A MINIMUM FOUR-INCH-WIDE TRIM



1 FRONT ELEVATION (FRONTING IDENTITY LANE)
1/16" = 1'-0"

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Cliffmore Park Apartments

Identity Lane,
Fayetteville, NC

TightLines Designs, Inc. Licensed Professional Corporation 51726 North Carolina Raleigh, NC

DAVID SCOTT MAURER REGISTERED ARCHITECT 5131 NORTH CAROLINA RALEIGH, NC

date	04/13/22
drafter	RBK
checked by	DSM
project number	T-21003.1
revisions	date
1-x	xx/xx/xx

ELEVATIONS

A2.1

ABBREVIATION KEY

NCHFA = NORTH CAROLINA HOUSING FINANCE AGENCY
QAP = QUALIFIED ALLOCATION PLAN
DWGS = DRAWINGS
F.E.C. = FIRE EXTINGUISHER CABINET (RECESSED)
F.O.M. = FACE OF MASONRY
U.N.O. = UNLESS NOTED OTHERWISE
CONT = CONTINUOUS
O.C. = ON CENTER
T.O. = TOP OF
HGT/HT = HEIGHT
MIN = MINIMUM
DP = DEEP
TYP = TYPICAL
CJ = MASONRY CONTROL JOINT
MR = MOISTURE RESISTANT
PT = PRESSURE TREATED
PTD = PAINTED

EXT = EXTERIOR
HM = HOLLOW METAL
WD = WOOD
CONC = CONCRETE
GWB = GYPSUM WALL BOARD
OSB = ORIENTED STRAND BOARD
LVT = LUXURY VINYL FLOORING
P.LAM = PLASTIC LAMINATE
T&G = TONGUE AND GROOVE
SHGC = SOLAR HEAT GAIN COEFFICIENT
STC = SOUND TRANSMISSION CLASS
IIC = IMPACT INSULATION CLASS
W/C = WALK-IN CLOSET
PAN. = PANTRY
H.C. ACCESS. = HANDICAP ACCESSIBLE

SIGNAGE, SECURITY & COMMUNICATION

GENERAL CONTRACTOR TO ENSURE THAT THE FOLLOWING SIGNAGE, SECURITY SYSTEM, AND COMMUNICATION ITEMS ARE INCLUDED AS PART OF THE CONTRACT WORK:

-MONUMENT SIGN-- BASE & SIGNAGE. (SEE CIVIL DRAWINGS.)

-EXTERIOR BUILDING NUMBER(S) WITH APPROPRIATE LIGHTING, AS REQUIRED BY ZONING OFFICIALS, BUILDING CODE, ACCESSIBILITY CODE AND NCHFA REQUIREMENTS.

-INTERIOR AND EXTERIOR BUILDING DIRECTIONAL AND ROOM SIGNAGE, AS REQUIRED BY BUILDING CODE, ACCESSIBILITY CODE AND NCHFA REQUIREMENTS. SIGNAGE TO BE THROUGH OWNER. VERIFY DESIGN(S) WITH OWNER.

-PROVIDE KNOX BOX PER DRAWINGS. VERIFY WITH FIRE DEPARTMENT FOR FINAL PURCHASE.

-FOR ENTRY KEY FOB/CARD, CALL BOX ENTRY SYSTEM, SEE NOTES ON A6.1 AND ELECTRICAL DRAWINGS.

-SECURITY SYSTEM, INCLUDING:
  -CAMERAS, AS COORDINATED WITH OWNERSHIP.

-CABLE, INTERNET AND LANDLINE TELEPHONE SERVICES, INCLUDING:
  -DMARK PANEL/MSD BOX AND ASSOCIATED RECEPTACLES IN EACH DWELLING UNIT AND FOR THE OFFICE & COMMON AREAS (COORDINATE REQUIREMENTS WITH UTILITIES/COMMUNICATION SERVICE COMPANIES).
  -CABLE AND DATA/PHONE JACKS AND BOXES AND ASSOCIATED RECEPTACLES, AS SHOWN ON ELECTRICAL DRAWINGS.
  -HOMERUNS TO DMARK ROOM ON FIRST FLOOR.
  -ANY CONDUITS, TRENCHING, WIRING, ETC. REQUIRED BY PROVIDER(S) TO BRING SERVICE TO THE BLDG.
  -COORDINATION WITH ALL COMMUNICATION SERVICE COMPANIES.

LIFE SAFETY LEGEND

FIRE WALL (2 HOUR)

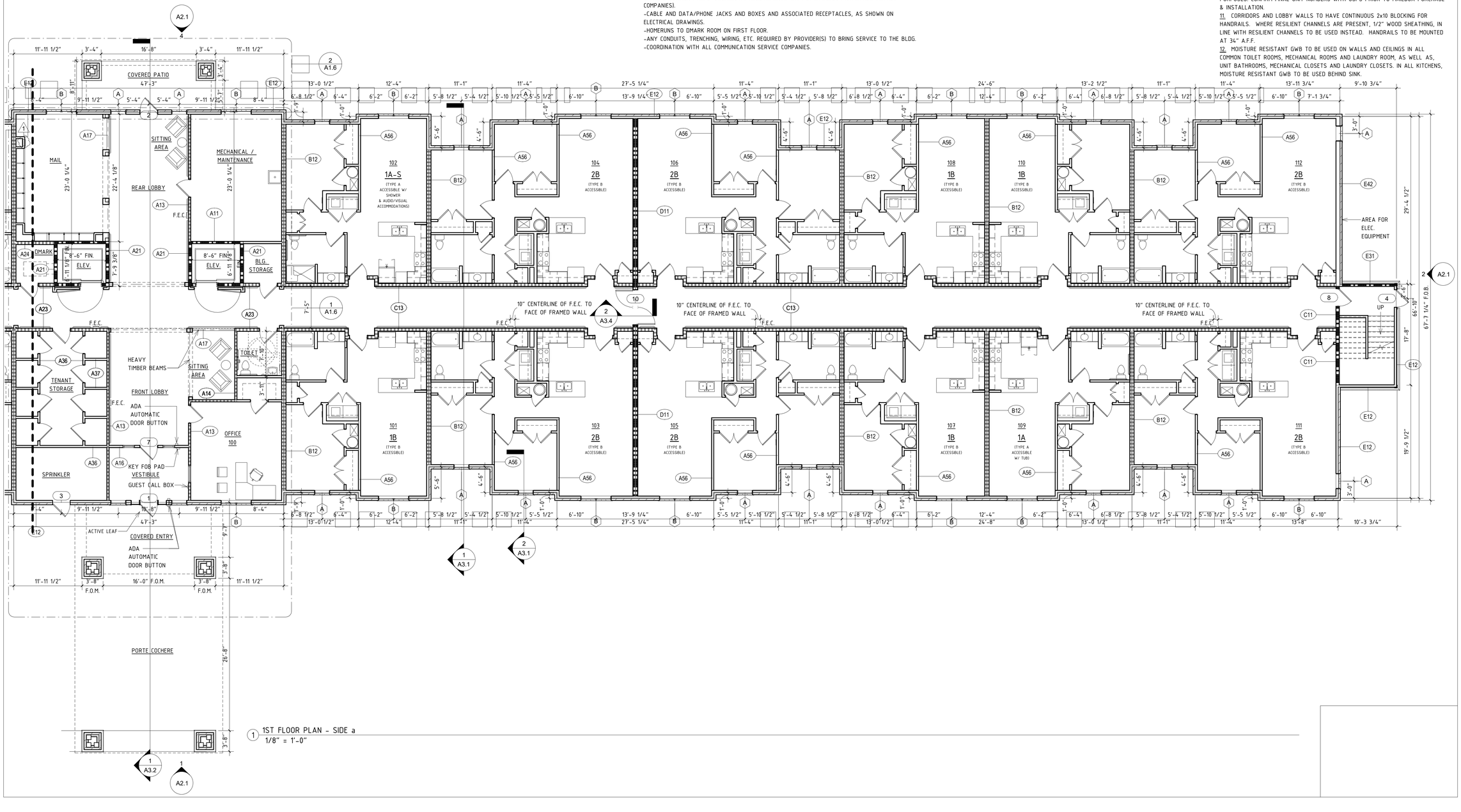
FIRE BARRIER (1 HOUR)

FIRE PARTITION (1 HOUR / 30 MINUTE)

SEE A1.0 FOR WALL TYPES AND WALL NOTES.

FLOOR PLAN GENERAL NOTES

1. ALL WORK TO COMPLY WITH THE NCHFA'S 2021 QAP AND FIELD GUIDE.
2. ALL EXT. WALL AND COLUMN DIMENSIONS ARE TO FACE OF SHEATHING, U.N.O. ALL INT. WALL AND COLUMN DIMENSIONS ARE TO FACE OF WOOD STUD, U.N.O.
3. * -- WHERE DIMENSION HAS ASTERISK ASSUME A 1/2" SHEATHING THICKNESS FOR CONSISTENCY OF BUILDING DIMENSIONS, WHERE SHEATHING MAY BE 5/8".
4. SEE STRUCTURAL DRAWINGS AND APPLICABLE UL DETAILS (T4.1-T4.3) FOR STUD SPACING AND OTHER SPECIFICATIONS AND REQUIREMENTS.
5. SEE STRUCTURAL DRAWINGS FOR LOCATIONS AND SHEATHING REQUIREMENTS OF SHEAR WALLS.
6. DWELLING UNIT SEPARATION AND DWELLING UNIT-CORRIDOR WALLS TO BE DETAILED FOR A MINIMUM 50 STC RATING (OR A MINIMUM 45 FIELD-TESTED). FLOOR/CEILING SYSTEMS SEPARATING DWELLING UNITS TO BE DETAILED FOR A MIN. 50 STC AND IIC RATINGS (OR A MIN. 45 FIELD-TESTED).
7. UNLESS OTHERWISE NOTED, ALL FIRE BARRIERS TO BE BALLOON FRAMED AND PRE-ROCKED SO THAT RATED GWB CAN BE CONTINUOUS TO UNDERSIDE OF ROOF OR FLOOR DECKING.
8. WHERE INSTALLED PRE-ROCK WILL BE EXPOSED TO THE ELEMENTS, PROVIDE EXTERIOR GWB (GEORGIA-PACIFIC DENSGLASS OR EQUAL) THAT MEETS THE QUALIFICATIONS OF THE PLANS, WALL LEGEND AND APPLICABLE UL DETAILS.
9. EXPANSION JOINTS IN ALL CORRIDOR CEILING SHEETROCK TO BE EVERY 50', ALL LEVELS.
10. UNIT NUMBERS ARE FOR UNIT TYPE REFERENCE ONLY -- THEY ARE NOT TO BE USED BY USPS OR ANY MUNICIPALITIES FOR MAILING ADDRESSES OR ANY OTHER PURPOSES. CONFIRM FINAL UNIT NUMBERS WITH USPS PRIOR TO MAILBOX PURCHASE & INSTALLATION.
11. CORRIDORS AND LOBBY WALLS TO HAVE CONTINUOUS 2x10 BLOCKING FOR HANDRAILS. WHERE RESILIENT CHANNELS ARE PRESENT, 1/2" WOOD SHEATHING, IN LINE WITH RESILIENT CHANNELS TO BE USED INSTEAD. HANDRAILS TO BE MOUNTED AT 34" A.F.F.
12. MOISTURE RESISTANT GWB TO BE USED ON WALLS AND CEILINGS IN ALL COMMON TOILET ROOMS, MECHANICAL ROOMS AND LAUNDRY ROOM, AS WELL AS, UNIT BATHROOMS, MECHANICAL CLOSETS AND LAUNDRY CLOSETS. IN ALL KITCHENS, MOISTURE RESISTANT GWB TO BE USED BEHIND SINK.



1 1ST FLOOR PLAN - SIDE a
1/8" = 1'-0"

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Cliffmore Park Apartments

Identity Lane,
Fayetteville, NC

TightLines Designs, Inc. 51726 North Carolina Raleigh, NC

DAVID SCOTT MAURER REGISTERED ARCHITECT 5131 NORTH CAROLINA RALEIGH, NC

date	04/13/22
drafter	RBK
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project number	T-21003.1
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1	06/27/22

FIRST FLOOR PLAN

A1.1a

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DWGS = DRAWINGS
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LIFE SAFETY LEGEND

FIRE WALL (2 HOUR)

FIRE BARRIER (1 HOUR)

FIRE PARTITION (1 HOUR / 30 MINUTE)

SEE A1.0 FOR WALL TYPES AND WALL NOTES.

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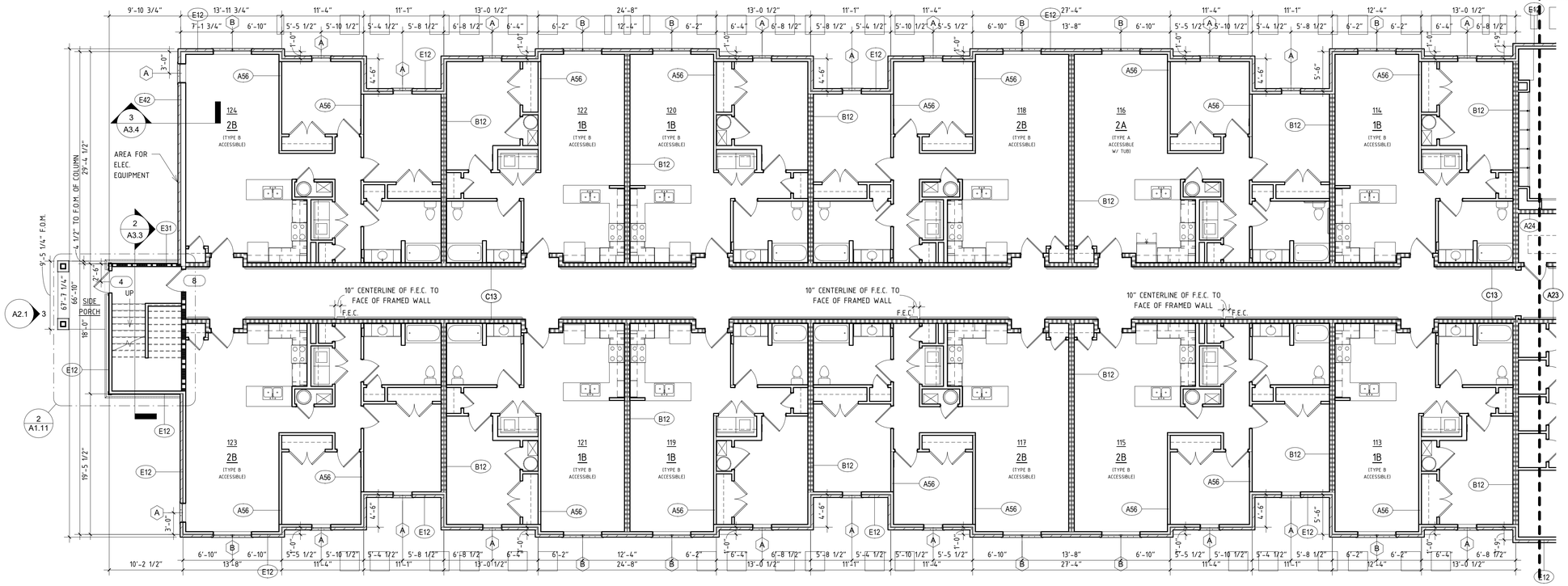

1 1ST FLOOR PLAN - SIDE b
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SECOND FLOOR PLAN

A1.2a

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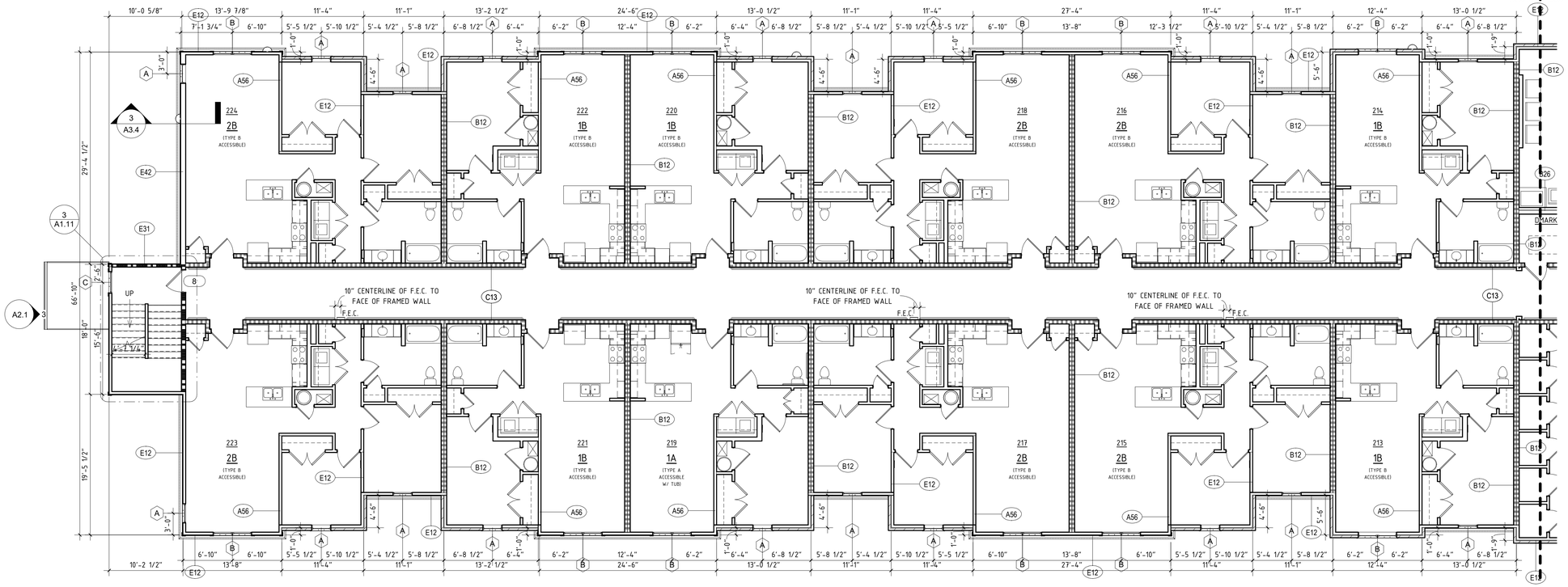

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THIRD FLOOR PLAN

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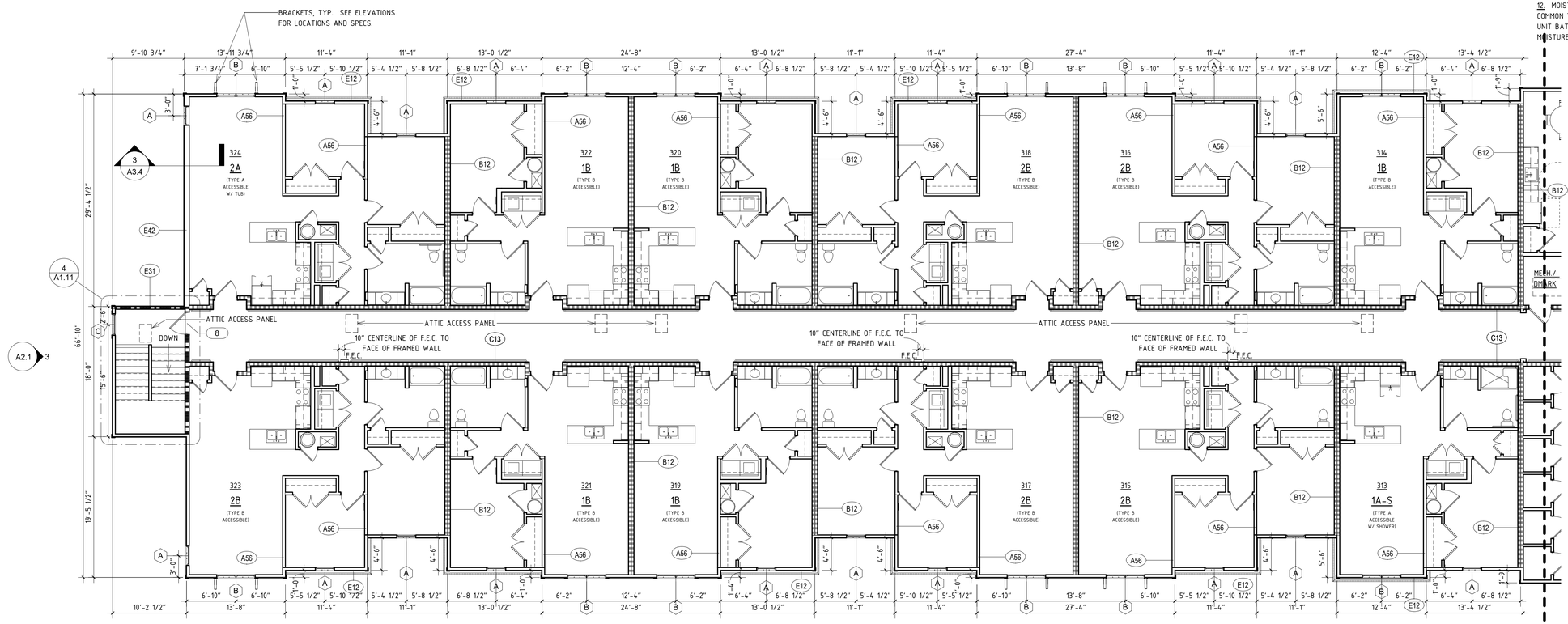

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A1.3b

ATTACHMENT 1A:

Site Visit Photographs

2021

5133 IDENTITY LN, FAY
Show search results for 5133 I...
CLIFFDALE RD
CLIFFDALE RD
BUHMANN DR
IDENTITY LN
ENFORCEMENT DR
ABBOTTS LANDING CIR
PARCSTONE LN
PARCSTONE LN
ALABASTER WAY
DEER TRAIL DR
BRANCHWOOD CIR
35.0550 -79.0499 Degrees
CCGIS \ ESRI Charlotte | CCGIS | CCGIS - TAX MAPPING
POWERED BY esri

Photograph 1 – View of the on-site structure looking south

Photograph 2 - View of the on-site structure looking southeast

Photograph 3 - View of interior of the on-site structure

Photograph 4 - View of the crawl space of the on-site structure

Photograph 5 - View of the site looking northeast

Photograph 6 – View of the southern property line looking west

Photograph 7 – West and northwestern adjacent properties

Photograph 8 – Northern adjacent property

Photograph 9 – Vie of trash along the road and northern portion of the site

Photograph 10 – View of the northeastern adjacent property

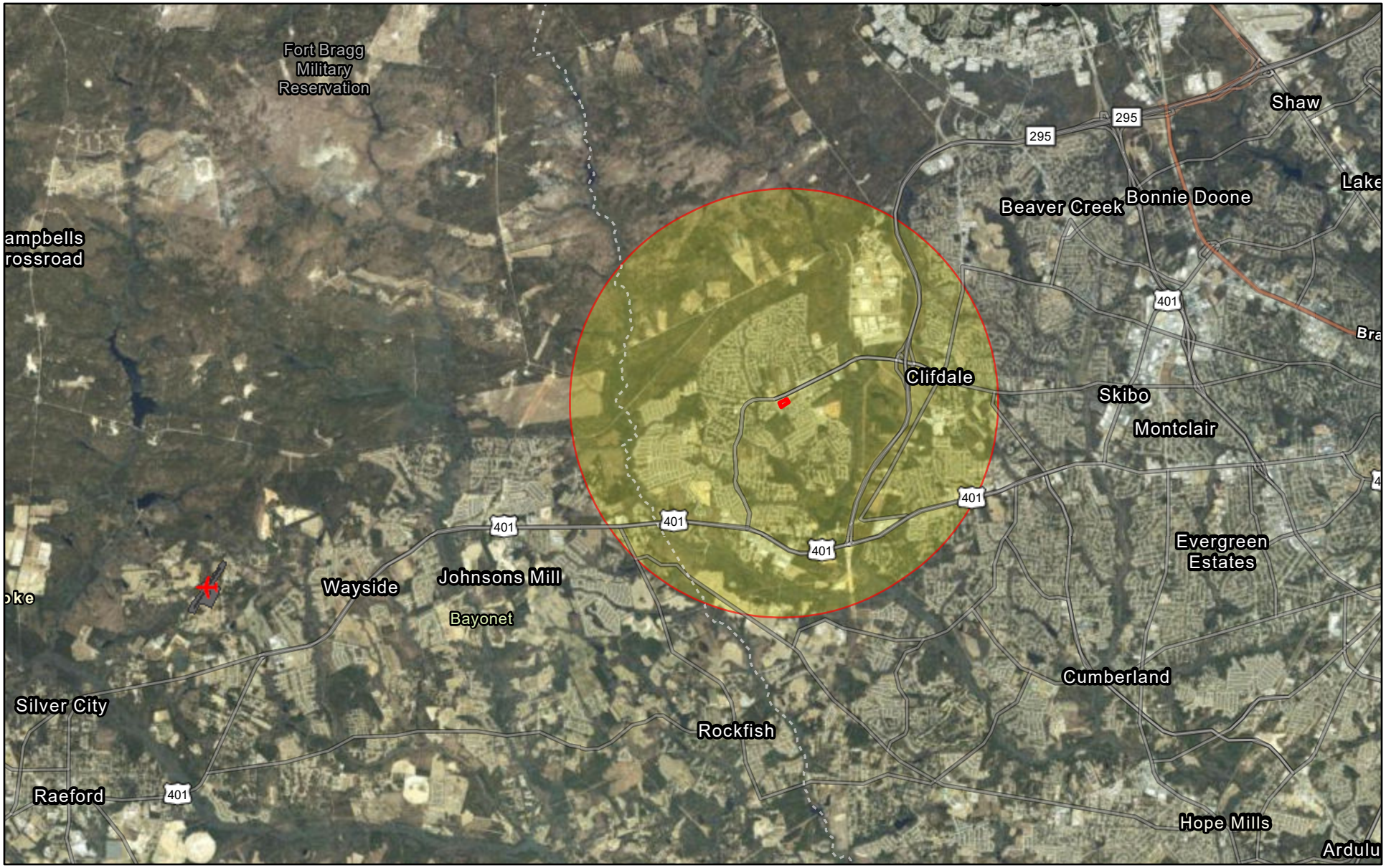
Photograph 11 – View of the northern adjacent property and the site looking southwest

Photograph 12 – View of the southern adjacent property

ATTACHMENT 2:

NEPAssist Map with 15,000-foot Buffer Showing Airports

Cliffmore Park - Airports with 15,000-foot Buffer



November 2, 2022

Cliffmore Park - 15,000-foot Buffer

Project Buffer

Airport Points

Airport Polygons

1:144,448

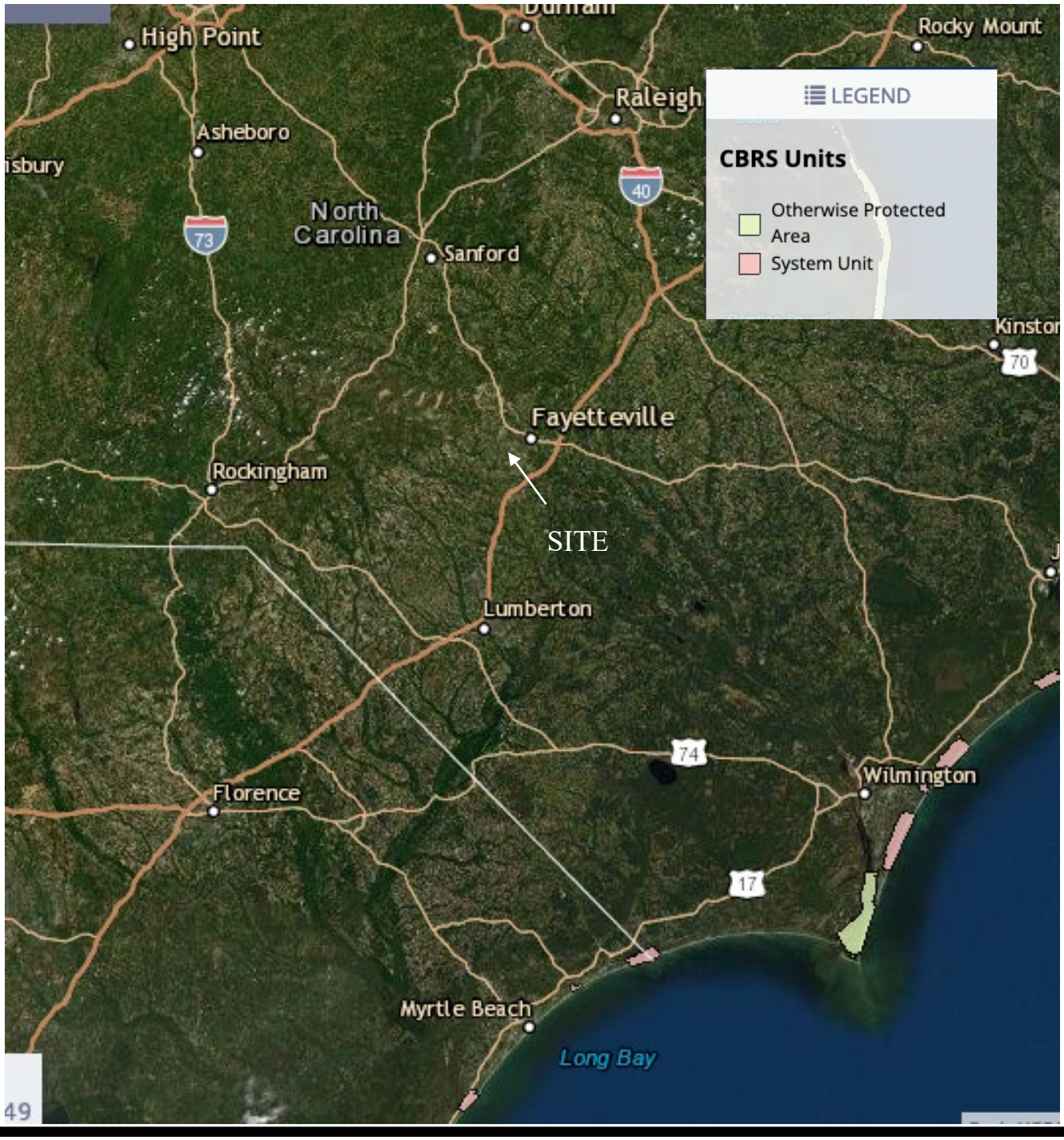
0 1 2 4 mi

0 1.5 3 6 km

State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, NC CGIA,

ATTACHMENT 3:

USFWS CBRS Map



Not to Scale **FIGURE 8: COASTAL BARRIER RESOURCES**

Source: NPS Maps ArcGIS

N

Proposed Cliffmore Park Apartments
Identity Lane
Fayetteville, North Carolina

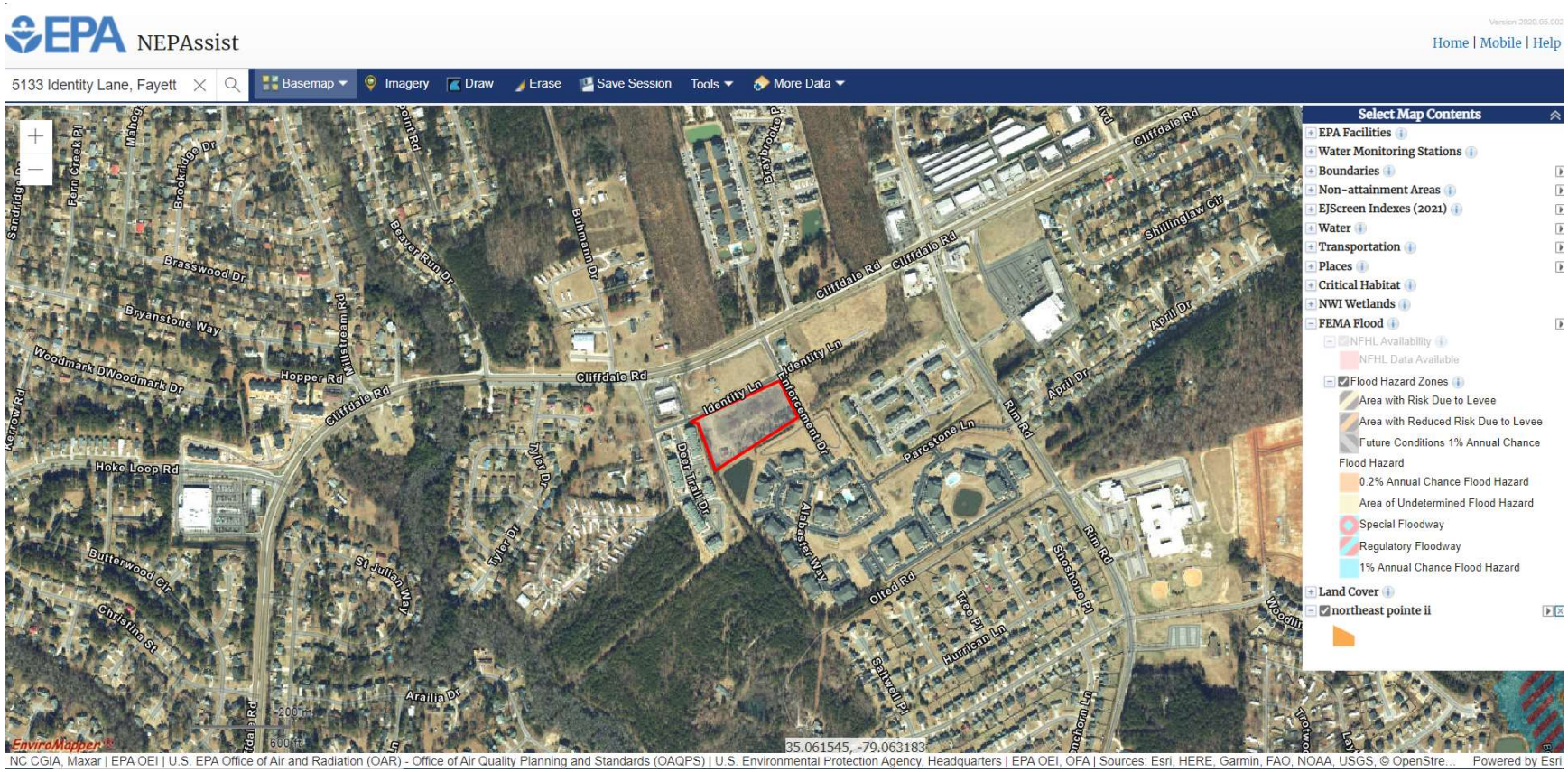
Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
February 2022

ATTACHMENT 11:

FEMA FIRM and FIRMette

CLIFFMORE PARK – FEMA FIRM



National Flood Hazard Layer FIRMette

FEMA

79°3'29"W 35°3'35"N

79°2'52"W 35°3'6"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/3/2022 at 11:12 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

ATTACHMENT 5:

North Carolina Nonattainment/ Maintenance Status for Each County by Year for All Criteria Pollutants and EPA NC Radon Level Map

North Carolina Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants

Data is current as of October 31, 2022

Listed by County, NAAQS, Area. The 8-hour Ozone (1997) standard was revoked on April 6, 2015 and the 1-hour Ozone (1979) standard was revoked on June 15, 2005.

* The 1997 Primary Annual PM-2.5 NAAQS (level of 15 µg/m^3) is revoked in attainment and maintenance areas for that NAAQS. For additional information see the PM-2.5 NAAQS SIP Requirements Final Rule, effective October 24, 2016. (81 FR 58009)

Change the State: NORTH CAROLINA GO

Cumberland County is not listed

Important Notes

Download National Dataset: dbf | xls | Data dictionary (PDF)

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
NORTH CAROLINA								
Cabarrus County	8-Hour Ozone (1997)-NAAQS revoked	Charlotte-Gastonia-Rock Hill, NC-SC	04 05 06 07 08 09 10 11 12 13	01/02/2014	Moderate	Whole	178,011	37/025
Cabarrus County	8-Hour Ozone (2008)	Charlotte-Rock Hill, NC-SC	12 13 14	08/27/2015	Marginal	Part	176,928	37/025
Catawba County	PM-2.5 (1997)-NAAQS revoked	Hickory-Morganton-Lenoir, NC	05 06 07 08 09 10	12/19/2011 *	Former Subpart 1	Whole	154,358	37/035
Chatham County	8-Hour Ozone (1997)-NAAQS revoked	Raleigh-Durham-Chapel Hill, NC	04 05 06	12/26/2007	Former Subpart 1	Part	32,372	37/037
Davidson County	1-Hour Ozone (1979)-NAAQS revoked	Greensboro-Winston-Salem-High Point, NC	92	11/08/1993	Moderate	Whole	162,878	37/057
Davidson County	PM-2.5 (1997)-NAAQS revoked	Greensboro-Winston Salem-High Point, NC	05 06 07 08 09 10	12/19/2011 *	Former Subpart 1	Whole	162,878	37/057

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Davie County	1-Hour Ozone (1979)-NAAQS revoked	Greensboro-Winston-Salem-High Point, NC	92	11/08/1993	Moderate	Part	1	37/059
Durham County	1-Hour Ozone (1979)-NAAQS revoked	Raleigh-Durham, NC	9293	06/17/1994	Moderate	Whole	267,587	37/063
Durham County	8-Hour Ozone (1997)-NAAQS revoked	Raleigh-Durham-Chapel Hill, NC	040506	12/26/2007	Former Subpart 1	Whole	267,587	37/063
Durham County	Carbon Monoxide (1971)	Raleigh-Durham, NC	929394	09/18/1995	Moderate <= 12.7ppm	Whole	267,587	37/063
Edgecombe County	8-Hour Ozone (1997)-NAAQS revoked	Rocky Mount, NC	040506	01/05/2007	Former Subpart 1	Whole	56,552	37/065
Forsyth County	1-Hour Ozone (1979)-NAAQS revoked	Greensboro-Winston-Salem-High Point, NC	92	11/08/1993	Moderate	Whole	350,670	37/067
Forsyth County	Carbon Monoxide (1971)	Winston-Salem, NC	9293	11/07/1994	Moderate <= 12.7ppm	Whole	350,670	37/067
Franklin County	8-Hour Ozone (1997)-NAAQS revoked	Raleigh-Durham-Chapel Hill, NC	040506	12/26/2007	Former Subpart 1	Whole	60,619	37/069
Gaston County	1-Hour Ozone (1979)-NAAQS revoked	Charlotte-Gastonia, NC	929394	07/05/1995	Moderate	Whole	206,086	37/071
Gaston County	8-Hour Ozone (1997)-NAAQS revoked	Charlotte-Gastonia-Rock Hill, NC-SC	040506070809101112 13	01/02/2014	Moderate	Whole	206,086	37/071
Gaston County	8-Hour Ozone (2008)	Charlotte-Rock Hill, NC-SC	12 13 14	08/27/2015	Marginal	Part	190,849	37/071

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Granville County	1-Hour Ozone (1979)-NAAQS revoked	Raleigh-Durham, NC	9293	06/17/1994	Moderate	Part	17,725	37/077
Granville County	8-Hour Ozone (1997)-NAAQS revoked	Raleigh-Durham-Chapel Hill, NC	040506	12/26/2007	Former Subpart 1	Whole	59,916	37/077
Guilford County	1-Hour Ozone (1979)-NAAQS revoked	Greensboro-Winston-Salem-High Point, NC	92	11/08/1993	Moderate	Whole	488,406	37/081
Guilford County	PM-2.5 (1997)-NAAQS revoked	Greensboro-Winston Salem-High Point, NC	050607080910	12/19/2011 *	Former Subpart 1	Whole	488,406	37/081
Haywood County	8-Hour Ozone (1997)-NAAQS revoked	Haywood and Swain Counties (Great Smoky NP), NC	040506070809	01/06/2010	Former Subpart 1	Part	985	37/087
Iredell County	8-Hour Ozone (1997)-NAAQS revoked	Charlotte-Gastonia-Rock Hill, NC-SC	040506070809101112 13	01/02/2014	Moderate	Part	68,089	37/097
Iredell County	8-Hour Ozone (2008)	Charlotte-Rock Hill, NC-SC	12 13 14	08/27/2015	Marginal	Part	65,899	37/097
Johnston County	8-Hour Ozone (1997)-NAAQS revoked	Raleigh-Durham-Chapel Hill, NC	040506	12/26/2007	Former Subpart 1	Whole	168,878	37/101
Lincoln County	8-Hour Ozone (1997)-NAAQS revoked	Charlotte-Gastonia-Rock Hill, NC-SC	040506070809101112 13	01/02/2014	Moderate	Whole	78,265	37/109
Lincoln County	8-Hour Ozone (2008)	Charlotte-Rock Hill, NC-SC	12 13 14	08/27/2015	Marginal	Part	64,189	37/109

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Mecklenburg County	1-Hour Ozone (1979)-NAAQS revoked	Charlotte-Gastonia, NC	92 93 94	07/05/1995	Moderate	Whole	919,628	37/119
Mecklenburg County	8-Hour Ozone (1997)-NAAQS revoked	Charlotte-Gastonia-Rock Hill, NC-SC	04 05 06 07 08 09 10 11 12 13	01/02/2014	Moderate	Whole	919,628	37/119
Mecklenburg County	8-Hour Ozone (2008)	Charlotte-Rock Hill, NC-SC	12 13 14	08/27/2015	Marginal	Whole	919,628	37/119
Mecklenburg County	Carbon Monoxide (1971)	Charlotte, NC	92 93 94	09/18/1995	Not Classified	Whole	919,628	37/119
Nash County	8-Hour Ozone (1997)-NAAQS revoked	Rocky Mount, NC	04 05 06	01/05/2007	Former Subpart 1	Whole	95,840	37/127
Orange County	8-Hour Ozone (1997)-NAAQS revoked	Raleigh-Durham-Chapel Hill, NC	04 05 06	12/26/2007	Former Subpart 1	Whole	133,801	37/135
Person County	8-Hour Ozone (1997)-NAAQS revoked	Raleigh-Durham-Chapel Hill, NC	04 05 06	12/26/2007	Former Subpart 1	Whole	39,464	37/145
Rowan County	8-Hour Ozone (1997)-NAAQS revoked	Charlotte-Gastonia-Rock Hill, NC-SC	04 05 06 07 08 09 10 11 12 13	01/02/2014	Moderate	Whole	138,428	37/159
Rowan County	8-Hour Ozone (2008)	Charlotte-Rock Hill, NC-SC	12 13 14	08/27/2015	Marginal	Part	130,057	37/159
Swain County	8-Hour Ozone (1997)-NAAQS revoked	Haywood and Swain Counties (Great Smoky NP), NC	04 05 06 07 08 09	01/06/2010	Former Subpart 1	Part	3,288	37/173

County	NAAQS	Area Name	Nonattainment in Year	Redesignation to Maintenance	Classification	Whole or/ Part County	Population (2010)	State/ County FIPS Codes
Union County	8-Hour Ozone (1997)-NAAQS revoked	Charlotte-Gastonia-Rock Hill, NC-SC	04 05 06 07 08 09 10 11 12 13	01/02/2014	Moderate	Whole	201,292	37/179
Union County	8-Hour Ozone (2008)	Charlotte-Rock Hill, NC-SC	12 13 14	08/27/2015	Marginal	Part	176,055	37/179
Wake County	1-Hour Ozone (1979)-NAAQS revoked	Raleigh-Durham, NC	92 93	06/17/1994	Moderate	Whole	900,993	37/183
Wake County	8-Hour Ozone (1997)-NAAQS revoked	Raleigh-Durham-Chapel Hill, NC	04 05 06	12/26/2007	Former Subpart 1	Whole	900,993	37/183
Wake County	Carbon Monoxide (1971)	Raleigh-Durham, NC	92 93 94	09/18/1995	Moderate <= 12.7ppm	Whole	900,993	37/183

Important Notes

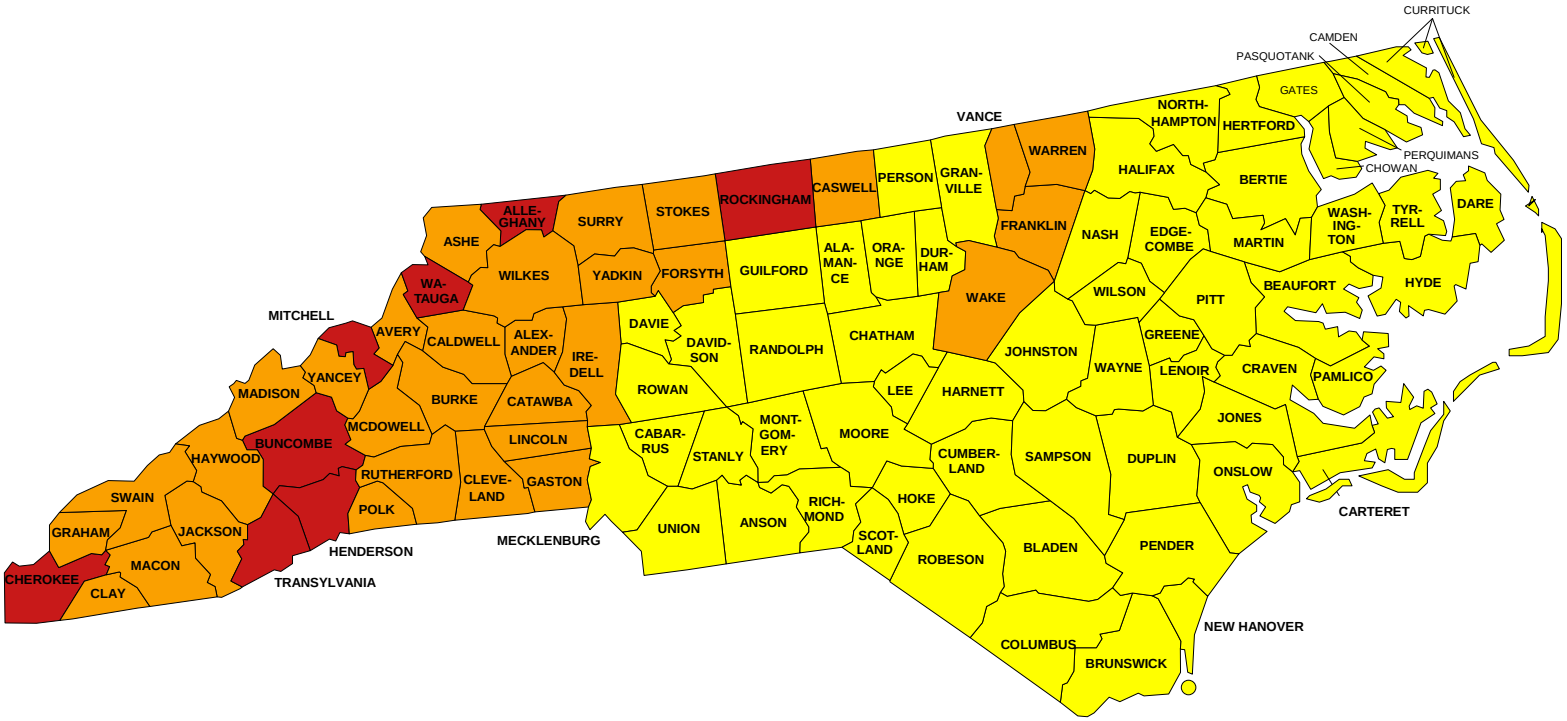
NORTH CAROLINA - EPA Map of Radon Zones

http://www.epa.gov/radon/zonemap.html

The purpose of this map is to assist National, State and local organizations to target their resources and to implement radon-resistant building codes.

This map is not intended to determine if a home in a given zone should be tested for radon. Homes with elevated levels of radon have been found in all three zones.

All homes should be tested, regardless of zone designation.



Zone 1 Zone 2 Zone 3

IMPORTANT: Consult the publication entitled "Preliminary Geologic Radon Potential Assessment of North Carolina" (USGS Open-file Report 93-292-D) before using this map. http://energy.cr.usgs.gov/radon/grpinfo.html This document contains information on radon potential variations within counties. EPA also recommends that this map be supplemented with any available local data in order to further understand and predict the radon potential of a specific area.

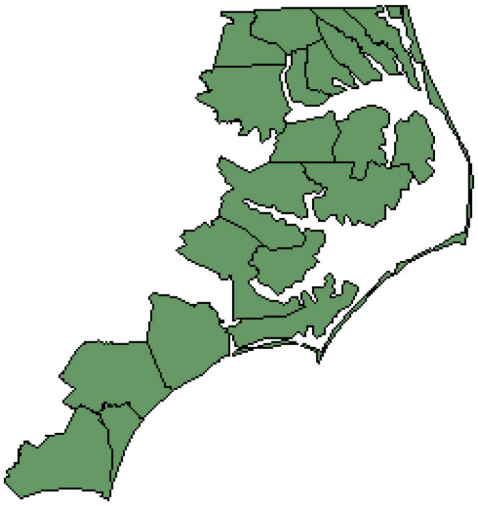
ATTACHMENT 6:

Division of Coastal Zone Management Counties Maps and DCM Correspondence

NORTH CAROLINA
Environmental Quality

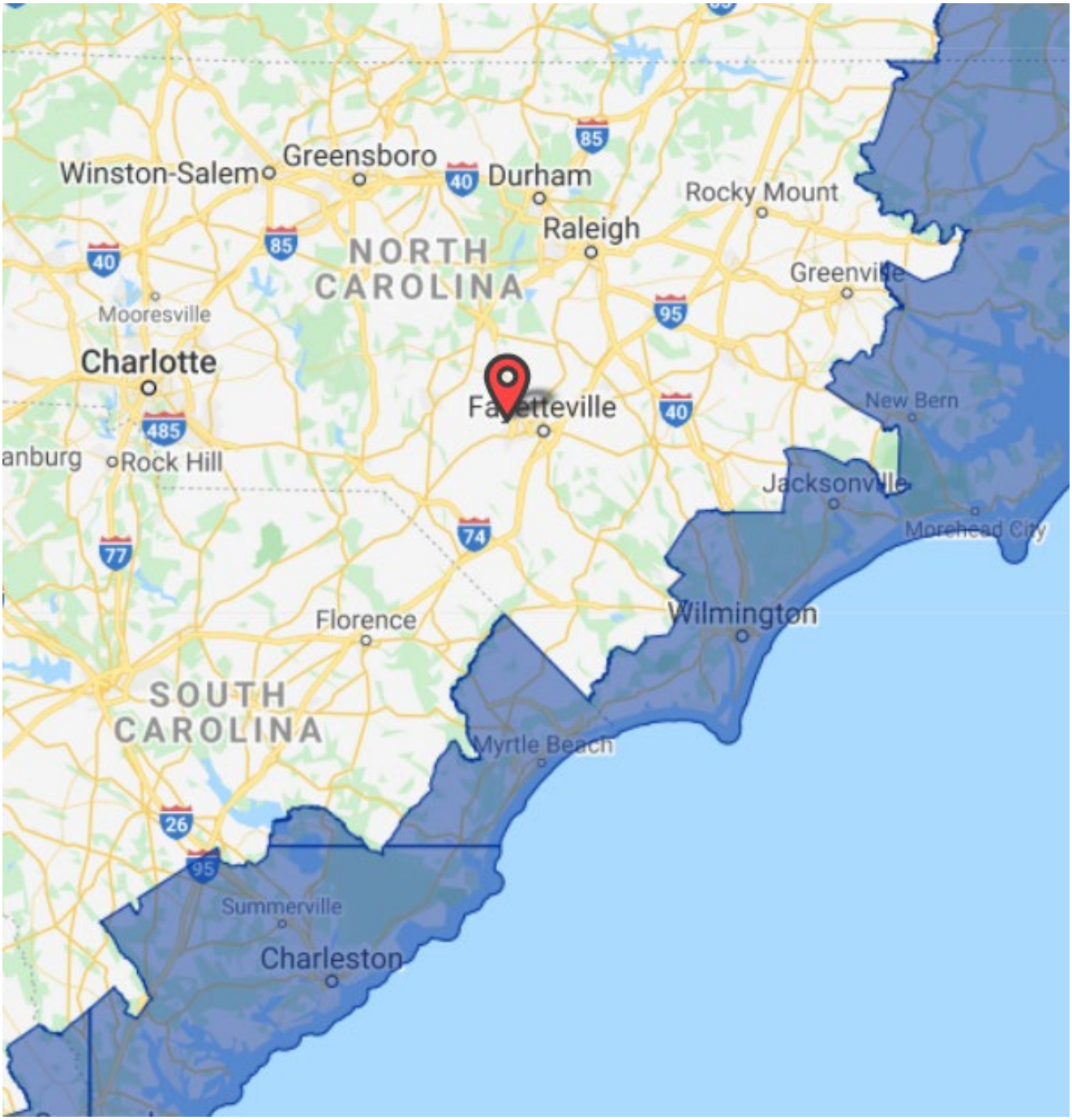
CAMA Counties

The following counties are subject to the rules and policies of the Coastal Resources Commission, which administers the Coastal Area Management Act. If you are planning to develop in one of these counties, check to see whether your project is also in an Area of Environmental Concern (https://deq.nc.gov/about/divisions/coastal-management/coastal-management-rules/coastal-development-rules). If it is, you may need a CAMA permit.

CAMA Counties		
• Beaufort • Bertie • Brunswick • Camden • Carteret • Chowan • Craven • Currituck • Dare • Gates	• Hertford • Hyde • New Hanover • Onslow • Pamlico • Pasquotank • Pender • Perquimans • Tyrrell • Washington	

Showing 1 to 1 of 1 entries

About Coastal Management



Not to Scale

FIGURE 3: COASTAL ZONE MANAEMENT

Source: US National Oceanic and Atmospheric Administration

N

Proposed Cliffmore Park Apartments
Identity Lane
Fayetteville, North Carolina

Atlantic Shores
ASE
Environmental Services, Ltd.

ASE Project No. 1523
February 2022

From: **Govoni, Daniel** daniel.govoni@ncdenr.gov
Subject: RE: [External] Consistency determintation DCM2022005
Date: January 28, 2022 at 9:24 AM
To: Cheryl Moody cmoody@atlanticshoresenv.com

DG

SUBJECT: Consistency Concurrence Concerning the Cliffmore Park Apartments Project, 5133 Identity Lane, Fayetteville, North Carolina, 28314

Hello Cheryl,

North Carolina's coastal zone management program consists of, but is not limited to, the Coastal Area Management Act, the State's Dredge and Fill Law, Chapter 7 of Title 15A of North Carolina's Administrative Code, and the land use plan of the County and/or local municipality in which the proposed project is located. It is the objective of the Division of Coastal Management (DCM) to manage the State's coastal resources to ensure that proposed federal actions would be compatible with safeguarding and perpetuating the biological, social, economic, and aesthetic values of the State's coastal waters.

DCM has reviewed the submitted information pursuant to the management objectives and enforceable policies of Subchapters 7H and 7M of Chapter 7 in Title 15A of the North Carolina Administrative Code and concurs that the proposed activity is consistent with North Carolina's approved coastal management program.

Prior to the initiation of the activities described, the applicant should obtain any required State approvals or authorizations. Should the proposed action be modified further, a revised consistency determination could be necessary. This might take the form of either a supplemental consistency determination pursuant to 15 CFR 930.46, or a new consistency determination pursuant to 15 CFR 930.36. Likewise, if further project assessments reveal environmental effects not previously considered, a supplemental consistency certification may be required. If you have any questions, please contact me at (252) 808-2808. Thank you for your consideration of the North Carolina Coastal Management Program.

Daniel M. Govoni
Policy Analyst
Federal Consistency Coordinator
NC Division of Coastal Management
Department of Environmental Quality

252 808 2808 x233
Daniel.Govoni@ncdenr.gov

Morehead City, NC 28557

Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: Cheryl Moody <cmoody@atlanticshoresenv.com>
Sent: Monday, November 29, 2021 2:56 PM
To: Govoni, Daniel <daniel.govoni@ncdenr.gov>
Subject: [External] Consistency determintation

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to Report Spam.

Daniel,

Can you please provide a consistency determination for the attached property? Thank you.

Cheryl J. Moody, PE, REM, CIEC, CMRS
Principal Engineer
Owner
LEED Green Associate

Atlantic Shores Environmental Services, Ltd.
175-1 Venture Drive
Belville, North Carolina 28451
910-371-5980 (o)
910-512-5321 (c)
cmoody@atlanticshoresenv.com
www.atlanticshoresenvironmental.com
NC License No. C-4762

- A Woman Owned Company - HUB Certified -

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Atlantic Shores Environmental Services, Ltd

November 8, 2021

Mr. Daniel Govoni
Federal Consistency Coordinator
NC Division of Coastal Management
400 Commerce Avenue
Morehead City, North Carolina, 28557

Reference: Consistency Determination
5133 Identity Lane
5133 Identity Lane Fayetteville, North Carolina 28314

Dear Mr. Govani:

Atlantic Shores Environmental Services, Ltd. is currently conducting a HUD Environmental Review for a proposed affordable housing apartment complex project located in Fayetteville, North Carolina. This letter is requesting that you concur that the project is consistent with the policies of the coastal program.

The proposed project area is an approximate 5-acre tract located on Identity Lane in Fayetteville, Cumberland County, North Carolina. Parcel ID: 9487-45-3559. The site is located on a relatively flat tract of land at approximately 250 feet above the National Geodetic Vertical Datum. The land gently slopes down to the southwest approximately 50 feet of the site.

The site is currently agricultural land and is located in a Single-Family Residential area of Fayetteville, North Carolina. The project consists of vacant land that will be used as an apartment complex.

For your reference maps of the location are attached. If you have any question, please contact me at dschiwinger@atlanticshoresenv.com or 910-520-6998 Thank you for your time.

Respectfully submitted,
ATLANTIC SHORES ENVIRONMENTAL SERVICES, LTD.

Daniel J. Schiwinger
Staff Scientist

Attachments: Location Maps

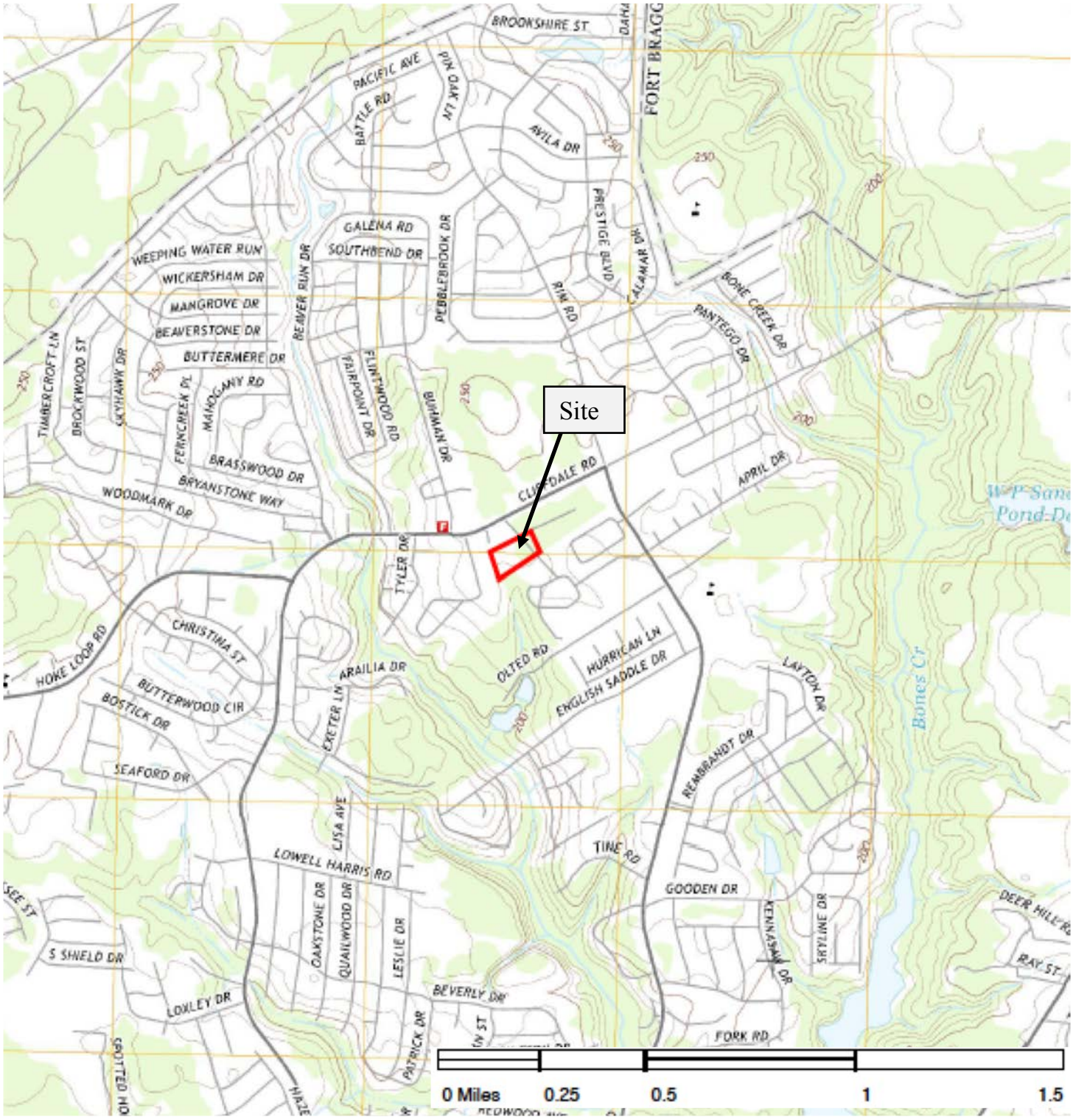


FIGURE 1: TOPOGRAPHIC MAP

Source: USGS Clifdale, North Carolina Quadrangle, 2013.

N

Phase I Environmental Site Assessment
Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
November 2021

0 50 100

FIGURE 2: AERIAL MAP

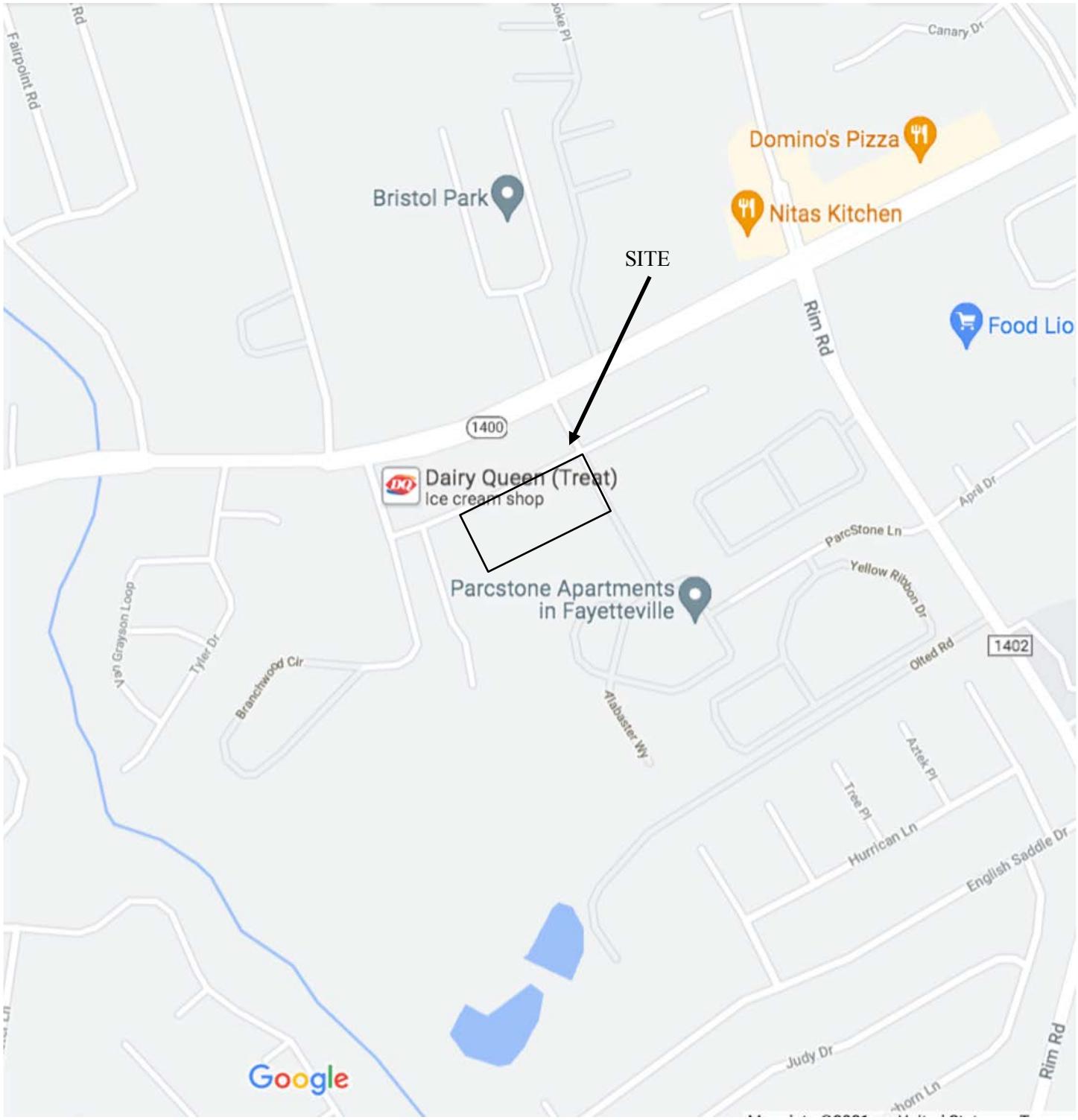
Source: Cumberland County GIS 2021 aerial

N

Phase I Environmental Site Assessment
Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
November 2021



Not to Scale

FIGURE 3: STREET MAP

Source: Google Maps

N

Phase I Environmental Site Assessment
Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
November 2021

ATTACHMENT 7:

Contamination and Toxic Substances

NEPAssist EPA Facilities with 1-mile and 0.5-mile Buffers, NC DEQ DWM Site Locator Reports with 1-mile and 3,000-foot Buffer, Facility Reports, and Phase I ESA

NEPAssist Report

Cliffmore Park - EPA Facilities 1-mile Buffer

November 2, 2022

- Water Dischargers (NPDES)
- Superfund (NPL)
- Hazardous Waste (RCRAInfo)
- Hazardous Waste (RCRAInfo)
- Air Pollution (ICIS-AIR)
- Toxic Releases (TRI)
- Cliffmore Park - EPA Facilities 1-mile Buffer
- Project Buffer

1:36,690

0 0.38 0.75 1.5 mi

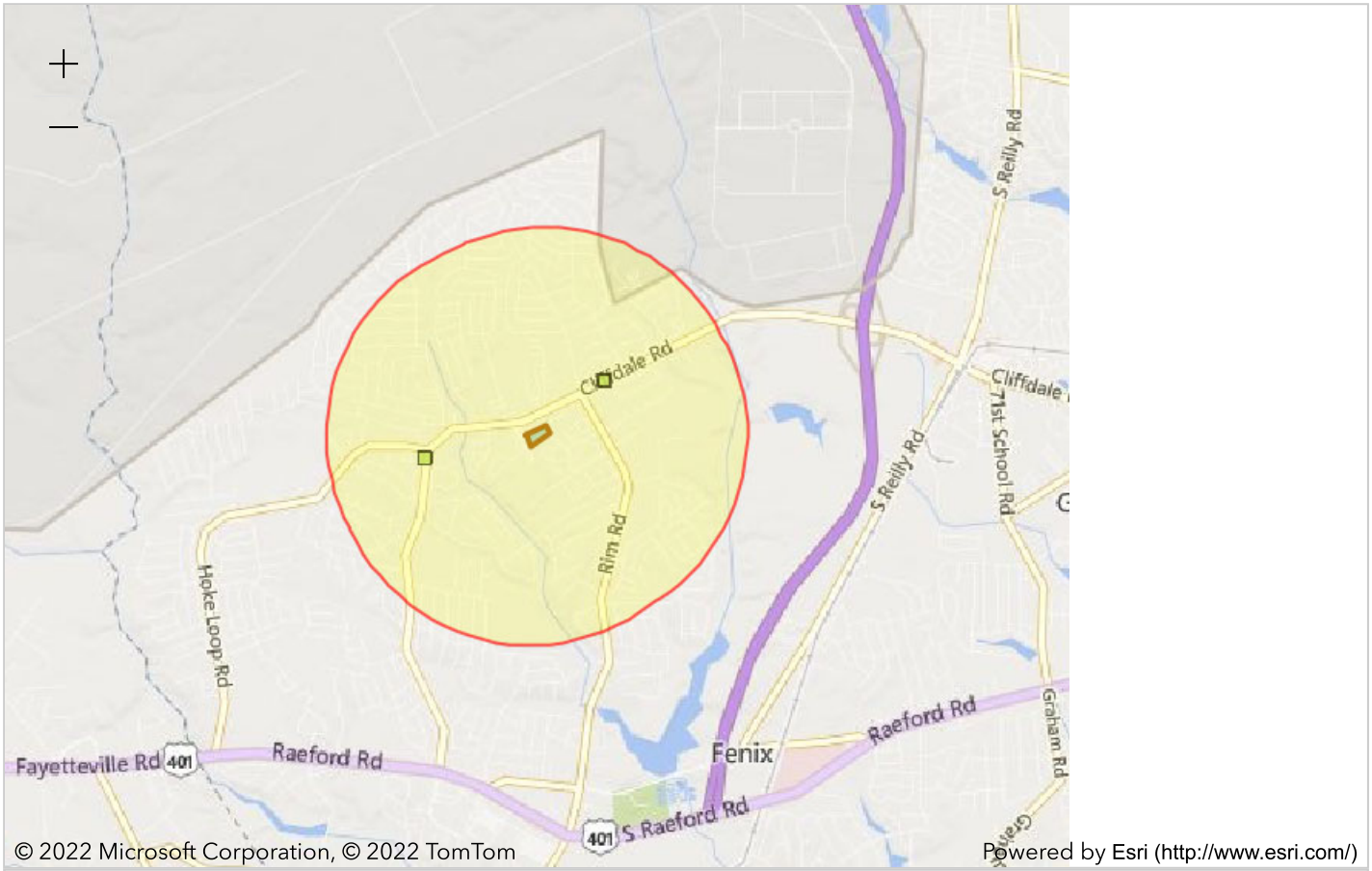
0 0.5 1 2 km

NC CGIA, Maxar, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA

Input Coordinates: 35.056144,-79.054048,35.056846,-79.052186,35.056214,-79.051799,35.055294,-79.053542,35.056095,-79.053911,35.056144,-79.054048	
Project Area	0.01 sq mi
Within 1 mile of an Ozone 8-hr (1997 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of an Ozone 8-hr (2008 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a Lead (2008 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a SO2 1-hr (2010 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a PM2.5 24hr (2006 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a PM2.5 Annual (1997 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a PM2.5 Annual (2012 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a PM10 (1987 standard) Non-Attainment/Maintenance Area?	no
Within 1 mile of a Federal Land?	yes
Within 1 mile of an impaired stream?	no
Within 1 mile of an impaired waterbody?	no
Within 1 mile of a waterbody?	yes
Within 1 mile of a stream?	yes
Within 1 mile of an NWI wetland?	Available Online
Within 1 mile of a Brownfields site?	no
Within 1 mile of a Superfund site?	no
Within 1 mile of a Toxic Release Inventory (TRI) site?	no
Within 1 mile of a water discharger (NPDES)?	no
Within 1 mile of a hazardous waste (RCRA) facility?	yes

Within 1 mile of an air emission facility?	no
Within 1 mile of a school?	no
Within 1 mile of an airport?	no
Within 1 mile of a hospital?	no
Within 1 mile of a designated sole source aquifer?	no
Within 1 mile of a historic property on the National Register of Historic Places?	no
Within 1 mile of a Toxic Substances Control Act (TSCA) site?	no
Within 1 mile of a Land Cession Boundary?	no
Within 1 mile of a tribal area (lower 48 states)?	no
Within 1 mile of the service area of a mitigation or conservation bank?	yes
Within 1 mile of the service area of an In-Lieu-Fee Program?	yes
Within 1 mile of a Public Property Boundary of the Formerly Used Defense Sites?	no
Within 1 mile of a Munitions Response Site?	no
Within 1 mile of an Essential Fish Habitat (EFH)?	no
Within 1 mile of a Habitat Area of Particular Concern (HAPC)?	no
Within 1 mile of an EFH Area Protected from Fishing (EFHA)?	no
Within 1 mile of a Bureau of Land Management Area of Critical Environmental Concern?	no
Within 1 mile of an ESA-designated Critical Habitat Area per U.S. Fish & Wildlife Service?	no
Within 1 mile of an ESA-designated Critical Habitat river, stream or water feature per U.S. Fish & Wildlife Service?	no

Created on: 11/2/2022 12:12:13 PM



Report question: ***Within 1 of a Hazardous waste site?*** **yes**

Modify question by entering a new buffer distance and unit for the selected study area:

1 meters Submit

Name	Distance
WALMART NEIGHBORHOOD MARKET #3411 (FAYETTEVILLE,NC) (https://ofmpub.epa.gov/enviro/rcrainfoquery_3.facility_information?pgm_sys_id=NCR000166165)	0.52 mile

REGISTRY_ID: 110066974983
LATITUDE: 35.054479
LONGITUDE: -79.06293699999999
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: NCR000166165
LOCATION_ADDRESS: 8660 CLIFFDALE RD
CITY_NAME: FAYETTEVILLE
COUNTY_NAME: CUMBERLAND
STATE_CODE: NC
POSTAL_CODE: 28314
FIPS_CODE: 37051
HUC_CODE:

Name	Distance
☐ ANDERSON CLEANERS (FAYETTEVILLE,NC) (https://ofmpub.epa.gov/enviro/rcrainfoquery_3.facility_information?pgm_sys_id=NCR000003517) **REGISTRY_ID:** 110004054166 **LATITUDE:** 35.06013 **LONGITUDE:** -79.04693 **PGM_SYS_ACRNM:** RCRAINFO **PGM_SYS_ID:** NCR000003517 **LOCATION_ADDRESS:** 8126 CLIFFDALE RD STE 707 **CITY_NAME:** FAYETTEVILLE **COUNTY_NAME:** CUMBERLAND **STATE_CODE:** NC **POSTAL_CODE:** 28314 **FIPS_CODE:** 37051 **HUC_CODE:**	0.37 mile

ECHO Enforcement and Compliance History Online

Detailed Facility Report

Facility Summary

WALMART NEIGHBORHOOD MARKET #3411

8660 CLIFFDALE RD, FAYETTEVILLE, NC 28314

FRS (Facility Registry Service) ID: 110066974983
EPA Region: 04
Latitude: 35.054479
Longitude: -79.062937
Locational Data Source: FRS
Industries: General Merchandise Retailers
Indian Country: N

Enforcement and Compliance Summary

Statute	RCRA
Compliance Monitoring Activities (5 years)	--
Date of Last Compliance Monitoring Activity	--
Compliance Status	No Violation Identified
Qtrs in Noncompliance (of 12)	0
Qtrs with Significant Violation	0
Informal Enforcement Actions (5 years)	--
Formal Enforcement Actions (5 years)	--
Penalties from Formal Enforcement Actions (5 years)	--
EPA Cases (5 years)	--

Penalties from EPA Cases (5 years)	--

Regulatory Information

Clean Air Act (CAA): No Information

Clean Water Act (CWA): No Information

Resource Conservation and Recovery Act (RCRA): Active VSQG, (NCR000166165)

Safe Drinking Water Act (SDWA): No Information

Go To Enforcement/Compliance Details
Known Data Problems

Other Regulatory Reports

Air Emissions Inventory (EIS): No Information

Greenhouse Gas Emissions (eGGRT): No Information

Toxic Releases (TRI): No Information

Compliance and Emissions Data Reporting Interface (CEDRI): No Information

Facility/System Characteristics

Facility/System Characteristics

System	Statute	Identifier	Universe	Status	Areas	Permit Expiration Date	Indian Country	Latitude	Longitude
FRS		110066974983					N	35.054479	-79.062937
RCRAInfo	RCRA	NCR000166165	VSQG	Active (H)			N	35.063402	-79.038417

Facility Address

System	Statute	Identifier	Facility Name	Facility Address	Facility County
FRS		110066974983	WALMART NEIGHBORHOOD MARKET #3411	8660 CLIFFDALE RD, FAYETTEVILLE, NC 28314	Cumberland County
RCRAInfo	RCRA	NCR000166165	WALMART NEIGHBORHOOD MARKET #3411	8660 CLIFFDALE RD, FAYETTEVILLE, NC 28314	Cumberland County

Facility SIC (Standard Industrial Classification) Codes

System	Identifier	SIC Code	SIC Description

No data records returned

Facility NAICS (North American Industry Classification System) Codes

System	Identifier	NAICS Code	NAICS Description
RCRAInfo	NCR000166165	455211	Warehouse Clubs and Supercenters

Facility Tribe Information

Reservation Name	Tribe Name	EPA Tribal ID	Distance to Tribe (miles)

No data records returned

Enforcement and Compliance

Compliance Monitoring History

Last 5 Years

Statute	Source ID	System	Activity Type	Compliance Monitoring Type	Lead Agency	Date	Finding (if applicable)

No data records returned

Entries in italics are not counted in EPA compliance monitoring strategies or annual results.

Compliance Summary Data

Statute	Source ID	Current SNC (Significant Noncompliance)/HPV (High Priority Violation)	Current As Of	Qtrs with NC (Noncompliance) (of 12)	Data Last Refreshed
RCRA	NCR000166165	No	10/29/2022	0	10/28/2022

Three-Year Compliance History by Quarter

Statute	Program/Pollutant/Violation Type		QTR 1	QTR 2	QTR 3	QTR 4	QTR 5	QTR 6	QTR 7	QTR 8	QTR 9	QTR 10	QTR 11	QTR 12+
RCRA (Source ID: NCR000166165)			01/01-03/31/20	04/01-06/30/20	07/01-09/30/20	10/01-12/31/20	01/01-03/31/21	04/01-06/30/21	07/01-09/30/21	10/01-12/31/21	01/01-03/31/22	04/01-06/30/22	07/01-09/30/22	10/01-12/31/22
	Facility-Level Status		No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified	No Violation Identified
	Violation	Agency												

Informal Enforcement Actions

Last 5 Years

Statute	System	Source ID	Type of Action	Lead Agency	Date

No data records returned

Entries in italics are not counted as "informal enforcement actions" in EPA policies pertaining to enforcement response tools.

Formal Enforcement Actions

Last 5 Years

Statute	System	Law/Section	Source ID	Type of Action	Case No.	Lead Agency	Case Name	Issued/Filed Date	Settlements/Actions	Settlement/Action Date	Federal Penalty Assessed	State/Local Penalty Assessed	Penalty Amount Collected	SEP Cost	Comp Action Cost

No data records returned

Environmental Conditions

Watersheds

12-Digit WBD (Watershed Boundary Dataset) HUC (RAD (Reach Address Database))	WBD (Watershed Boundary Dataset) Subwatershed Name (RAD (Reach Address Database))	State Water Body Name (ICIS (Integrated Compliance Information System))	Beach Closures Within Last Year	Beach Closures Within Last Two Years	Pollutants Potentially Related to Impairment	Watershed with ESA (Endangered Species Act)-listed Aquatic Species?

No data records returned

Assessed Waters From Latest State Submission (ATTAINS)

State	Report Cycle	Assessment Unit ID	Assessment Unit Name	Water Condition	Cause Groups Impaired	Drinking Water Use	Aquatic Life	Fish Consumption Use	Recreation Use	Other Use

No data records returned

Air Quality Nonattainment Areas

Pollutant	Within Nonattainment Status Area?	Nonattainment Status Applicable Standard(s)	Within Maintenance Status Area?	Maintenance Status Applicable Standard(s)

No data records returned

Pollutants

Toxics Release Inventory History of Reported Chemicals Released in Pounds per Year at Site

TRI Facility ID	Year	Total Air Emissions	Surface Water Discharges	Off-Site Transfers to POTWs (Publicly Owned Treatment Works)	Underground Injections	Releases to Land	Total On-Site Releases	Total Off-Site Transfers

No data records returned

Toxics Release Inventory Total Releases and Transfers in Pounds by Chemical and Year

Chemical Name

No data records returned

Community

EJScreen EJ Indexes

Twelve environmental justice (EJ) indexes of EJScreen, EPA's screening tool for EJ concerns. EPA uses these indexes to identify geographic areas that may warrant further consideration or analysis for potential EJ concerns. The index values below are for the Census block group or 1-mile maximum (US or State) in which the facility is located. Note that use of these indexes does not designate an area as an "EJ community" or "EJ facility." EJScreen provides screening level indicators, not a determination of the existence or absence of EJ concerns. For more information, see the EJScreen home page.

Show EJ Indexes calculated based on: Census Block Group - US

Census Block Group EJ Indexes (percentile)	
Particulate Matter 2.5	89.3
Ozone	92.5
Diesel Particulate Matter	82
Air Toxics Cancer Risk	91.9
Air Toxics Respiratory Hazard Index	92.5
Traffic Proximity	73.8
Lead Paint	62.9
Risk Management Plan (RMP) Facility Proximity	70.5
Hazardous Waste Proximity	77.2
Superfund Proximity	94.6
Underground Storage Tanks (UST)	63.6

Number of EJ Indexes Above 80th Percentile
6

View EJScreen Report (US/regional/state percentiles, 1-mile average)

Census Block Group EJ Indexes (percentile)	
Wastewater Discharge	--

Demographic Profile of Surrounding Area (1 mile)

This section provides demographic information regarding the community surrounding the facility. ECHO compliance data alone are not sufficient to determine whether violations at a particular facility had negative impacts on public health or the environment. Statistics are based upon the 2010 U.S. Census and 2015 - 2019 American Community Survey (ACS) 5-year Summary and are accurate to the extent that the facility latitude and longitude listed below are correct. EPA's spatial processing methodology considers the overlap between the selected radii and the census blocks (for U.S. Census demographics) and census block groups (for ACS demographics) in determining the demographics surrounding the facility. For more detail about this methodology, see the DFR Data Dictionary.

General Statistics (U.S. Census)	
Total Persons	8,374
Population Density	2,765/sq.mi.
Housing Units in Area	3,174

General Statistics (ACS (American Community Survey))	
Total Persons	10,399
Percent People of Color	74%
Households in Area	3,634
Households on Public Assistance	40
Persons With Low Income	3,619
Percent With Low Income	35%

Geography	
Radius of Selected Area	1 mi.
Center Latitude	35.054479
Center Longitude	-79.062937
Land Area	100%
Water Area	0%

Income Breakdown (ACS (American Community Survey)) - Households (%)	
Less than $15,000	330 (9.09%)
$15,000 - $25,000	243 (6.69%)
$25,000 - $50,000	888 (24.46%)
$50,000 - $75,000	785 (21.62%)
Greater than $75,000	1,385 (38.14%)

Age Breakdown (U.S. Census) - Persons (%)	
Children 5 years and younger	833 (10%)
Minors 17 years and younger	2,656 (32%)
Adults 18 years and older	5,718 (68%)
Seniors 65 years and older	335 (4%)

Race Breakdown (U.S. Census) - Persons (%)	
White	3,177 (38%)
African-American	4,034 (48%)
Hispanic-Origin	1,127 (13%)
Asian/Pacific Islander	269 (3%)
American Indian	53 (1%)
Other/Multiracial	841 (10%)

Education Level (Persons 25 & older) (ACS (American Community Survey)) - Persons (%)	
Less than 9th Grade	128 (2.04%)
9th through 12th Grade	220 (3.51%)
High School Diploma	1,504 (24.01%)
Some College/2-year	1,788 (28.54%)
B.S./B.A. (Bachelor of Science/Bachelor of Arts) or More	1,841 (29.39%)

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MENU

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RCRAInfo Facility Information

<< Return

WALMART NEIGHBORHOOD MARKET #3411 Handler ID: NCR000166165 8660 CLIFFDALE RD FAYETTEVILLE, NC 28314 **County Name:** CUMBERLAND **Latitude:** 35.054479 **Longitude:** -79.062937 **Hazardous Waste Generator:** Very Small Quantity Generator **Owner Name:** WAL-MART STORES EAST, LP		**You can navigate within the map with your mouse.*

No BIENNIAL REPORT data is available for the facility listed above.

LIST OF FACILITY CONTACTS

NAME	STREET	CITY	STATE	ZIP CODE	PHONE	TYPE OF CONTACT
CALDWELL ROSE	P.O. BOX 8041	BENTONVILLE	AR	72712-8041	479-277-8972	Public
ROSE CALDWELL	P.O. BOX 8041	BENTONVILLE	AR	72712-8041	479-277-8972,	Permit

HANDLER / FACILITY CLASSIFICATION

Unspecified Universe for the facility listed above.

HANDLER TYPE
Very Small Quantity Generator

No PROCESS INFORMATION is available for the facility listed above.

LIST OF NAICS CODES AND DESCRIPTIONS

NAICS CODE	NAICS DESCRIPTION
452311	WAREHOUSE CLUBS AND SUPERCENTERS
455211	WAREHOUSE CLUBS AND SUPERCENTERS

452910	WAREHOUSE CLUBS AND SUPERCENTERS

LIST OF WASTE CODES AND DESCRIPTIONS

WASTE CODE	WASTE DESCRIPTION
D001	IGNITABLE WASTE
D002	CORROSIVE WASTE
D003	REACTIVE WASTE
D004	ARSENIC
D005	BARIUM
D006	CADMIUM
D007	CHROMIUM
D008	LEAD
D009	MERCURY
D010	SELENIUM
D011	SILVER
D013	LINDANE (1,2,3,4,5,6-HEXA-CHLOROCYCLOHEXANE, GAMMA ISOMER)
D016	2,4-D (2,4-DICHLOROPHENOXYACETIC ACID)
D018	BENZENE
D024	M-CRESOL
D025	P-CRESOL
D026	CRESOL
D027	1,4-DICHLOROBENZENE
D030	2,4-DINITROTOLUENE
D035	METHYL ETHYL KETONE
D039	TETRACHLOROETHYLENE

P001	2H-1-BENZOPYRAN-2-ONE, 4-HYDROXY-3-(3-OXO-1-PHENYLBUTYL)-, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3% (OR) WARFARIN, & SALTS, WHEN PRESENT AT CONCENTRATIONS GREATER THAN 0.3%
U002	2-PROPANONE (I) (OR) ACETONE (I)
U034	ACETALDEHYDE, TRICHLORO- (OR) CHLORAL
U035	BENZENEBUTANOIC ACID, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) CHLORAMBUCIL
U058	2H-1,3,2-OXAZAPHOSPHORIN-2-AMINE, N,N-BIS(2-CHLOROETHYL)TETRAHYDRO-, 2-OXIDE (OR) CYCLOPHOSPHAMIDE
U072	BENZENE, 1,4-DICHLORO- (OR) P-DICHLOROBENZENE
U089	DIETHYLSTILBESTEROL (OR) PHENOL, 4,4'-(1,2-DIETHYL-1,2-ETHENEDIYL)BIS, (E)-
U122	FORMALDEHYDE
U129	CYCLOHEXANE, 1,2,3,4,5,6-HEXACHLORO-, (1ALPHA, 2ALPHA, 3BETA, 4ALPHA, 5ALPHA, 6BETA)- (OR) LINDANE
U132	HEXACHLOROPHENE (OR) PHENOL, 2,2'-METHYLENEBIS[3,4,6-TRICHLORO-
U134	HYDROFLUORIC ACID (C,T) (OR) HYDROGEN FLUORIDE (C,T)
U150	L-PHENYLALANINE, 4-[BIS(2-CHLOROETHYL)AMINO]- (OR) MELPHALAN
U154	METHANOL (I) (OR) METHYL ALCOHOL (I)
U165	NAPHTHALENE
U188	PHENOL
U200	RESERPINE (OR) YOHIMBAN-16-CARBOXYLIC ACID, 11,17-DIMETHOXY-18-[(3,4,5-TRIMETHOXYBENZOYL)OXY]-, METHYL ESTER, (3BETA, 16BETA, 17ALPHA, 18BETA, 20ALPHA)-
U205	SELENIUM SULFIDE (OR) SELENIUM SULFIDE SES2 (R,T)
U249	ZINC PHOSPHIDE ZN3P2, WHEN PRESENT AT CONCENTRATIONS OF 10% OR LESS
U279	CARBARYL (OR) 1-NAPHTHALENOL, METHYLCARBAMATE
U411	PHENOL, 2-(1-METHYLETHOXY)-, METHYLCARBAMATE (OR) PROPOXUR

Go To Top Of The Page

Total Number of Facilities Retrieved: 1

Data Refresh Information <https://epa.gov/resources/echo-data/about-the-data#sources>

NEPAssist Report

Cliffmore Park - EPA Facilities 0.5-mile Buffer

November 2, 2022

- Water Dischargers (NPDES)
- Air Pollution (ICIS-AIR)
- Superfund (NPL)
- Hazardous Waste (RCRAInfo)
- Toxic Releases (TRI)
- Cliffmore Park - EPA Facilities 0.5-mile Buffer
- Project Buffer

1:18,345

0 0.17 0.35 0.7 mi
0 0.3 0.6 1.2 km

NC CGIA, Maxar, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

Input Coordinates: 35.056144,-79.054048,35.056846,-79.052186,35.056214,-79.051799,35.055294,-79.053542,35.056095,-79.053911,35.056144,-79.054048	
Project Area	0.01 sq mi
Within 0.5 miles of an Ozone 8-hr (1997 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of an Ozone 8-hr (2008 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a Lead (2008 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a SO2 1-hr (2010 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM2.5 24hr (2006 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM2.5 Annual (1997 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM2.5 Annual (2012 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a PM10 (1987 standard) Non-Attainment/Maintenance Area?	no
Within 0.5 miles of a Federal Land?	no
Within 0.5 miles of an impaired stream?	no
Within 0.5 miles of an impaired waterbody?	no
Within 0.5 miles of a waterbody?	no
Within 0.5 miles of a stream?	yes
Within 0.5 miles of an NWI wetland?	Available Online
Within 0.5 miles of a Brownfields site?	no
Within 0.5 miles of a Superfund site?	no
Within 0.5 miles of a Toxic Release Inventory (TRI) site?	no
Within 0.5 miles of a water discharger (NPDES)?	no
Within 0.5 miles of a hazardous waste (RCRA) facility?	yes

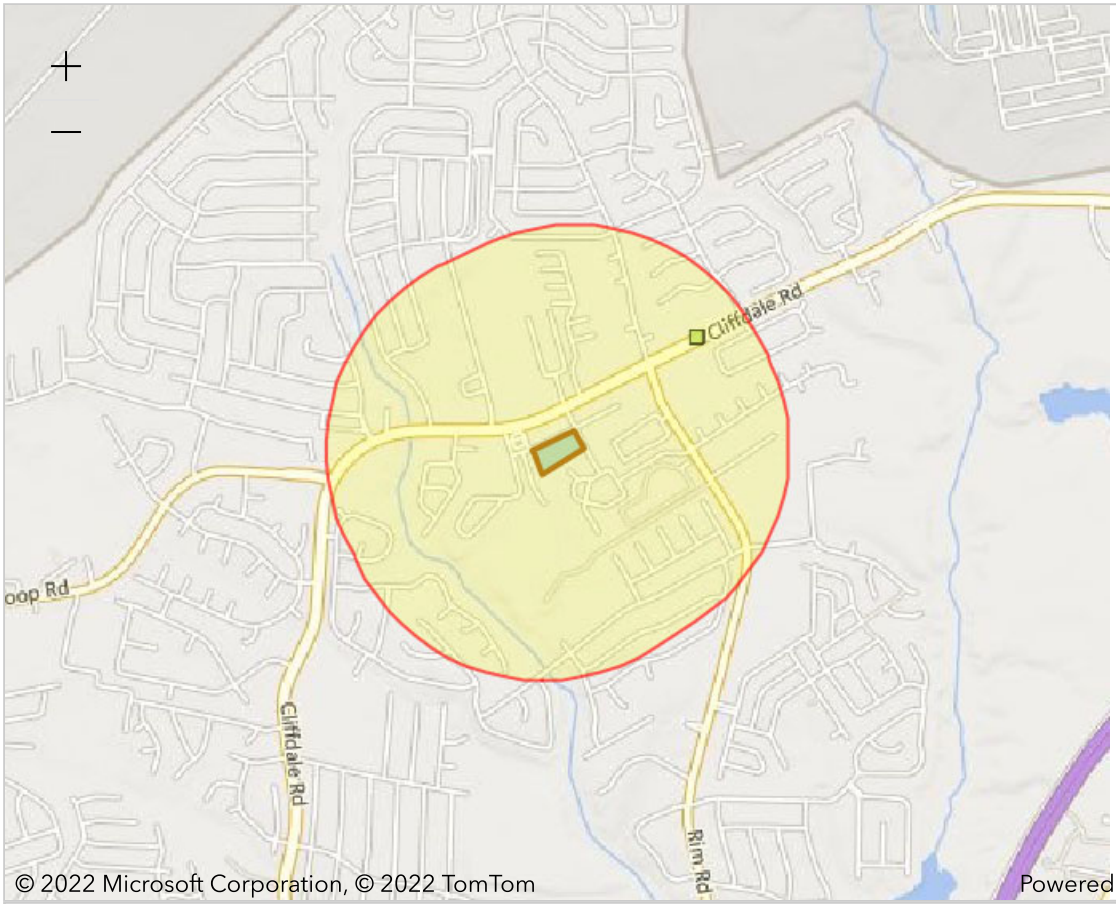
Within 0.5 miles of an air emission facility?	no
Within 0.5 miles of a school?	no
Within 0.5 miles of an airport?	no
Within 0.5 miles of a hospital?	no
Within 0.5 miles of a designated sole source aquifer?	no
Within 0.5 miles of a historic property on the National Register of Historic Places?	no
Within 0.5 miles of a Toxic Substances Control Act (TSCA) site?	no
Within 0.5 miles of a Land Cession Boundary?	no
Within 0.5 miles of a tribal area (lower 48 states)?	no
Within 0.5 miles of the service area of a mitigation or conservation bank?	yes
Within 0.5 miles of the service area of an In-Lieu-Fee Program?	yes
Within 0.5 miles of a Public Property Boundary of the Formerly Used Defense Sites?	no
Within 0.5 miles of a Munitions Response Site?	no
Within 0.5 miles of an Essential Fish Habitat (EFH)?	no
Within 0.5 miles of a Habitat Area of Particular Concern (HAPC)?	no
Within 0.5 miles of an EFH Area Protected from Fishing (EFHA)?	no
Within 0.5 miles of a Bureau of Land Management Area of Critical Environmental Concern?	no
Within 0.5 miles of an ESA-designated Critical Habitat Area per U.S. Fish & Wildlife Service?	no
Within 0.5 miles of an ESA-designated Critical Habitat river, stream or water feature per U.S. Fish & Wildlife Service?	no

Created on: 11/2/2022 12:09:44 PM

NEPAssist

Home (https://www.epa.gov/nepa/nepassist) | Help (help/NEPAssistHelp.pdf)

US Environmental Protection Agency (//www.epa.gov)



Report question: ***Within 0.5 of a Hazardous waste site?*** **yes**

Modify question by entering a new buffer distance and unit for the selected study area:

0.5 miles Submit

Name	Distance
ANDERSON CLEANERS (FAYETTEVILLE,NC) (https://ofmpub.epa.gov/enviro/rcrainfoquery_3.facility_information?pgm_sys_id=NCR000003517)	0.37 miles

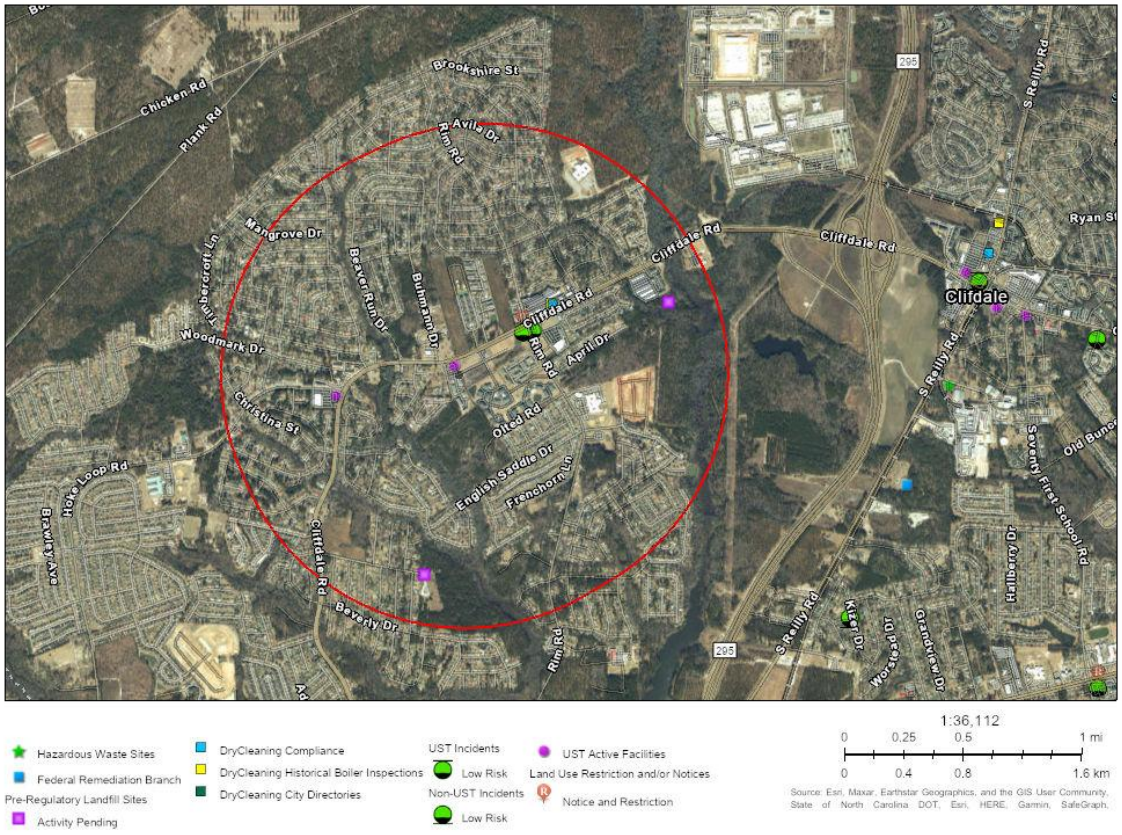
REGISTRY_ID: 110004054166
LATITUDE: 35.06013
LONGITUDE: -79.04693
PGM_SYS_ACRNM: RCRAINFO
PGM_SYS_ID: NCR000003517
LOCATION_ADDRESS: 8126 CLIFFDALE RD STE 707
CITY_NAME: FAYETTEVILLE
COUNTY_NAME: CUMBERLAND
STATE_CODE: NC
POSTAL_CODE: 28314
FIPS_CODE: 37051
HUC_CODE:

Cliffmore Park - Screening Report (One-mile Buffer)

Area of Interest (AOI) Information

Area : 97,535,958.82 ft²

Nov 22 2022 16:13:35 Eastern Standard Time



Pre-Regulatory Landfill Sites

#	EPAID	SITENAME	Count
1	NCD980502900	Cumberland County/Cliffdale LF	1
2	NONCD0000733	Cumberland County Landfill - Bones Creek	1

DryCleaning Compliance

#	Facility_ID	Facility_Name	Count
1	260006C	Anderson Cleaners	1

DryCleaning Historical Boiler Inspections

#	Drycleaner	InspDate	Count
1	ANDERSONS CLEANERS	6/22/1997	1

UST Incidents

#	IncidentNumber	IncidentName	Count
1	19702	PANTRY 456	1
2	22150	THE PANTRY 3031 (DBA QUICK STOP)	1

UST Active Facilities

#	FACILID	FACILNAME	Count
1	00-0-0000012310	CIRCLE K 2720456	1
2	00-0-0000037127	REFUEL 151	1
3	00-0-0000040008	WALMART NEIGHBORHOOD MARKET 3411	1

Land Use Restriction and/or Notices

#	Prj_Number	Prj_Name	Count
1	FA-1176	THE PANTRY 3031 (DBA QUICK STOP)	1

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary

NORTH CAROLINA
Environmental Quality

To: Crystal Best
State Clearinghouse
NC Department of Administration

From: Lyn Hardison
Division of Environmental Assistance and Customer Service
Washington Regional Office

RE: 22-0186
Environmental Assessment - Proposed project is for the construction of Cliffmore Park which will consist of a 72-unit apartment community for low to moderate income seniors.
Cumberland County

Date: April 18, 2022

The Department of Environment Quality has reviewed the proposal for the referenced project. Based on the information provided, two (2) contamination sites were identified within one mile of the project site. In addition, several of our agencies have identified permits that may be required and offered some valuable guidance. The comments are attached for the applicant's review.

The Department will continue to be available to assist the applicant with any question or concerns.

Thank you for the opportunity to respond.

Attachments

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
MICHAEL SCOTT
Director

NORTH CAROLINA
Environmental Quality

Date: April 11, 2022

To: Michael Scott, Director
Division of Waste Management

Through: Janet Macdonald
Inactive Hazardous Sites Branch

From: Bonnie S. Ware
Inactive Hazardous Sites Branch

Subject: NEPA Project # 22-0186, NC Housing Finance Agency, Cumberlandt County, North Carolina

The Superfund Section has reviewed the proximity of sites under its jurisdiction to the NC Housing Finance Agency project. Proposed project is for the construction of Cliffmore Park which will consist of a 72-unit apartment community for low to moderate income seniors.

Two (2) Superfund Section sites were identified within one mile of the project as shown on the attached report. However, these two separate incident numbers are in fact associated with one site. The Superfund Section recommends that site files be reviewed to ensure that appropriate precautions are incorporated into any construction activities that encounter potentially contaminated soil or groundwater. Superfund Section files can be viewed at: http://deq.nc.gov/waste-management-laserfiche.

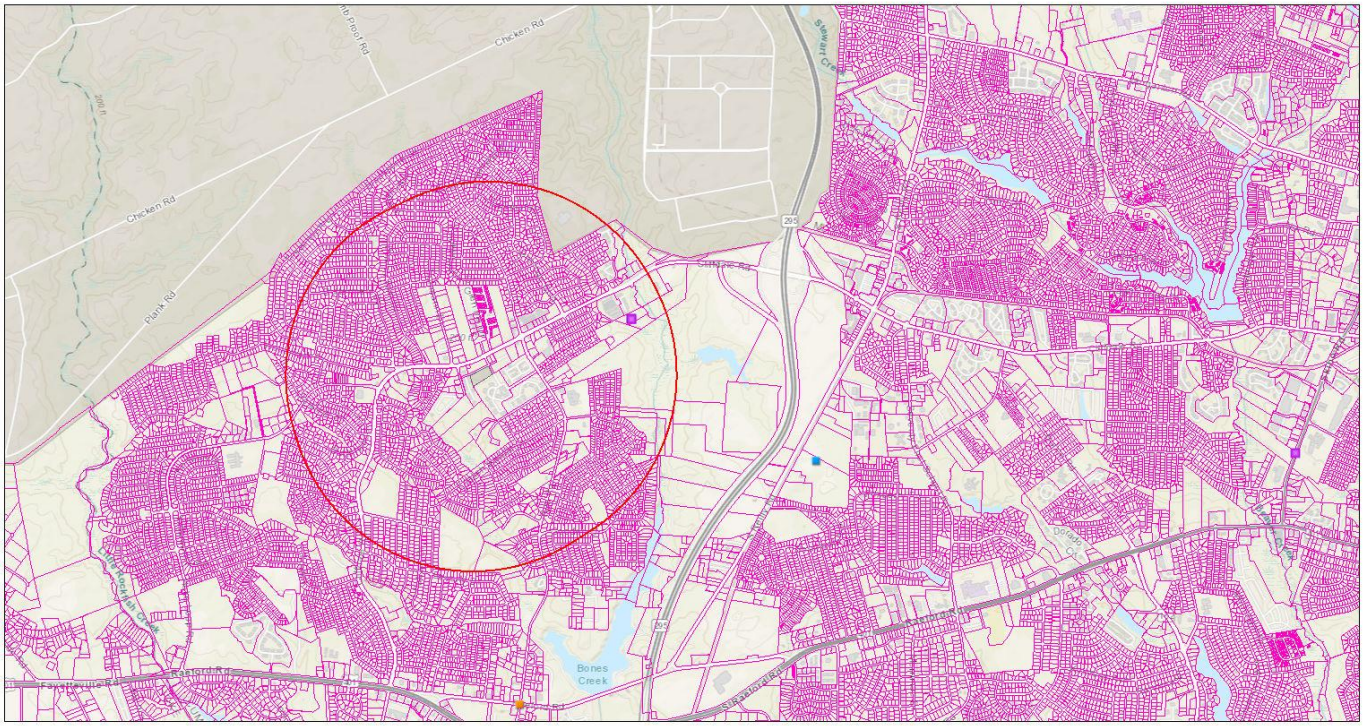
Please contact Janet Macdonald at 919.707.8349 if you have any questions concerning the Superfund Section review portion of this SEPA/NEPA inquiry.

SUPERFUND SECTION SITES ONLY : SEPA/NEPA

Area of Interest (AOI) Information

Area : 2,235.09 acres

Apr 11 2022 12:53:57 Eastern Daylight Time



Superfund Section Sites Only : 22-0186 Cumberland County

Summary

Name	Count	Area(acres)	Length(mi)
Certified DSCA Sites	0	N/A	N/A
Federal Remediation Branch Sites	0	N/A	N/A
Inactive Hazardous Sites	0	N/A	N/A
Pre-Regulatory Landfill Sites	2	N/A	N/A
Brownfields Program Sites	0	N/A	N/A

Pre-Regulatory Landfill Sites

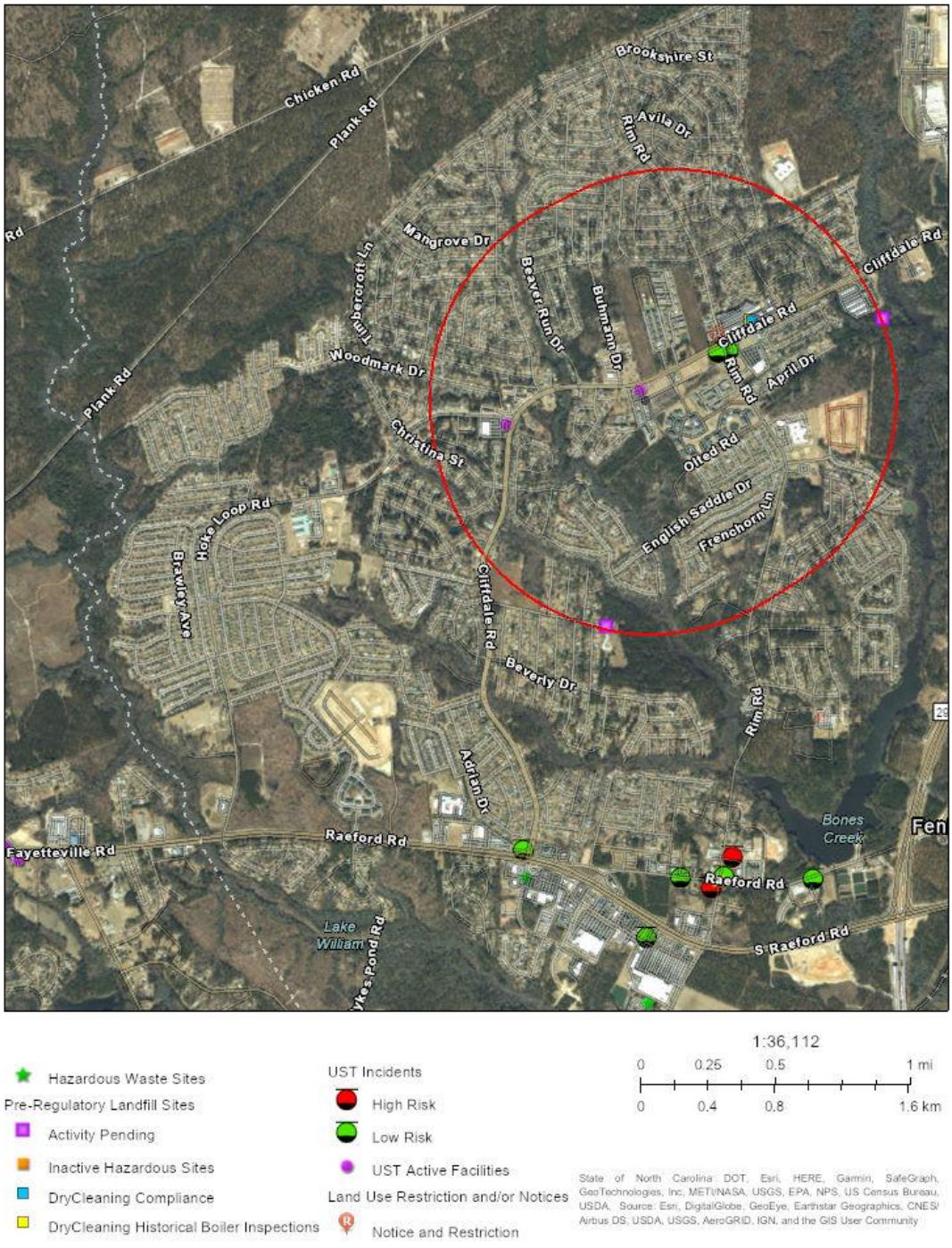
#	EPAID	SITENAME	Count
1	NCD980502900	CUMBERLAND COUNTY/CLIFFDALE LF	1
2	NONCD0000733	CUMBERLAND COUNTY LANDFILL - BONES CREEK	1

Cliffmore Park - DWM Screening Report (4,250-foot Buffer)

Area of Interest (AOI) Information

Area : 64,650,026.8 ft²

Nov 3 2022 13:46:49 Eastern Daylight Time



Pre-Regulatory Landfill Sites

#	EPAID	SITENAME	Count
1	NCD980502900	Cumberland County/Cliffdale LF	1

DryCleaning Compliance

#	Facility_ID	Facility_Name	Count
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DryCleaning Historical Boiler Inspections

#	Drycleaner	InspDate	Count
1	ANDERSONS CLEANERS	6/22/1997	1

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2	22150	THE PANTRY 3031 (DBA QUICK STOP)	1

UST Active Facilities

#	FACILID	FACILNAME	Count
1	00-0-0000012310	CIRCLE K 2720456	1
2	00-0-0000037127	REFUEL 151	1
3	00-0-0000040008	WALMART NEIGHBORHOOD MARKET 3411	1

Land Use Restriction and/or Notices

#	Prj_Number	Prj_Name	Count
1	FA-1176	THE PANTRY 3031 (DBA QUICK STOP)	1

Cliffmore Park - Screening Report (3,000-foot Buffer)

Area of Interest (AOI) Information

Area : 33,972,874.83 ft²

Nov 22 2022 13:40:29 Eastern Standard Time

DryCleaning Compliance

#	Facility_ID	Facility_Name	Count
1	260006C	Anderson Cleaners	1

DryCleaning Historical Boiler Inspections

#	Drycleaner	InspDate	Count
1	ANDERSONS CLEANERS	6/22/1997	1

UST Incidents

#	IncidentNumber	IncidentName	Count
1	19702	PANTRY 456	1
2	22150	THE PANTRY 3031 (DBA QUICK STOP)	1

UST Active Facilities

#	FACILID	FACILNAME	Count
1	00-0-0000012310	CIRCLE K 2720456	1
2	00-0-0000037127	REFUEL 151	1
3	00-0-0000040008	WALMART NEIGHBORHOOD MARKET 3411	1

Land Use Restriction and/or Notices

#	Prj_Number	Prj_Name	Count
1	FA-1176	THE PANTRY 3031 (DBA QUICK STOP)	1

LANDFILL DOCUMENTATION

324PRLFSF548

DocumentID	NCD980502900
SITENAME	CUMBERLAND COUNTY/CLIFFDALE LF
DocumentType	Correspondence (C)
RptSegment	1
DocDate	1/31/2005
DocRcvd	1/31/2005
Box	SF548
AccessLevel	Public
Division	Waste Management
Section	Superfund
Program	IHS (IHS)
DocCat	Facility

Site Name:	CUMBERLAND CO/CLIFFDALE LF	**In IHS Inventory?**	Yes
ID Number:	NCD980502900	**Other Agency Lead**	SWS
Site Address:	CLIFFDALE RD(SR	**NFA or NFA-Restricted Use?**	No
City:	FAYETTEVILLE	**Unable to Locate**	○
State Plane X:		**Latitude:**	35.0585
State Plane Y:		**Longitude:**	-79.0455

Directions: CLIFFDALE RD(SR 1402) & SR1400

✓

LDFL Size (Acres):	.42	**Present Within 1000 ft of Ldfl**			
Property Size (Acres):	42	**Church**	No	**Residence On Ldfl?**	No
Date Open:		**School**	No	**Potable Well Within 500 ft?**	No
Date Closed:	1983	**Day Care**	No	**Adjoins Perennial SW?**	No
		Residential	No		

Notes: CREOSOTE SALTS FROM CLARK & PROCTOR TURP CO IN FAYETTEVILLE. OWNED BY CUMBERLAND CO AS OF 2/2000..

(End Site Record)

Cumberland Co.

Pine Trees Room Stuff

English Saddle Dr
Judy Dr
Bugle Call Dr
Frenchorn Ln
Foxhunt Ln
Foxhound Ct
Old Hunt Pl
Oak Meadow
Deertrot Rd
Grouse Run Ln
Levi Rd
Ssssssssstine Rd
Martha Ct
Harris Rd
Gooden
Rim Rd
Castle Falls Cir
Mountai
High Kite Pl
Patrick Dr
Nan St
Cellner Dr
Shumont Dr
Beverly Dr
Blackford Dr
Fox Fern Dr
Stitch St

Cliffdale
sanitary Landfill
71st township site
SR-1400

October 30, 1978

Clifdale Quad.

Mr. Rodney M. Honeycutt, P. E.
County Engineer
Cumberland County Joint Planning Board
801 Arsenal Avenue
Post Office Box 3005
Fayetteville, North Carolina 28305

Dear Mr. Honeycutt:

RE: Addendum to Order of Approval for the Cliffdale Sanitary Landfill Expansion

The approved plan for the Cliffdale Sanitary Landfill Expansion includes the following required modifications and recommendations:

Required modifications;

1. Soil borings were terminated at elevations of 169 feet to 173 feet; therefore, maximum excavation limits for solid waste disposal shall be terminated at elevations of 179 feet to 183 feet.

2. Surface drainage for the area enclosed by the 200 foot contour line, located on the south perimeter of the present operational phase, must be maintained by excavation below 195 feet in the proposed south perimeter drainage ditch on the expansion phase.

Recommendations:

1. Lateral movement of sub-surface water from off site sources, particularly from the South, toward the proposed expansion may be a potential problem. It is recommended that the south perimeter drainage ditch be excavated to, and channel bottom terminated in, the upper SC or other impermeable soil layers. The upper impermeable soil layers should perch laterally moving water and discharge this water into the south perimeter drainage ditch.

2. Soil borings indicate stratified permeable and impermeable earth material layers on the expansion phase. These layers are tilted from the horizonal in such a manner that highly permeable layers with a gradient to the groundwater table, may be exposed during excavation. If maximum excavation limits are terminated in SM, or particularly SP materials, then any mobile contaminants resulting

from landfill activity could be a potential source of discharge to groundwater. To minimize this potential, it is recommended that 24-inch and 48-foot compacted blankets of SC, SC-SM, CL materials be placed over exposed SM and SP lenses respectively. Compaction with a Rex 350 in successive 6-inch layers to 95 percent standard Proctor (ASTM D698, AASHO T99) should be sufficient.

3. Rip-rap may not be sufficient to prevent cutting of discharge area from drainage ditch to sedimentation basin.

4. Consideration should be given to stabilization devices, such as piping, for movement of surface water from the finished landfill face to the toe of perimeter dikes.

If I can be of any assistance to you, please contact me.

Respectfully,

William L. Meyer
Environmental Engineer
Solid Waste & Vector Control Branch
Sanitary Engineering Section

WLM/wss

cc: Mr. Terry F. Dover

October 17, 1978

Mr. Rodney M. Honeycutt, P. E.
County Engineer
Cumberland County Joint Planning Board
801 Arsenal Avenue
Post Office Box 3005
Fayetteville, North Carolina 28305

Dear Mr. Honeycutt:

The plan for the Cliffdale Landfill Expansion, located in Cumberland County, has beep reviewed and approved with the following conditions:

1. The site be operated in accordance with the approved plan and in accordance with the Division of Health Services' "Rules for Solid Waste Management".

2. The Order of Approval be recorded with the Cumberland County Register of Deeds.

Sincerely,

O. W. Strickland, Supervisor
Solid Waste Management Unit
Solid Waste & Vector Control Branch
Sanitary Engineering Section

OWS/wss

cc: Mr. Terry F. Dover
Mr. C. L. Twine

Enclosure

N. C. DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
SOLID WASTE & VECTOR CONTROL BRANCH
P. O. BOX 2091
RALEIGH, NORTH CAROLINA 27602

Wake County
Raleigh, NC

ORDER OF APPROVAL
for
Cliffdale Landfill
Cumberland County

I. Order of Approval Issued to C. L. Twine
on October 17, 19 78.

II. Required information for evaluating proposed site and operational plans for a sanitary landfill on the below described property has been submitted for review in compliance with the "Solid Waste Management Rules". Those plans are hereby approved for operation with a complete set of the approved plans being returned to the applicant.

III. Description of Property:

BEGINNING at a twin poplar, a common corner with Cumberland County (Book 2319, page 567), a line running South 67 degrees 17 minutes East 1,499.42 feet to a new iron pipe, a common corner with David F. McInnis Heirs property; thence with the McInnis line South 69 degrees 27 minutes West 1,000.00 feet to a new iron pipe, a common corner with David F. McInnis Heirs property; thence North 26 degrees 33 minutes West 81.84 feet to a new iron pipe; thence due West 770.34 feet to a new iron pipe, a common corner with Cumberland County property; thence with the Cumberland County line North 22 degrees 49 minutes East 929.50 feet to the beginning, a twin poplar, containing 19.387 acres, more or less, being the same land described in a deed to Alex Bethune (Book 436, page 104) dated December 26, 1941.

IV. Effective Date: This approval is not effective until the applicant has recorded this document with the Register of Deeds in the county where the sanitary landfill is located. (G.S. 130-166.21)

This is to certify that this is an exact and true copy of the above order of approval.

Jacob Koomen

Jacob Koomen, M.D., M.P.H.
Director
Division of Health Services

Jerry C. Perkins

Jerry C. Perkins, Head
Solid Waste & Vector Control Branch
Sanitary Engineering Section

DHS Form 2510 (8/76)
Solid Waste & Vector Control Branch

CUMBERLAND COUNTY JOINT PLANNING BOARD

801 Arsenal Avenue • P. O. Box 3005 Fayetteville, North Carolina 28302

Telephone (919) 483-8131

RECEIVED
OCT 5 1978
SOLID WASTE-VECTOR CONTROL

October 3, 1978

North Carolina Department of Human
Resources
Division of Health Services
Solid Waste and Vector Control Branch
Sanitary Engineering Section
P. O. Box 2091
Raleigh, North Carolina 27602

Attention: Mr. O. W. Strickland

Re: Cliffdale Landfill Expansion
Cumberland County, North Carolina

Dear Sirs:

Please find enclosed three (3) copies each of the description of the Cliffdale Landfill Expansion property.

Let me know if additional information is required.

Yours truly,

RODNEY M. HONEYCUTT
County Engineer
Cumberland County Joint Planning Board

RMH/bjc

cc: Mr. Carter Twine
County Manager

DESCRIPTION

Cumberland County Property

For

Cliffdale Landfill Expansion

Beginning at a twin poplar, a common corner with Cumberland County (Book 2319, page 567), a line running South 67 degrees 17 minutes East 1,499.42 feet to a new iron pipe, a common corner with David F.McInnis Heirs property; thence with the McInnis line South 69 degrees 27 minutes West 1,000.00 feet to a new iron pipe, a common corner with David F. McInnis Heirs property; thence North 26 degrees 33 minutes West 81.84 feet to a new iron pipe; thence due West 770.34 feet to a new iron pipe, a common corner with Cumberland County property; thence with the Cumberland County line North 22 degrees 49 minutes East 929.50 feet to the beginning, a twin poplar, containing 19.387 acres, more or less, being the same land described in a deed to Alex Bethune (Book 436, page 104) dated December 26, 1941.

DIVISION OF ENVIRONMENTAL MANAGEMENT

September 21, 1978

MEMORANDUM TO: R. A. Carter, Coordinator
Wastewater Management

FROM: Dennis R. Ramsey, Regional Supervisor DRR
Fayetteville Regional Office

SUBJECT: Proposed Expansion
Cumberland County (Cliffdale) Landfill
Cumberland County

On September 1, 1978, I received a request from Mr. O. W. Strickland, Supervisor, Solid Waste Management Unit, Department of Human Resources for my comments on the subject expansion. As a result of a staff evaluation plus a site visit by myself and Mr. Bill Bright (Groundwater Hydrologist, Fayetteville Regional Office), the following facts were established.

1. The existing Cliffdale Landfill became operational in 1971.

2. In 1977, the City of Fayetteville began using this landfill.

3. The existing landfill contains 42.01 acres.

4. The proposed landfill site is directly adjacent to the existing landfill and contains 19.39 acres. Of this 19.39 acres only about one half is proposed for use. The rest was not usable due to a small stream that runs through it. This stream is Middle Creek (Class C) and it is the headwaters for Lake Rim.

5. The entire landfill is surrounded by a natural buffer area of trees and brush.

6. No houses are located within 1,000 feet of the proposed site.

7. Four soil borings were made on the proposed site by the Soil Conservation Service. The soil was found to contain layers of silts, silty sand, clayey sand and clay in random patterns.

8. The area filling method will be utilized at the proposed landfill site. There will be a minimum of four (4) feet of undisturbed earth between the lowest excavation and the ground water table.

9. All runoff from this site will be routed through a sediment basin before draining into Middle Creek.

10. Lab analysis run on an existing surface water holding pond at the existing landfill on May 23, 1978, failed to show any signs of chemical pollution. No biological data was available.

11. The existing Cliffdale landfill is projected to be filled in approximately two (2) months.

12. The proposed landfill is only a temporary operation to allow for the establishment of a larger landfill. It is expected to be filled in one year.

13. Mr. Bill Bright has advised me that the proposed site appears to be acceptable (see attached memo).

14. The existing landfill appears to be well operated.

Due to the above facts, it is my recommendation that Mr. Strickland be advised that our office has no objection to the proposed expansion.

If any additional information or clarification is needed, please advise.

DRR/fbc

Attachment

DIVISION OF ENVIRONMENTAL MANAGEMENT

September 21, 1978

M E M O R A N D U M

TO: Dennis Ramsey
Regional Supervisor

FROM: Bill Bright
Water Management

SUBJECT: Cumberland County (Cliffdale) Landfill

An on-site investigation was made of subject landfill on September 19, 1978. The investigation revealed a clay-rich environment and a water table that is at least 30-35 feet below land surface. Further, the present landfill is merely going to be extended and allowances have been made for a suitable buffer.

Therefore, from the standpoint of the groundwater resources of the general area, there is no opposition to extending the landfill.

BB/lr

FORT BRAGG
MILITARY
RESERVATION
SPRING LAKE
POP. 3,968
Pope Field
FORT BRAGG
MILITARY
RESERVATION
Shaws
Bonnie
Doone
Clifdale
Clifton
Skibo
FAYETTEVILLE
POP. 53,510
OWENS
POP. 5,207
UNINC.
Fenix
Galatia Ch.
Cumberland
Fine knoll
HOPE MILLS
POP. 1,866
Hope
Roslin
UPCHURCHES POND
Rockfish Ch.
TO RAEFORD
TO ST. PAUL
HOKE
COUNTY
ROBESON
COUNTY
35°10′
35°05′
35°00′
34°55′
79°05′
79°00′
LINE
A
D
MATCH
LINE

North Carolina Department of Natural Resources & Community Development
James B. Hunt, Jr., Governor
Howard N. Lee, Secretary

September 12, 1978

Mr. W. O. Strickland
Solid Waste and Vector Control Branch
Sanitary Engineering Section
North Carolina Department of Human Resources
Division of Health Services
P. O. Box 2091
Raleigh, North Carolina 27602

RE: Cliffdale Landfill Expansion
Cumberland County

Dear Mr. Strickland:

The Land Quality Section has completed a review of the aforementioned project and we are satisfied that it meets the requirements of the Sedimentation Pollution Control Act of 1973. The erosion control measures indicated on sheet 4 of 8 of the plans and the seeding specifications described on page B-2 of the narrative should adequately control erosion for the site. It will be of utmost importance that these erosion control measures be installed as early as possible and also that all areas such as dikes, slopes, etc., that are brought to final grade, be seeded within 30 days after the grading is completed.

I would like to thank you for the opportunity to review the plan and offer our comments before construction is to begin. If you have any questions, please feel free to contact this office.

Sincerely,

Joe Glass

Joe Glass
Regional Engineer
Land Quality Section

JG:gc

PROPOSED LANDFILL EXPANSION

CLIFFDALE SITE

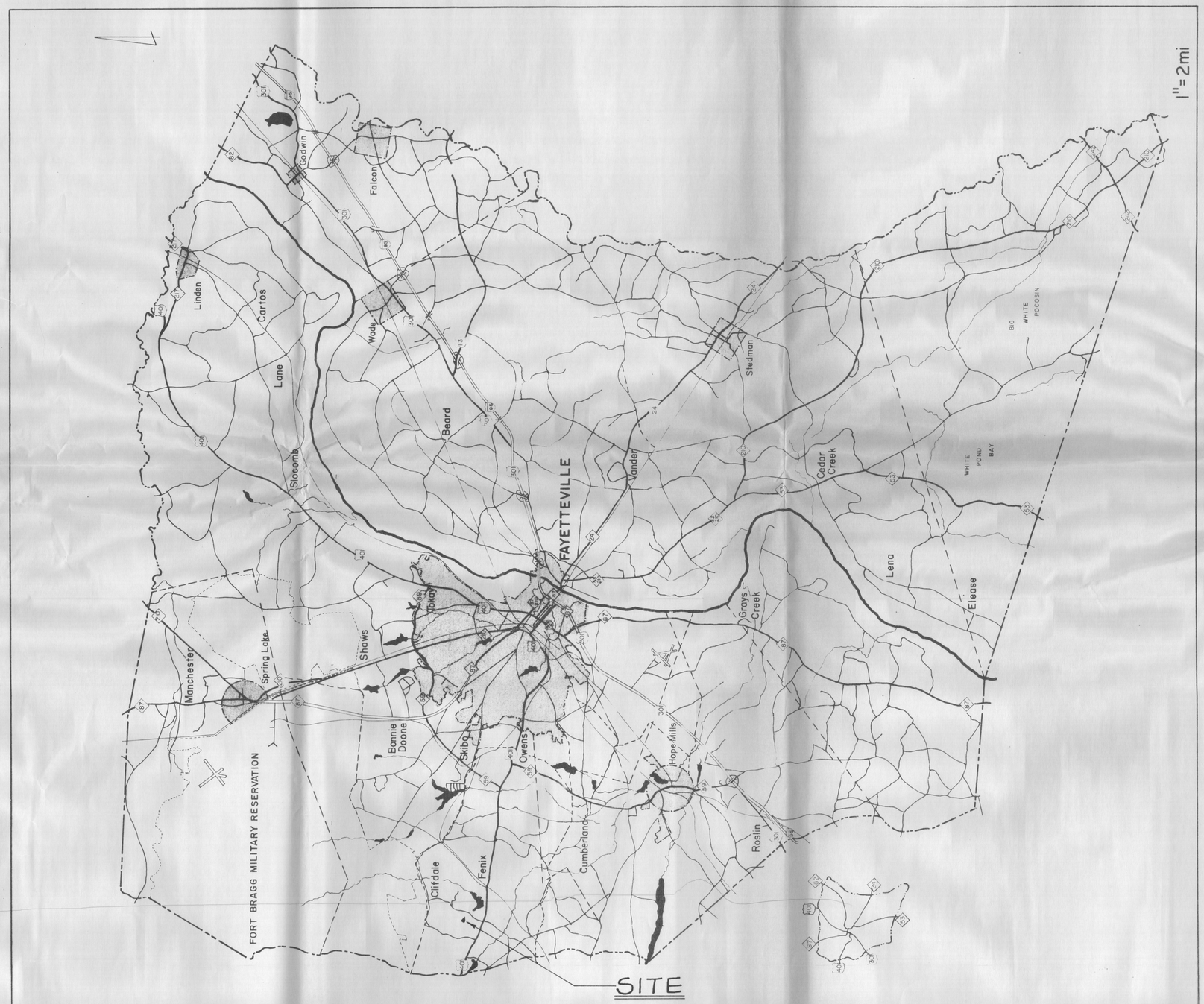
CUMBERLAND COUNTY, NORTH CAROLINA

RECEIVED
AUG 18 1978
SOLID WASTE-VECTOR CONTROL

PREPARED BY

CUMBERLAND COUNTY JOINT PLANNING BOARD

NORTH CAROLINA
AUG. 16, 1978



INDEX

SHEET No.	TITLE
1	COVER SHEET
2	LOCATION MAP & INDEX
3	ORIGINAL TOPOGRAPHY & BORING LOCATION
4	FINAL TOPOGRAPHY & EROSION-SEDIMENTATION CONTROL PLAN
5	LANDFILL CROSS SECTIONS
6	MISCELLANEOUS PROFILES - CROSS SECTIONS
7	RECORDATION MAP
8	PROPOSED LAND USE AFTER COMPLETION OF SANITARY LANDFILL

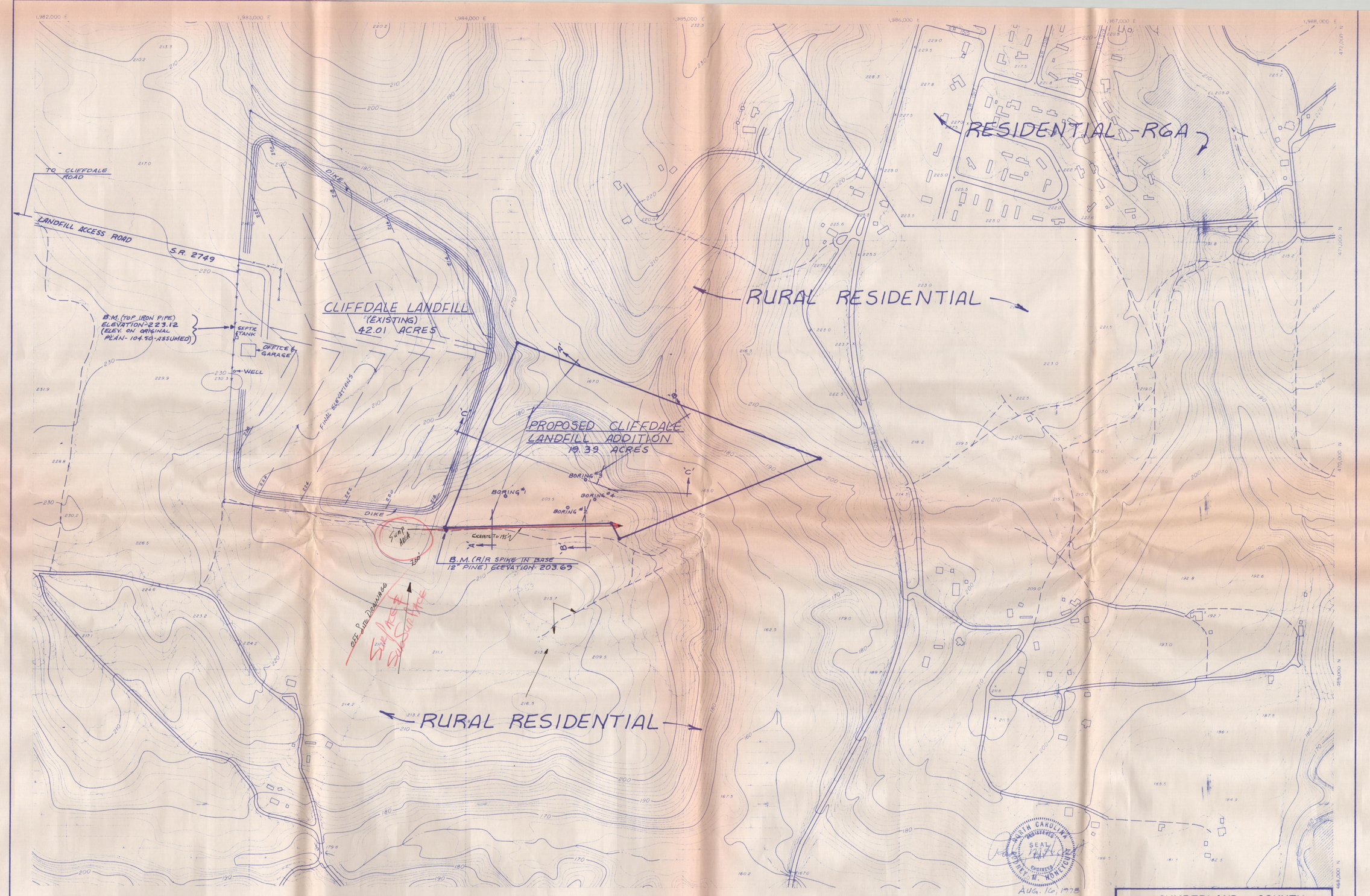
CUMBERLAND COUNTY
PLANNING DEPARTMENT

CUMBERLAND COUNTY

PROPOSED CLIFFDALE LANDFILL EXPANSION

LOCATION MAP
& INDEX

SCALE 1" = 2 MILES DATE AUG. '78



LEGEND

RALEIGH ROADS	CULVERT	TRANSMISSION TOWERS
INTERSTATE	SWAMP	CONTOURS
2534 COUNTY	DAM	113-2 752.11 VERTICAL CONTROL
U.S.	EL 785.3 WATER	192.8 HORIZONTAL CONTROL
STATE	STREAM	COUNTY LINE
TRAIL	RIVER	MUNICIPAL LINE
BRIDGE	MINE	STRUCTURES
RAILROAD		UNDER CONSTRUCTION
FENCE		
WALL		

TOPOGRAPHIC MAP

CUMBERLAND COUNTY

NORTH CAROLINA

COMPILED BY PHOTOGRAMMETRIC SERVICES INC., FROM AERIAL PHOTOGRAPHY, FLOWN IN THE SPRING OF 1971, IN ACCORDANCE WITH CONTRACT WITH BOARD OF COMMISSIONERS OF CUMBERLAND COUNTY AND ADMINISTERED BY THE CUMBERLAND COUNTY JOINT PLANNING BOARD

SCALE

200 0 200 400 600

SCALE 1" = 200' CONTOUR INTERVAL 2'

CUMBERLAND COUNTY
PLANNING DEPARTMENT

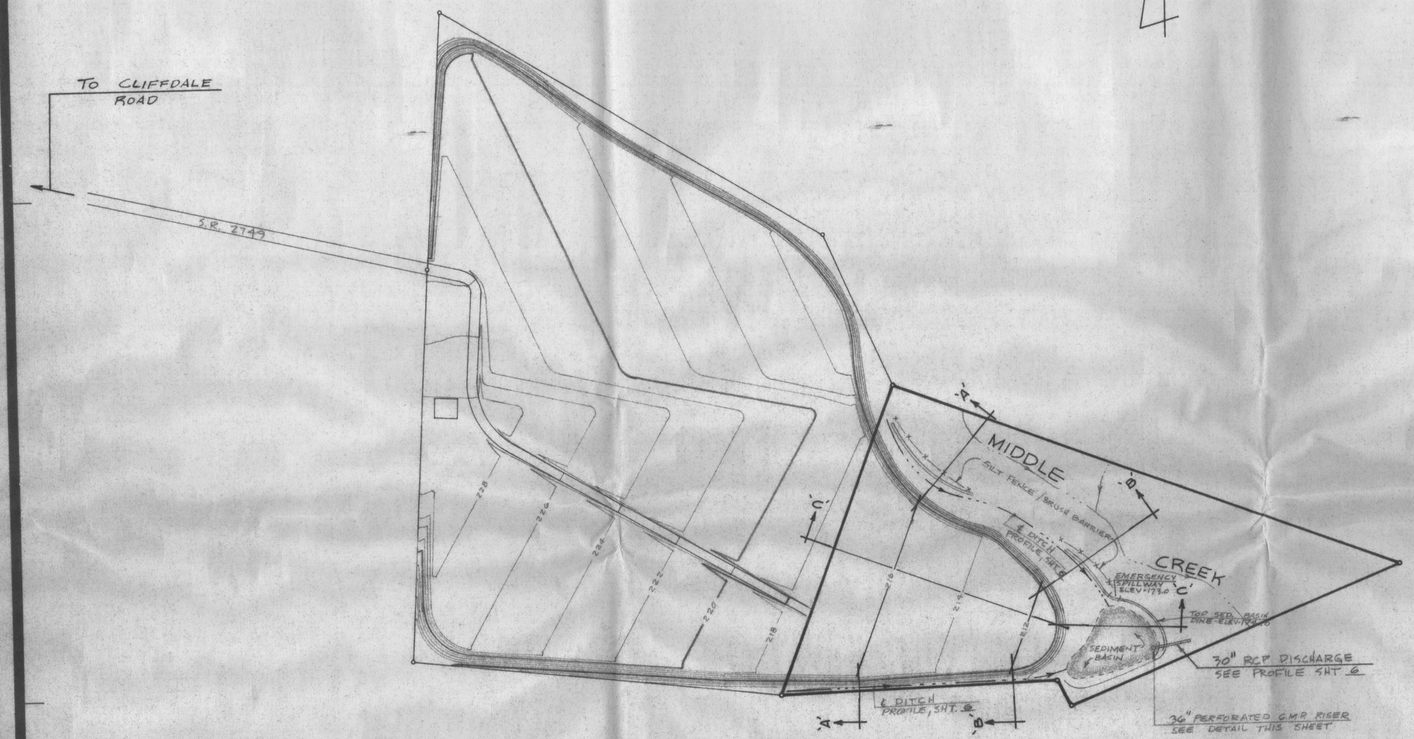
CUMBERLAND COUNTY

PROPOSED CLIFFDALE LANDFILL EXPANSION

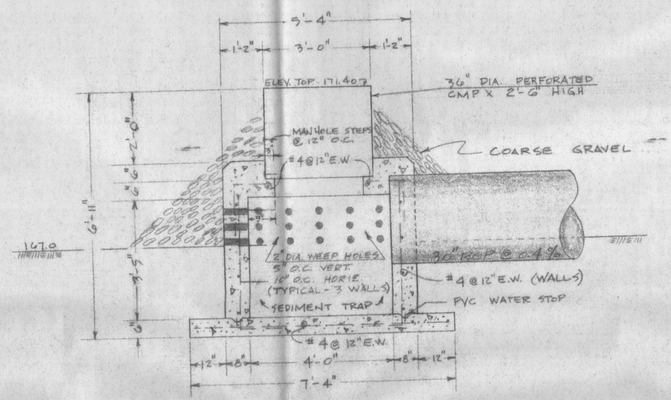
ORGINAL TOPOGRAPHY
& BORING LOCATION

SCALE 1" = 200' DATE AUG. '78

SHEET 3 OF 8



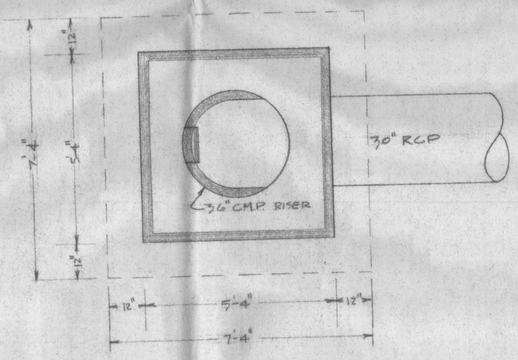
SCALE: 1"=200'



PLAN VIEW

PERFORATED C.M.P. RISER DETAIL

SCALE: ½"=1'-0"



TOP VIEW

PERFORATED C.M.P. RISER DETAIL

SCALE: ½"=1'-0"

NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL 7210 RODNEY M. HONEYCUTT

AUG. 16 1978

CUMBERLAND COUNTY JOINT PLANNING BOARD

801 ARSENAL AVE. FAYETTEVILLE, N.C.

CUMBERLAND COUNTY, N.C.

PROPOSED CLIFFDALE LANDFILL EXPANSION

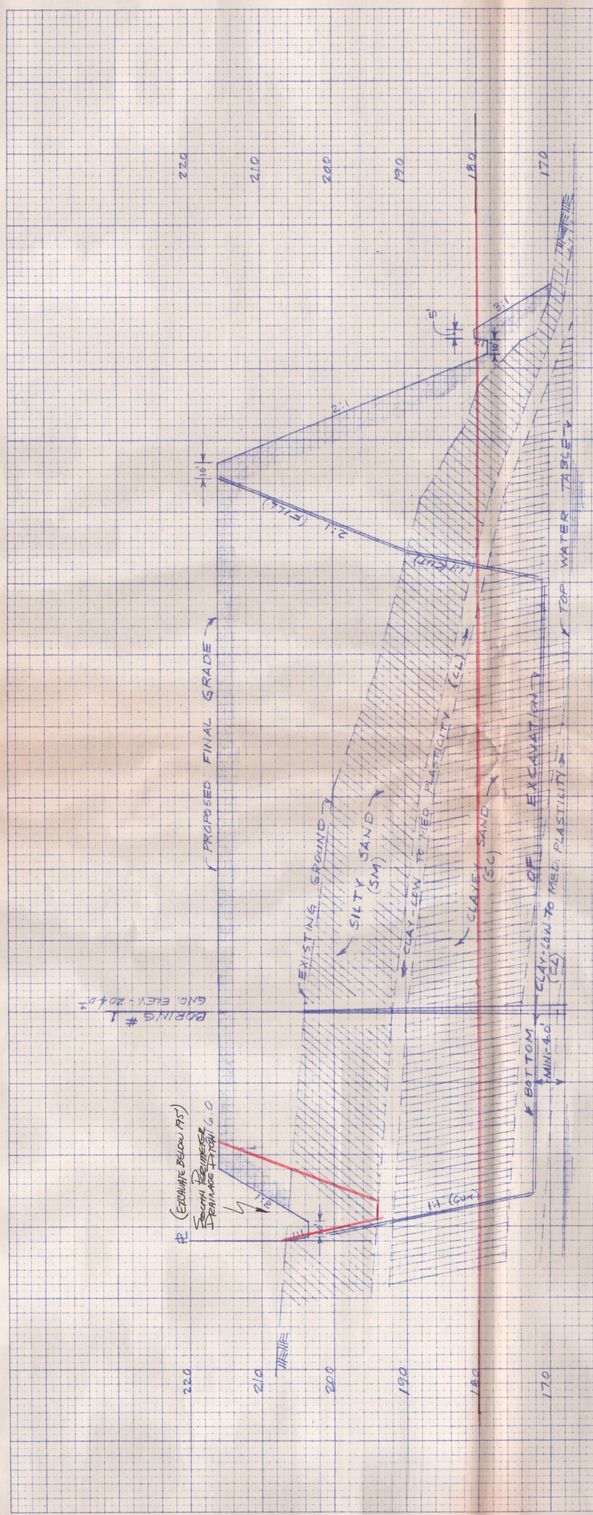
FINAL TOPOGRAPHY

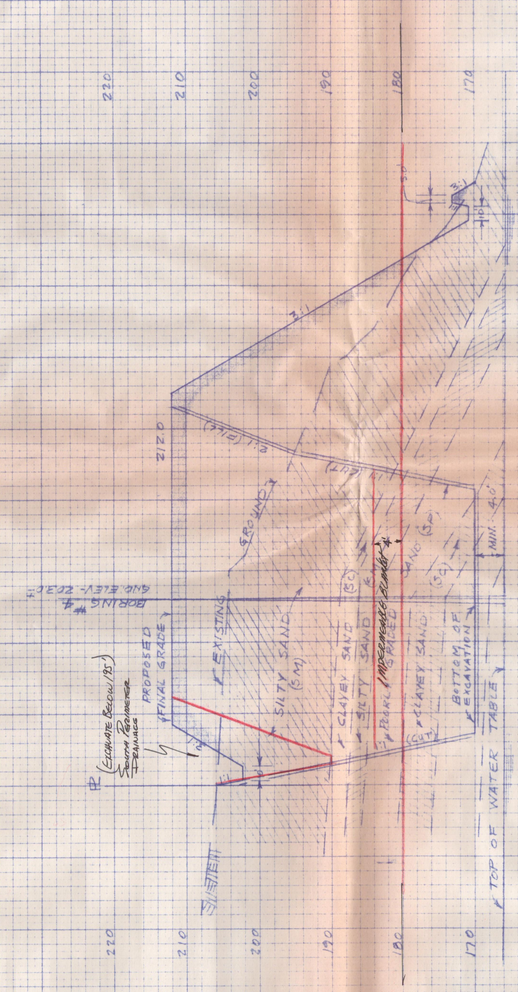
EROSION-SEDIMENTATION CONTROL PLAN

DATE	DRAFTSMAN	SHEET NO.
AUG, '78	RMH	4 OF 8
SCALE: As Shown	JOB NUMBER	

FINAL SURVEY — SURVEYED, PLOTTED, TRIMLINE, AREAS, AREAS CHECKED — BY — DATE

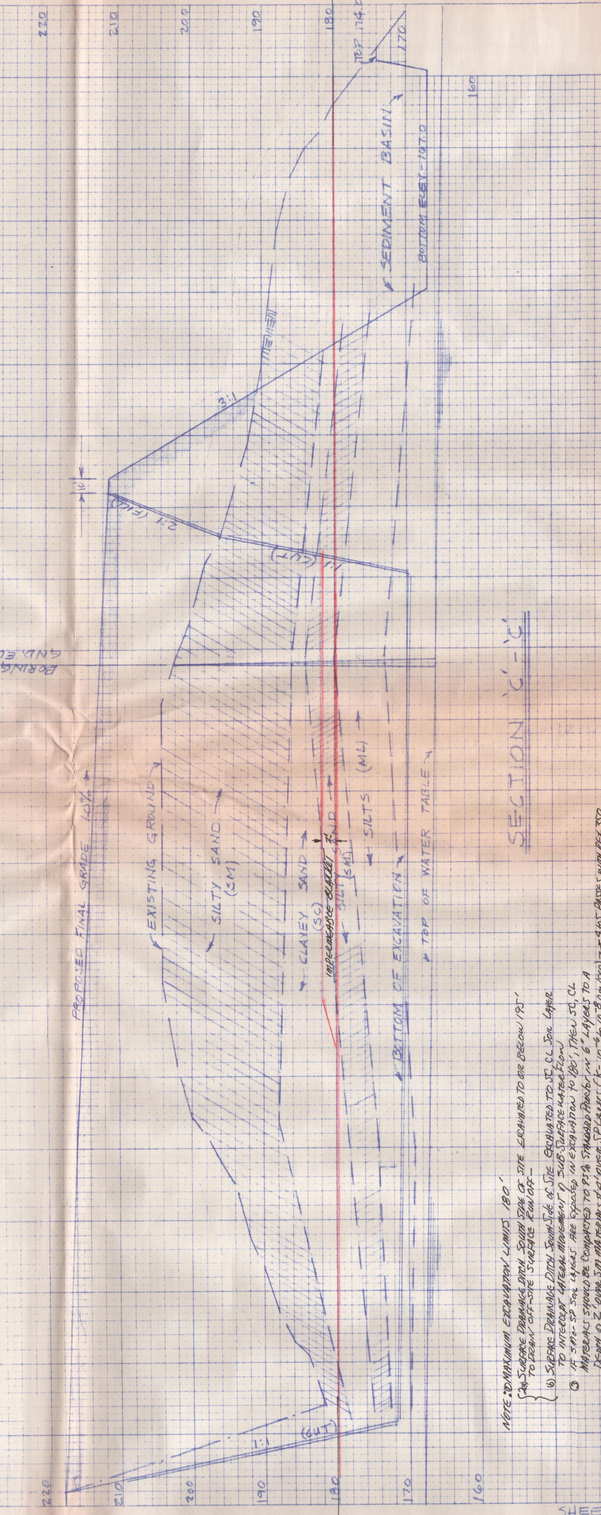
ORIGINAL SURVEY — SURVEYED, PLOTTED, TRIMLINE, AREAS, AREAS CHECKED — BY — DATE





WATER TABLE UNDER LANDFILL NOT BROADENED (ASSUMED) TO BE STATIC AT SLIGHT GRADIENT TO STREAM)
NOTE: WATER LEVEL ELEVATIONS SHOWN ARE TRUE, WHERE THERE CONTROL EXISTS, BUT ARE APPROXIMATE WHERE NO CONTROL EXISTS. BECAUSE OF SEASONAL FLUCTUATIONS AND NO DEFINITE METHOD OF REASONABLE ACCURATE ESTIMATION.

TOTAL VOLUME OF RUNOFF FROM LANDFILL NOT EXCAVATED, VOLUME OF OFF-SITE SURFACE RUNOFF FROM UNDISTURBED AREAS SHOULD BE INCLUDED IN STORAGE CAPACITY OF SEDIMENT BASIN (SEE DRAWING)



NOTE TO MINIMIZE EXCAVATION LIMITS (80'-
(a) SURFACE DRAINAGE DITCH SOUTH SIDE OF SITE DESIGNED TO BE BELOW 192'-
TO DRAIN OFF-SITE SURFACE RUNOFF-
(b) SURFACE DRAINAGE DITCH SOUTH SIDE OF SITE DESIGNED TO BE BELOW SILTY CL SOIL LAYER.
TO INTERCEPT UPLAND MOVEMENT OF SURFACE WATER FLOW-
AT 3:1 SLOPES ARE EXPOSED TO EXCAVATION TO 180'; THRU SILTY CL
MATERIALS SHOULD BE COMPACTED TO 95% STANDARD PROCTOR IN 8" LAYERS TO A
DEPTH OF 2' OVER SAPROLITE (K = 10^-4 to 10^-6 cm/sec) — 4 FEET PACKED WITH BENTO

CUMBERLAND COUNTY
PLANNING DEPARTMENT

CUMBERLAND COUNTY, N.C.

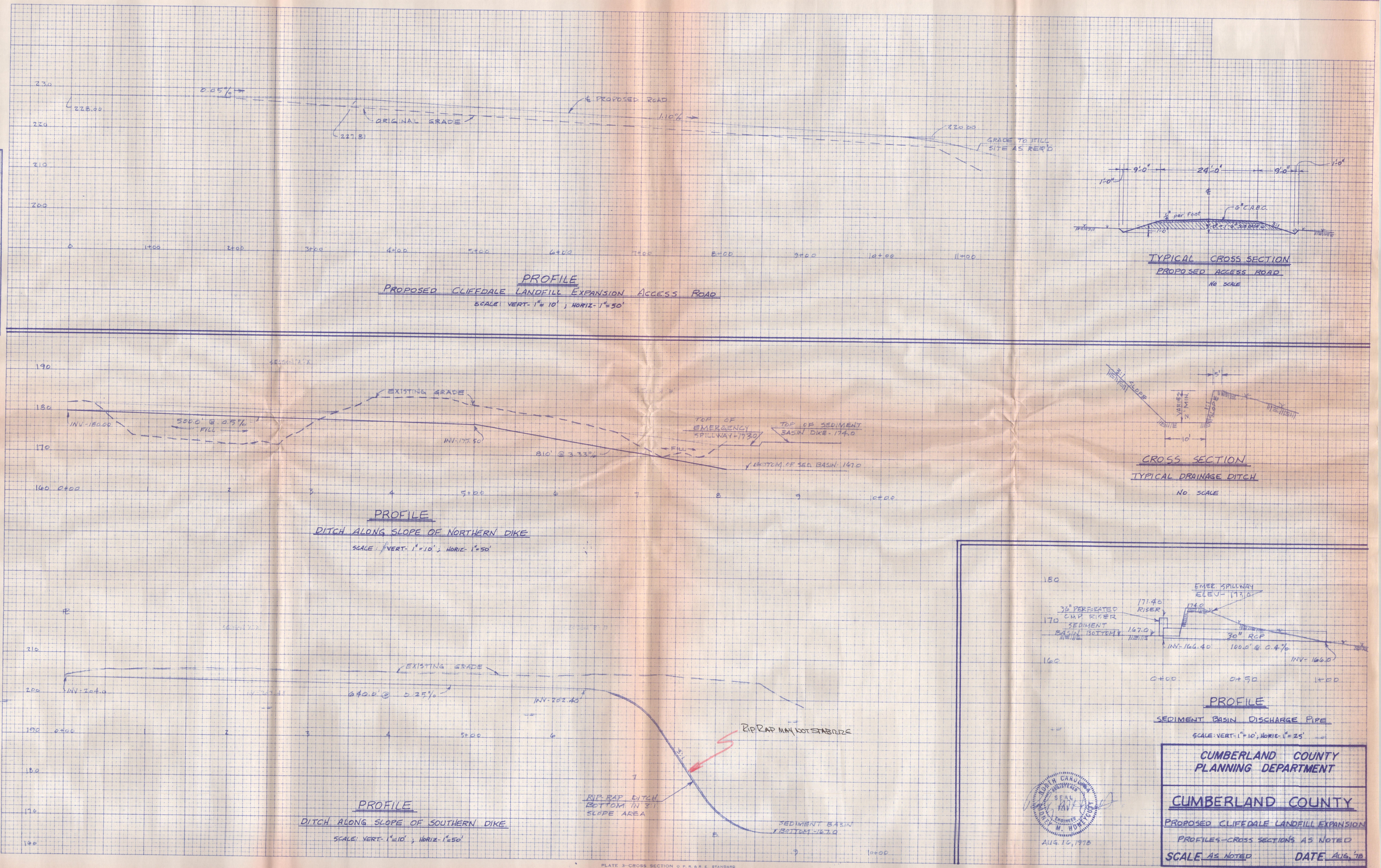
PROPOSED CLIFFDALE LANDFILL EXPANSION

CROSS SECTIONS

SCALE VERT: 1"=10' HORIZ: 1"=50' DATE JULY '78

SEAL — NORTH CAROLINA — REGISTERED — 7218 — PROFESSIONAL ENGINEER — AUG. 16, 1978

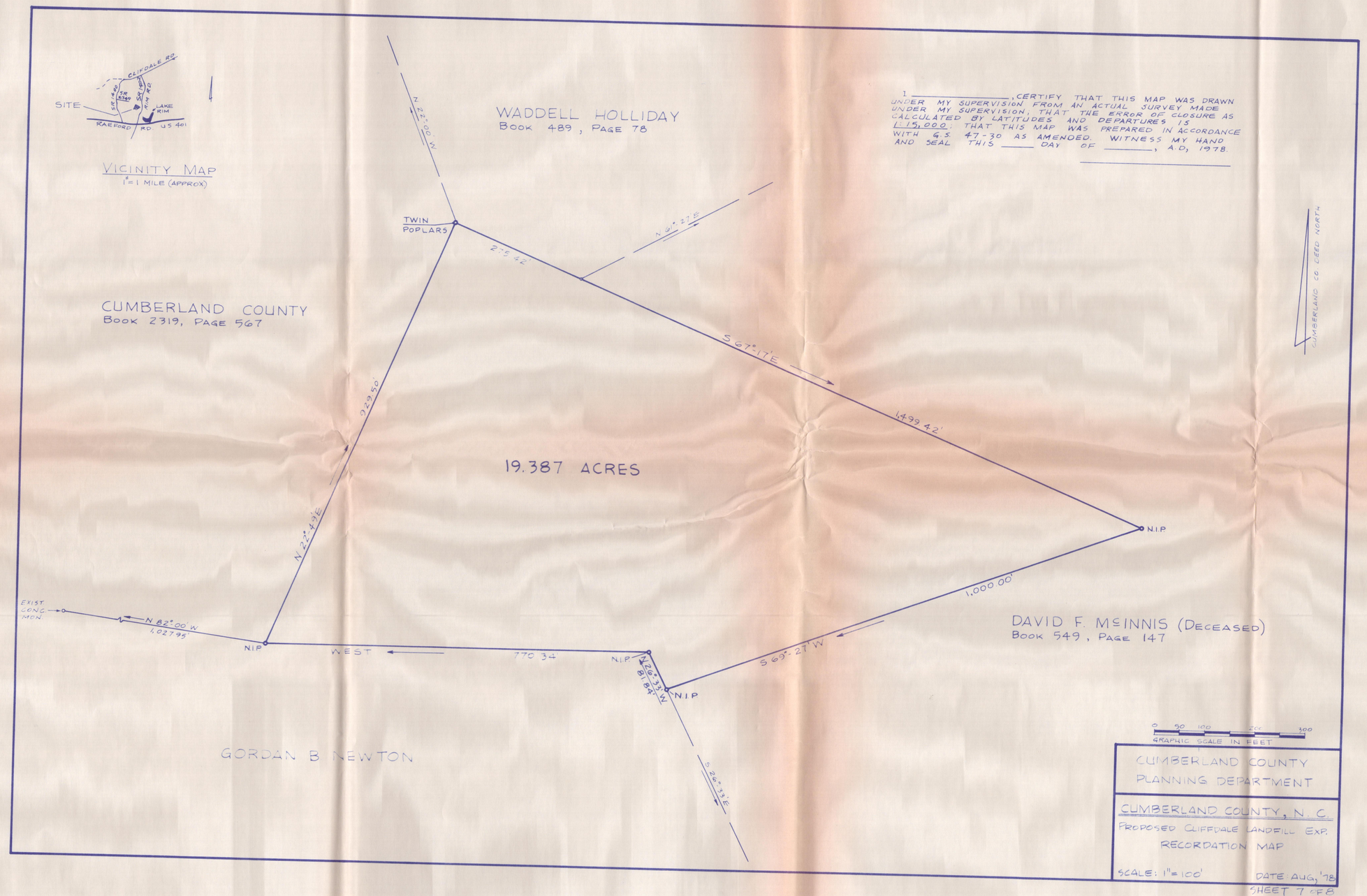
PLATE 3—CROSS SECTION O P R & R. E. STANDARD
100% RAG — MADE AND PRINTED IN U. S. A.
THE FREDERICK POST CO. CHICAGO



FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — NOTE BOOK NO. — BY — DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, AREAS CHECKED — NOTE BOOK NO. — BY — DATE

PLATE 3-CROSS SECTION O.P.R.&R.E. STANDARD
100% RAG — MADE AND PRINTED IN U.S.A.
THE FREDERICK POST CO. CHICAGO



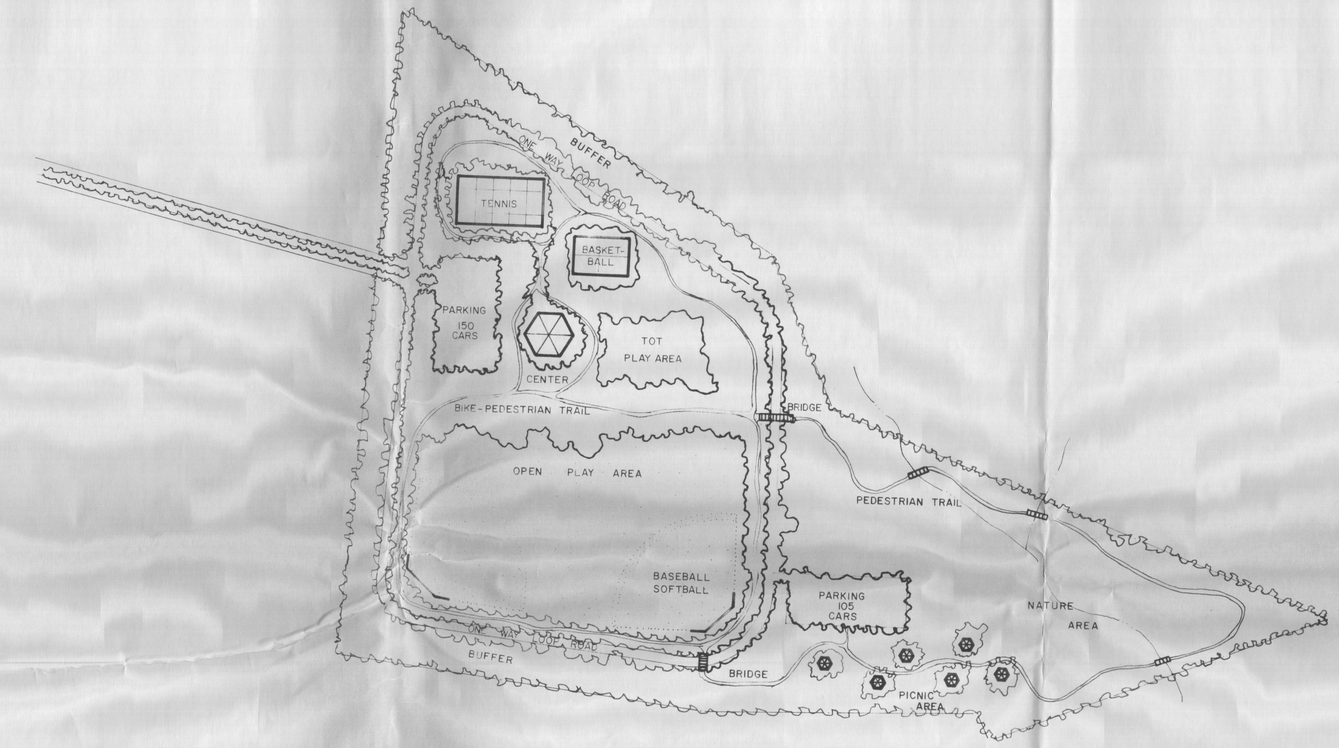
I _____, CERTIFY THAT THIS MAP WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION; THAT THE ERROR OF CLOSURE AS CALCULATED BY LATITUDES AND DEPARTURES IS 1:15,000; THAT THIS MAP WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY HAND AND SEAL THIS _____ DAY OF _____, A.D, 1978.

_____

CUMBERLAND COUNTY
PLANNING DEPARTMENT

CUMBERLAND COUNTY, N. C.
PROPOSED CLIFFDALE LANDFILL EXP.
RECORDATION MAP

SCALE: 1" = 100'
DATE: AUG, '78
SHEET 7 OF 8



Aug 16, 1978

CUMBERLAND COUNTY PLANNING DEPARTMENT
PROPOSED LAND USE AFTER COMPLETION OF SANITARY LANDFILL CUMBERLAND COUNTY
SCALE 1" = 200' DATE AUG. 78

SHEET 8 OF 8

RECEIVED
AUG 18 1978
SOLID WASTE-VECTOR CONTROL

REPORT

PROPOSED

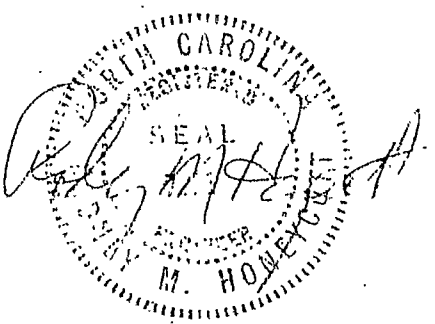
LANDFILL EXPANSION
CLIFFDALE SITE

CUMBERLAND COUNTY, NORTH CAROLINA

Prepared By

Cumberland County Planning Department

August, 1978



August 16, 1978

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B. Buffer

C. Adjacent Structures

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A. General

B. Soil Borings

III. DRAINAGE

IV. OPERATIONAL PLANS

A. Site Facilities

B. Disposal Method

C. Erosion-Sedimentation Control

V. RECORDATION

VI. OTHER PERTINENT INFORMATION

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B. Material Disposed

C. Equipment

D. Operational Responsibility

E. Future Land Use

F. Life Expectancy

I. SITE DATA

A. Land Use and Zoning

All zoning within one-fourth (¼) mile of the property purchased for the proposed Cliffdale Landfill expansion is Rural Residential except one residential area to the Northwest zoned R6A. The R6A classification denotes an area consisting of a mix of single and multi-family dwellings and permitting the use of trailer houses. This area is located as shown on plan sheet 3 of 8 approximated 1,150 feet from the landfill property line. Due to topography, this section of county property is not acceptable for sanitary landfill use at this time; therefore all zoning is rural residential within one-fourth (¼) mile of the actual landfill area boundary.

B. Buffer

The entire landfill is surrounded by a natural buffer consisting of mostly tall pines with medium to thick under brush.

C. Adjacent Structures

The only buildings located within (¼) mile of the landfill boundary are three (3) rural residents located approximately 1,000-1,200 feet to the southwest. These homes are separated from the landfill by a ridge line and a pine forest with medium under brush.

II. SUBSURFACE EVALUATION

A. General

The proposed landfill site is located adjacent to the existing landfill. The soil conditions and water table in the proposed landfill are generally the same types and locations as in the existing landfill.

B. Soil Borings

Soil borings at the proposed landfill site were made by the Cumberland County Health Department assisted by Soil Scientists from the United States Department of Agriculture, Soil Conservation Service. The following table lists the soil classification, depth and elevation of each soil boring.

Boring #1

top gnd. elev. = 204

Depth	Classification
0-12	SM
12-14	CL
14-30	SC
30-35	CL

Boring #2

top gnd. elev. = 205

Depth	Classification
0-15	SM
15-24	SC
24-35	SM

Boring #3

top gnd. elev. = 202

Depth	Classification
0-16	SM
16-18	SC
18-22	SM
22-29	ML

Boring #4

top gnd. elev. = 203

Depth	Classification
0-14	SM
14-17	SC
17-19	SM
19-23	SP
23-29	SC
29-35	CL

Refer to attachment "A" for further information concerning these soil borings.

A permanent bench mark has been established on the southwest corner of the landfill expansion property. The bench mark is a railroad spike in the base of a twelve inch (12") pine tree, elevation 203.69 (sea level elevation). Each soil boring has been located relative to the land fill boundary and the ground elevation of each boring has been established from the permanent bench mark.

III. DRAINAGE

Middle Creek divides the county property purchased for the proposed landfill expansion. The creek is located in a swamp ranging from 200-500 feet wide. Middle Creek drains the entire landfill expansion property and is headwaters for Lake Rim.

IV. OPERATIONAL PLANS

A. Site Facilities

The office, garage and sanitary facilities at the existing landfill site will remain for the landfill expansion area.

B. Disposal Method

The area filling method will be utilized at the proposed landfill site. There will be a minimum of four (4) feet of undisturbed earth between the lowest excavation and the ground water table.

C. Erosion-Sedimentation Control

An erosion and sedimentation plan is included on the final topo map, plan sheet 4 of 8. All runoff including runoff from dike slopes will be routed through a sediment basin before draining into Middle Creek. All calculations necessary for the erosion-sedimentation control plan are included as attachment "B".

V. RECORDATION

A preliminary recordation map is included in the plans. See plan sheet 7 of 8.

VI. OTHER PERTINENT INFORMATION

A. Population-Area Served

The entire county will be served by the landfill including all municipalities. The estimated population to be served is 243,573.

B. Material Disposed

The primary use of the landfill will be for disposing of household, commercial and industrial refuse and rubble.

C. Equipment

Following is a list of equipment available at the landfill site.

1. 250-C Loader
2. Dragline
3. Two Rex 350 Compactors
4. 444 Pan
5. Bulldozer
6. Pickup Truck
7. Five Roll-off container truck
8. Van

D. Operational Responsibility

Roy Washington is responsible for operation and maintenance at the existing and proposed landfill site expansion. The landfill will be operated in accordance with the North Carolina Solid Waste Management Rules as prepared by the Department of Human Resources, Division of Health Services, Sanitary Engineering Section to the best of Mr. Washington's knowledge and abilities.

E. Future Use

A county recreational area is planned for the completed sanitary landfill. See plan sheet 8 of 8 for the preliminary plan.

F. Life Expectancy

The anticipated life time of the landfill expansion is 12 months.

Attachment A

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
P. O. Box 64337, Fayetteville, N. C. 28306

June 14, 1978

Mr. Joe P. Gladden
County Sanitarian
Cumberland County Health Dept.
P. O. Box 470
Fayetteville, N. C. 28302

Dear Mr. Gladden:

On December 22, 1977, Soil Scientists Berman Hudson and Albert Mills assisted County Health Department personnel in boring and recording soils information for a proposed land fill site on Cliffdale Road in Cumberland County.

Six borings were made. Four holes were 35 feet deep, one was 29 feet deep, and one was 14 feet deep. The water table was not evident in any of the holes bored.

Attached are data logged from these borings. Texture classes are presented in the unified system, with a legend attached explaining the symbols used. These data indicate that most of the subject area consists of from 6 to about 15 feet of sandy material underlain by clayey sands and low plasticity clays.

Sincerely yours,

Berman D. Hudson

Berman D. Hudson
Soil Scientist

Attachments

Hole # 1

Depth (ft.)	Texture
0-12	SM
12-14	CL
14-30	SC
30-35	CL

Hole # 2

Depth (ft.)	Texture
0-15	SM
15-24	SC
24-35	SM

Hole # 3

Depth (ft.)	Texture
0-16	SM
16-18	SC
18-22	SM
22-29	ML

Hole # 4

Depth (ft.)	Texture
0-14	SM
14-17	SC
17-19	SM
19-23	SP
23-29	SC
29-35	CL

Hole # 5

Depth (ft.)	Texture
0-6	SM
6-8	SC
8-15	SM-SC
12-30	SC
30-32	SM-SC
32-35	SP

Hole # 6

Depth (ft.)	Texture
0-6	SM
6-8	SC
8-11	CL
11-14	SC-CL

TYPES OF MATERIAL ENCOUNTERED IN BORINGS
(Use one of systems below)

UNIFIED CLASSIFICATION	USDA CLASSIFICATION
GW - Well graded gravels; gravel, sand mix	g - gravel
GP - Poorly graded gravels	s - sand
GM - Silty gravels; gravel-sand-silt mix	vfs - very fine sand
GC - Clayey gravels; gravel-sand-clay mix	sl - sandy loam
SW - Well graded sands; sand-gravel mix	fsl - fine sandy loam
SP - Poorly graded sands	l - loam
SM - Silty sand	gl - gravelly loam
SC - Clayey sands; sand-clay mixtures	si - silt
ML - Silts; silty, v. fine sands; sandy or clayey silt	sil - silt loam
CL - Clays of low to medium plasticity	cl - clay loam
CH - Inorganic clays of high plasticity	sicl - silty clay loam
MH - Elastic silts	scl - sandy clay loam
OL - Organic silts and silty clays, low plasticity	sic - silty clay
OH - Organic clays, medium to high plasticity	c - clay

1. Suitable material for embankment is available [ ] Yes [ ] No *(Indicate where located on this sketch on reverse side)*

REMARKS:

2. Explain hazards requiring special attention in design *(Seepage, spring, rock etc.)*

GENERAL REMARKS:

PROPOSED CLIFFDALE LANDFILL EXPANSION

Erosion-Sedimentation Control
Including Runnoff Calculations

1. KNOWN DATA

   a. Soil type - Lucy ls - Hydrologic group A
      Wagram ls - Hydrologic group A

   b. Drainage Area - 35 Acres (Maximum)

   c. 2 year - 24 hour rainfall - 3.8 inches
      10 year - 24 hour rainfall - 5.8 inches
      25 year - 24 hour rainfall - 6.8 inches

   d. Pasture or range poor (for design) condition

      Use curve number 49

   e. Slope - 1% - use correction factor 1.00 on ES sheet labeled flat for peak flow.

2. PEAK DISCHARGE

   2 year - 6.5 cfs
   10 year - 22.0 cfs
   25 year - 31.0 cfs

   these figures are high since CN of 49 is not available-using CN 60

3. DESIGN

   a. use 10 year flow

      22.0 cfs @ 0.4% slope

      use 30" RCP - cap. approx. 26.0 cfs

   b. use 36" perfurated rise pipe w/ anti vortexing device at entrance

   c. Max discharge Velocity - 5.2 ± fps

      10 year storm discharge velocity - 5.1 ± fps

      2 year storm discharge velocity - 3.7 ± fps

   d. Since drainge is into a swamp immediately ahead of Lake Rim, velocity will not cause an erosion problem (due to Lake - Swamp stilling effect). But should erosion become a problem due to velocity, rip - rap will be installed along effluent channel.

e. Upon completion of dike, slopes will be immediately seeded and mulched as follows:

(assumed seeded in fall)

50# tall fesgue grass per acre

Mulch - 1½ tons straw per acre

1000# 10-10-10 fertilizer per acre

2 tons agriculture line per acre

f. Upon completion of landfill or any area thereof, it will be seeded the same as (e) immediately.

CUMBERLAND COUNTY JOINT PLANNING BOARD

801 Arsenal Avenue • P. O. Box 3005 Fayetteville, North Carolina 28305

Telephone (919) 483-8131

RECEIVED
AUG 18 1978
SOLID WASTE-VECTOR CONTROL

August 16, 1978

North Carolina Department of Human
Resources
Division of Health Services
Solid Waste & Vector Control Branch
Sanitary Engineering Section
P. O. Box 2091
Raleigh, North Carolina 27602

Re: Cliffdale Landfill Expansion
Cumberland County, North Carolina

Dear Sirs:

We are enclosing three (3) copies each of the plans and report for the proposed expansion of the Cliffdale Landfill Site. Please review these items at your earliest convenience.

Let us know if we can provide you with additional information.

Yours truly,

Rodney M. Honeycutt, P.E.
County Engineer

RMB/bjc

cc: Mr. Carter Twine, County Manager
w/Enclosure

Mr. Joe Glass w/Enclosure

NORTH CAROLINA
DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
SOUTH CENTRAL REGIONAL OFFICE
225 GREEN STREET
WACHOVIA BUILDING — SUITE 506
FAYETTEVILLE, NORTH CAROLINA 28301

APR 1 1978
SOLID WASTE-VECTOR CONTROL

April 10, 1978

Mr. Lacy Williams, Jr., R. S.
Director of Environmental Health
Cumberland County Health Department
Post Office Box 470
Fayetteville, North Carolina 28302

Dear Mr. Williams:

Mr. Joe Gladden and myself made a site evaluation on the 32 acre tract of property located adjacent to the present Cliffdale landfill Friday, April 7, 1978.

I foresee no problems in developing this site into an additional phase for your present landfill operation. My only stipulation would be that a 100 foot buffer be required between the creek and any part of the landfill development.

If you have any further questions or if I may be of assistance to you, please do not hesitate to contact me.

Sincerely,

Terry F. Dover

Terry F. Dover
District Sanitarian
Solid Waste & Vector Control Branch

TFD:jbr
cc: Mr. O. W. Strickland

NORTH CAROLINA
DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES
SOUTH CENTRAL REGIONAL OFFICE
225 GREEN STREET
WACHOVIA BUILDING — SUITE 506
FAYETTEVILLE, NORTH CAROLINA 28301

August 29, 1977

Mr. Carter L. Twine, County Manager
County of Cumberland
Post Office Drawer 1829
Fayetteville, North Carolina 28301

Dear Mr. Twine:

This letter is to inform you of the conditions found at the Cliffdale-Cumberland County landfill on my routine inspection of August 25, 1977. Accompanying me on my inspection was Mr. John Johnson, Regional Engineer, Land Quality Section, Department of Natural and Economic Resources. Mr. Johnson's concern is sedimentation and erosion control of which he is making evaluations of all sanitary landfills within the southeastern region.

As you may or may not be aware, Mr. Johnson's office becomes concerned with erosion problems when the sedimentation from said erosion either (1) enters a flowing stream, or (2) erodes onto adjacent property. We have both of these problems at the Cliffdale landfill. These problems have been developing over the last eight months and they have been duly noted on the last three inspection reports. To correct the problems we must rework silt fences and regrade and reseed all dyke slopes.

Concerning the day-to-day operation of the landfill, I was most disappointed. The morning of the inspection all landfill equipment was inoperative. Waste was spread out over at least one acre of ground with the necessary compaction and coverage with earth nonexistent. As I stated to you in our meeting, Cumberland County-Cliffdale landfill volumewise is one of the ten largest landfills in this state. You are grossly underequipped to handle the volume of waste and operate a good solid waste disposal site. This office must insist that improvements be made in the daily operation.

We would be happy to give you all the assistance possible in helping to eliminate the problems.

If you have any questions or if we can be of further assistance to you, please do not hesitate to contact us.

Sincerely,

Terry F. Dover

Terry F. Dover
District Sanitarian
Solid Waste & Vector Control Branch

TFD:jbr
cc: Mr. O. W. Strickland
Mr. Lacy Williams, Jr.

March 7, 1977

Mr. Lacy Williams, Jr.
Director, Environmental Health
Cumberland County Health Department
515 Person Street
Fayetteville, North Carolina 28302

Dear Mr. Williams:

Your request for review and approval of the revised plans for the Cumberland County sanitary landfill located near Cliffdale has been received. The proposed revisions have been found to be acceptable and are hereby approved with the following conditions:

1. The operations are to conform to the requirements of the Department of Human Resources, Division of Health Services "Solid Waste Management Rules".

2. Operating conditions specified in prior approvals are a part of this approval.

This site having been originally approved in May, 1972, has not had the documents prepared for site recordation. At your option, these documents can be prepared upon receipt of the site description in narrative form.

If this office can be of further assistance, do not hesitate to call.

Yours truly,

Jerry C. Perkins, Head
Solid Waste & Vector Control Branch
Sanitary Engineering Section

JCP:bm
cc: Mr. Terry F. Dover

1(2.

NORTH CAROLINA DEPARTMENT OF HUMAN RESOURCES
DIVISION OF HEALTH SERVICES

OFFICE MEMORANDUM

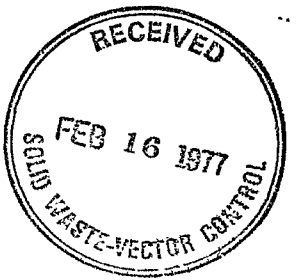
2-15-77 DATE

TO: Mr. Perkins

FROM: T.F.D.

RE: Enclosed plans

Please find enclosed proposed changes in the final elevations at the Cumberland Co. Cliffdale landfill. I discussed the changes with Mr. Williams and feel they are appropriate to eliminate excess cover material.



DHS Form 1140
Supportive Services

Health Department

County of Cumberland

Fayetteville, N.C. 28302

February 10, 1977

Mr. Terry F. Dover, District Sanitarian
Solid Waste & Vector Control Branch
Division of Health Services
South Central Regional Office
Wachovia Bank Building, Suite 506
225 Green Street
Fayetteville, North Carolina 28301

Dear Mr. Dover:

As per your instructions a few days ago please find revised plans for Cliffdale or Cumberland County, North Carolina, landfill for your review and for your colleagues' review and approval.

As you know, due to the amount of excavation that remains to be done in the area to be filled and use of the excess dirt that will come from these excavations including the existing enormous stock pile of dirt on the completed area, we respectfully request these proposed changes. I trust that these are in keeping with your comments expressed recently.

1. Using Cross Section Line "B" (see plans) as the dividing line for Cliffdale landfill, the area to the south of this line will be raised eight feet more than the original plans. This will be done with approximately six feet of garbage and two feet of earth cap.

2. The area to the north of Section Line "B" has been filled and capped. This area will have an additional two feet of dirt distributed over it. We propose to make the lift beginning at Section Line "B" at finished grade as shown on the plans. We will then have a one-foot rise in every 15.5 feet. This will peak approximately 100 feet south of Section line "B". We will then maintain a slope of not more than one per cent. The finished grade will slope to the south and to the east.

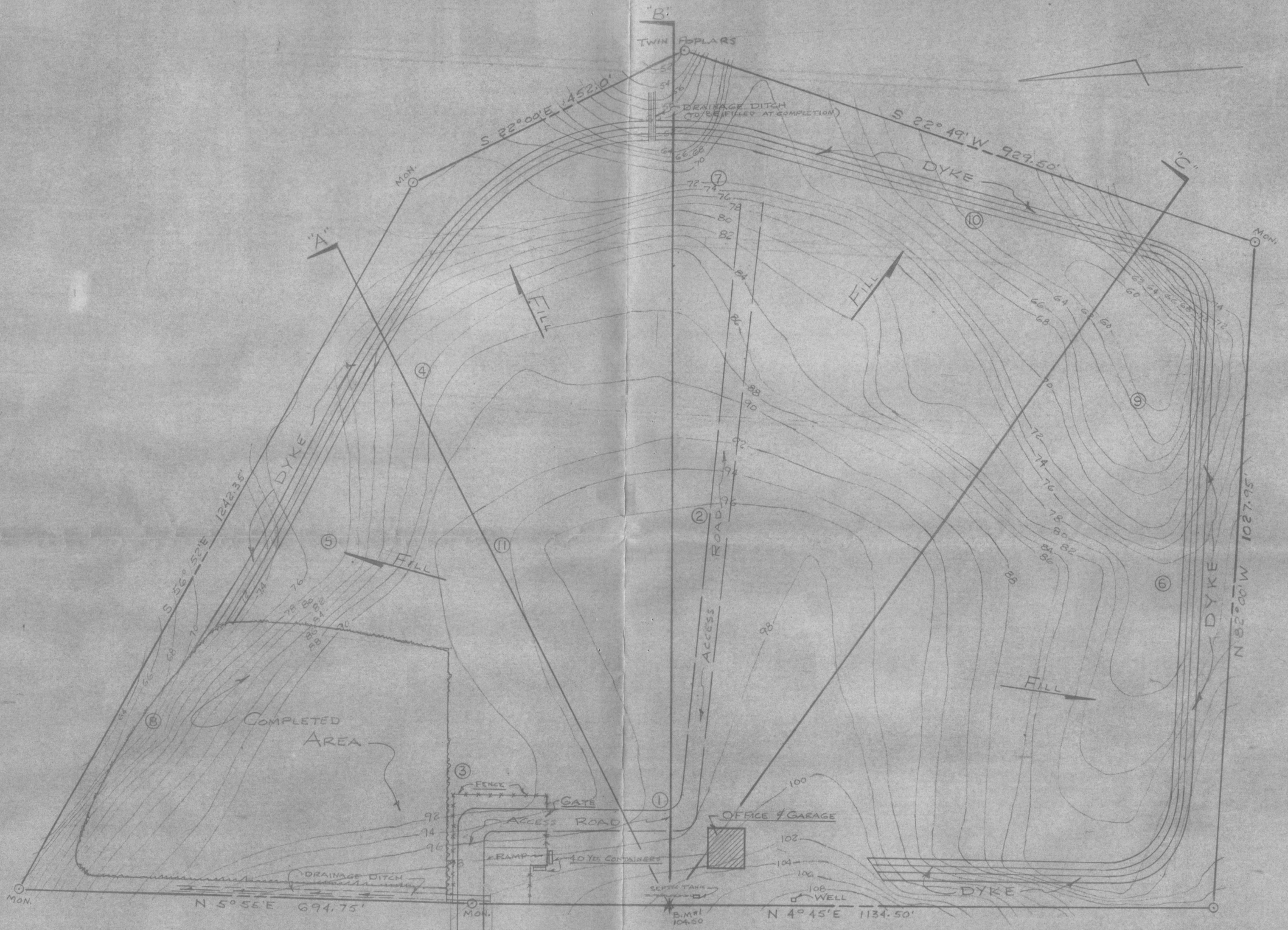
If we can be of further assistance, please let us know. However, it is hoped at this time that the information submitted as an addendum to this section will suffice.

Very truly yours,

Lacy Williams, Jr., R. S.
Director of Environmental Health

Enclosures

cc: Joseph S. Canady



⑤ = TEST HOLES

PLOT PLAN

CLIFFDALE LANDFILL

71ST TOWNSHIP CUMBERLAND COUNTY, NC

DATE: Nov. 1974
SCALE: 1"=100'

PLOT PLAN

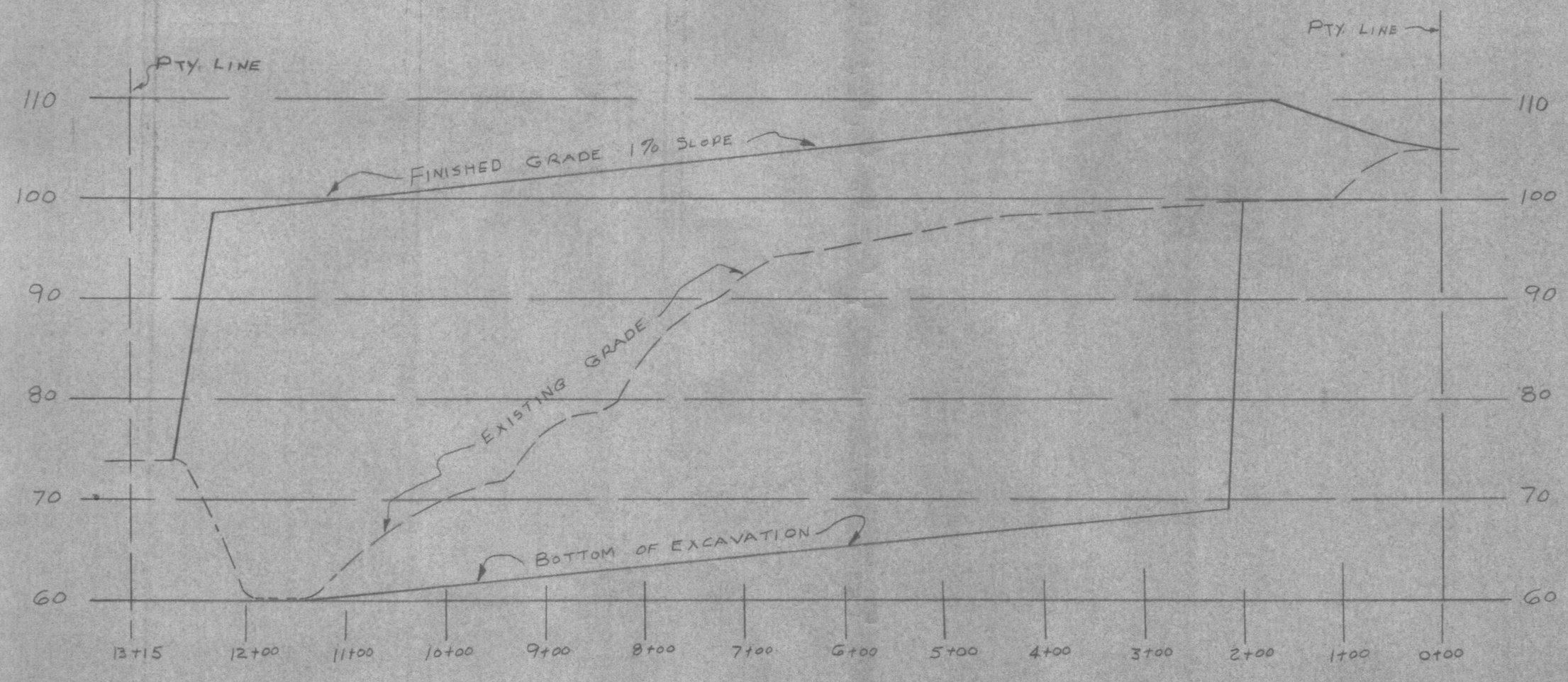
CROSS SECTIONS

CLIFFDALE LANDFILL

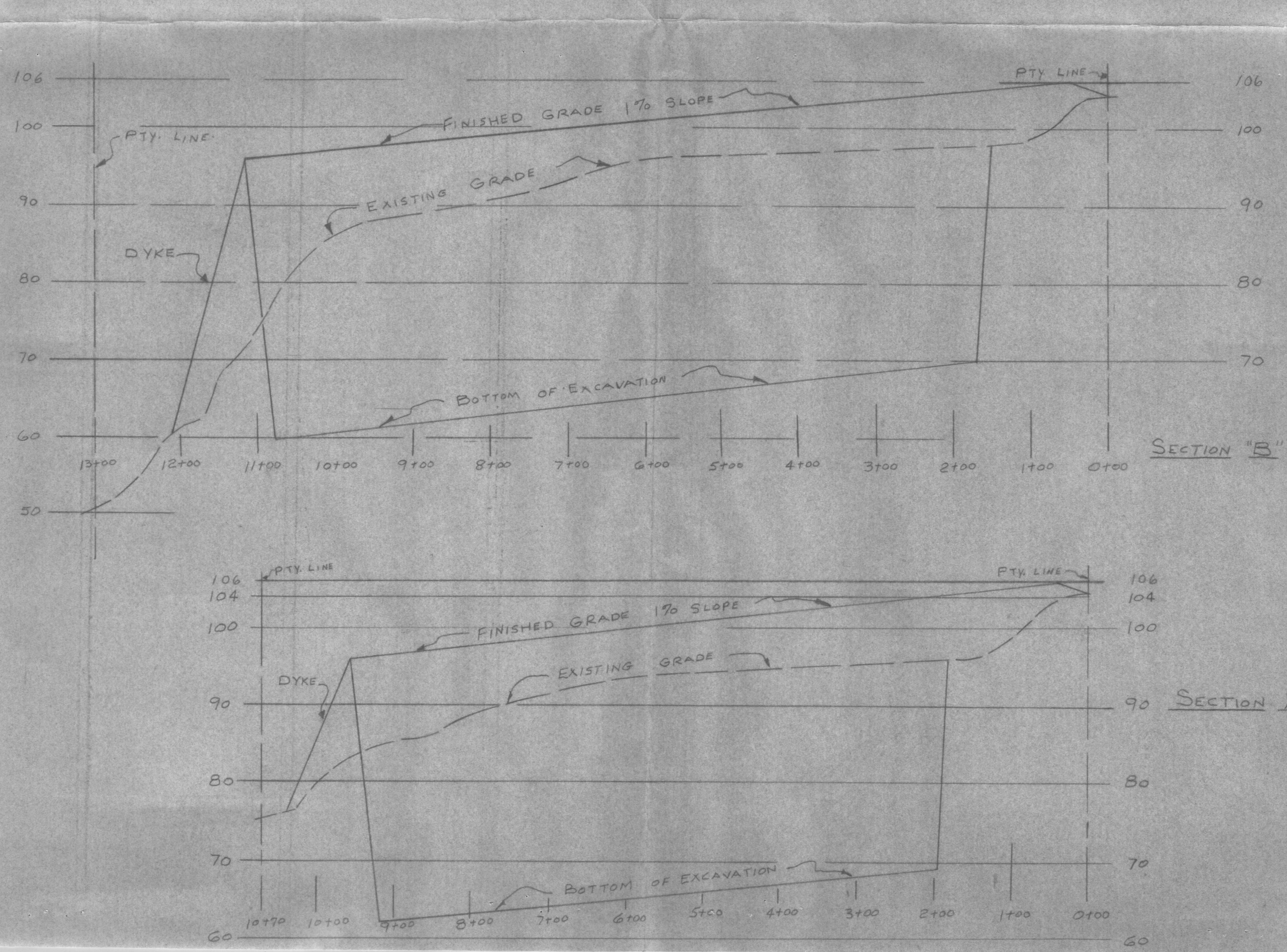
71 ST TWSP CUMBERLAND CO.

DATE JAN. 1977

SCALE: HORIZ 1"=100' VERT. 1"=10'

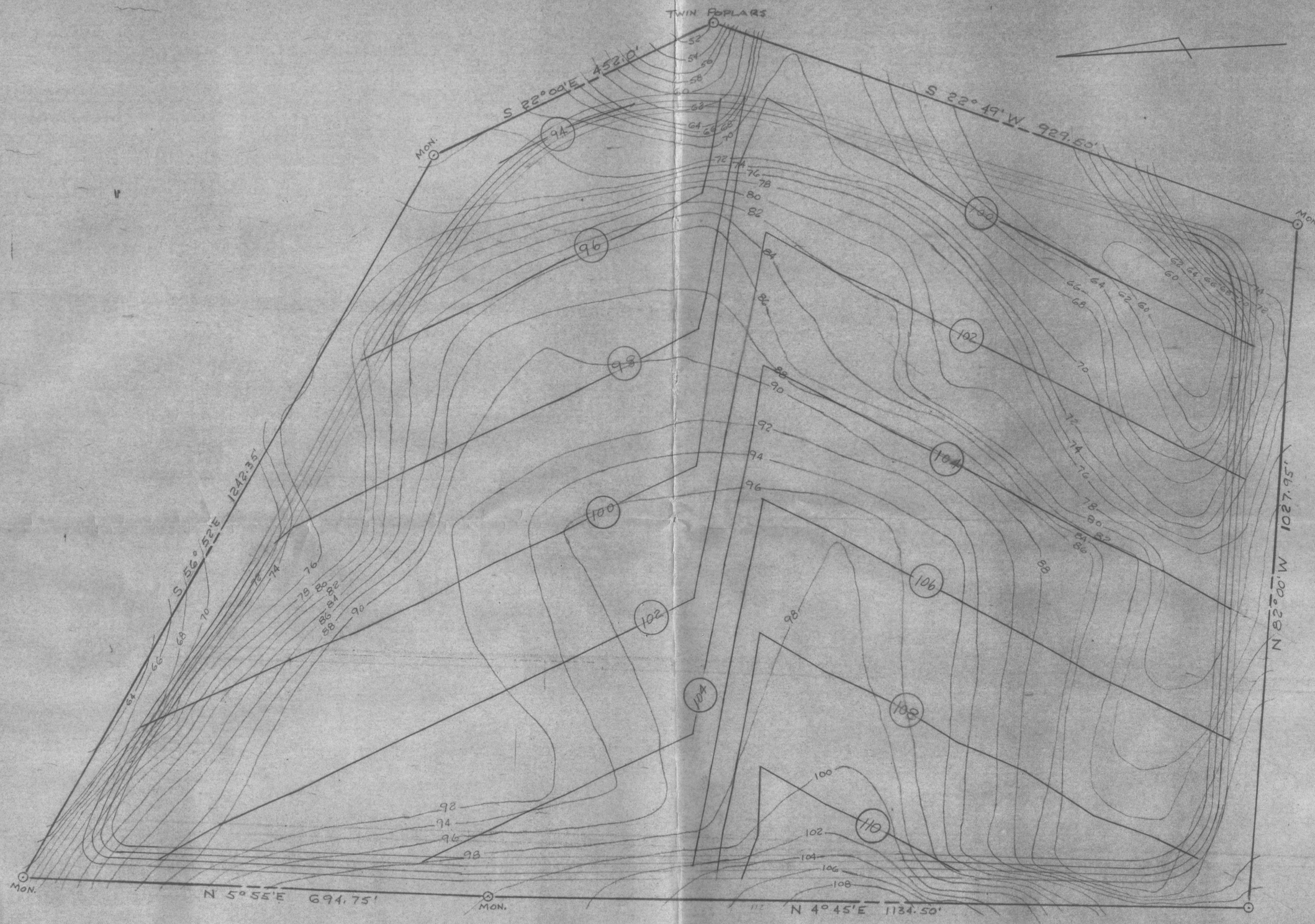


SECTION "C"



SECTION "B"

SECTION "A"



CLIFFDALE LANDFILL

71 SI TOWNSHIP CUMBERLAND COUNTY, N.C.

DATE: JAN. 1977

SCALE: 1" = 100'

cliffdale

December 19, 1974

Mr. Lacy Williams, Jr., R. S.
Director of Environmental Health
Cumberland County Health Department
Fayetteville, N. C. 28302

Dear Mr. Williams:

The revised operational plans for the Cumberland County Sanitary Landfill off S.R. 1400 have been reviewed and the following applies:

1. The plans are hereby approved for operations meeting the requirements of the N. C. Department of Human Resources, Division of Health Services "Rules and Regulations Providing Standards for Solid Waste Disposal."

2. As referenced in the original approval, a separation distance of at least three feet is to be maintained between waste placed in excavated areas and the site's ground water table.

3. Although 1% finished grades have been designated, it is recommended that diversion berms for surface water control be developed as the site development progresses. Also step-down facilities, such as drop boxes with inlet and outlet pipe or paved spillways should be considered for surface water and erosion control where major portions of the surface water spill over the completed dike.

If this office can be of further assistance, do not hesitate to call.

Yours truly,

Jerry C. Perkins, Assistant Head
Solid Waste & Vector Control Branch
Sanitary Engineering Section

JCP/ct
Enclosure

cc: Mr. Terry Dover

Health Department

County of Cumberland

Fayetteville, N. C. 28302

December 11, 1974

Department of Human Resources
Division of Health Services
Sanitary Engineering Division
Solid Waste and Vector Control
Post Office Box 2091
Raleigh, North Carolina 27602

RE: Cliffdale Sanitary Landfill
(Formerly 71st Area Landfill)

Gentlemen:

In accordance with instructions outlined in the State Board of Health Bulletin Number 411, dated March 11, 1971, we are enclosing three copies each of the following proposed changes in the operation of subject landfill. Original plans and operational procedures approved by your office on May 23, 1972.

A. Plat plan (sheet no. 1) indicating property boundaries, dimensions, existing elevations, service roads, fences, gates, buildings, well, septic tank and bulk roll-off containers, also diversion drainage ditch, dyke and location of cross section cuts. Plan also shows area completed with final cover and seeded. Sheet number two indicates cross section of cuts, existing grades, excavations and finished grade. Sheet number three indicates finished elevations of completed site.

B. Pertinent information regarding proposed operational changes are as follow:

1. Population and area served;

a. 152,000 estimated total.

b. Rural Cumberland County including towns of Spring Lake, Hope Mills and Stedman.

2. Anticipated type, quantity and source of material to be disposed of at site: household, commercial and industrial solid waste, estimated 2,000+ plus cubic yards per day.

C. Plans for development of entire remaining portion of property utilizing area method of disposal.

D. Daily maintenance will be performed by Cumberland County using the following listed equipment: one Rex 350 Trashmaster Compactor, one International 250 front-end loader; one International 22 cubic yard scraper pan and one Allis-Chalmers 7-G front end loader.

E. All other aspects will remain the same as previously approved by your office with the exception of the hours of operation of landfill proper. Operational hours to be in accordance with needs and demands of public as posted at entrance gate.

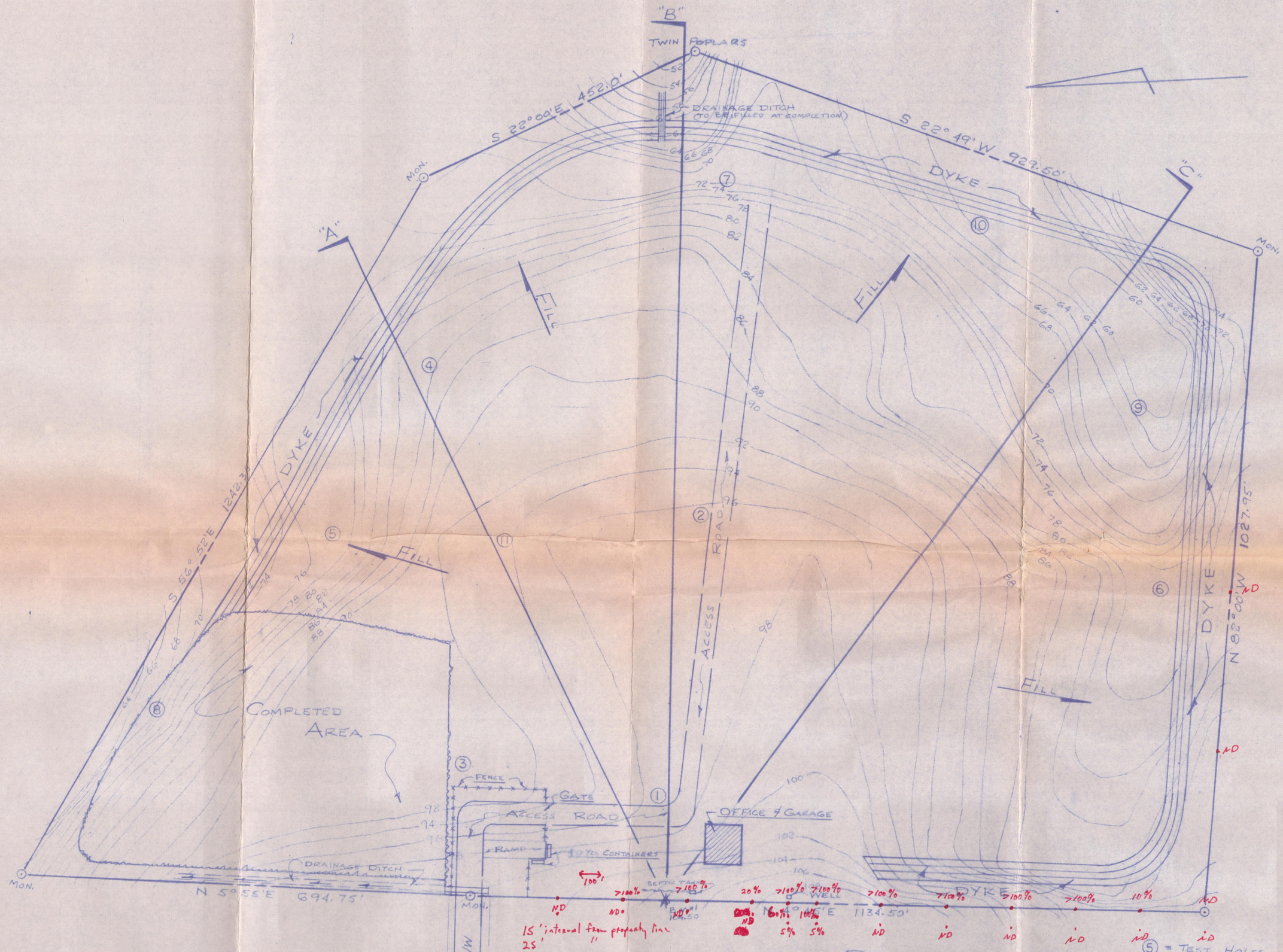
F. To the best of my knowledge at this time the sanitary landfill site will be operated in accordance with the rules and regulations and standards for solid waste disposal as set forth by the North Carolina State Board of Health.

Very truly yours,

Lacy Williams, Jr., R. S.
Director of Environmental Health

cc: Mr. Terry Dover

Enclosures: 3

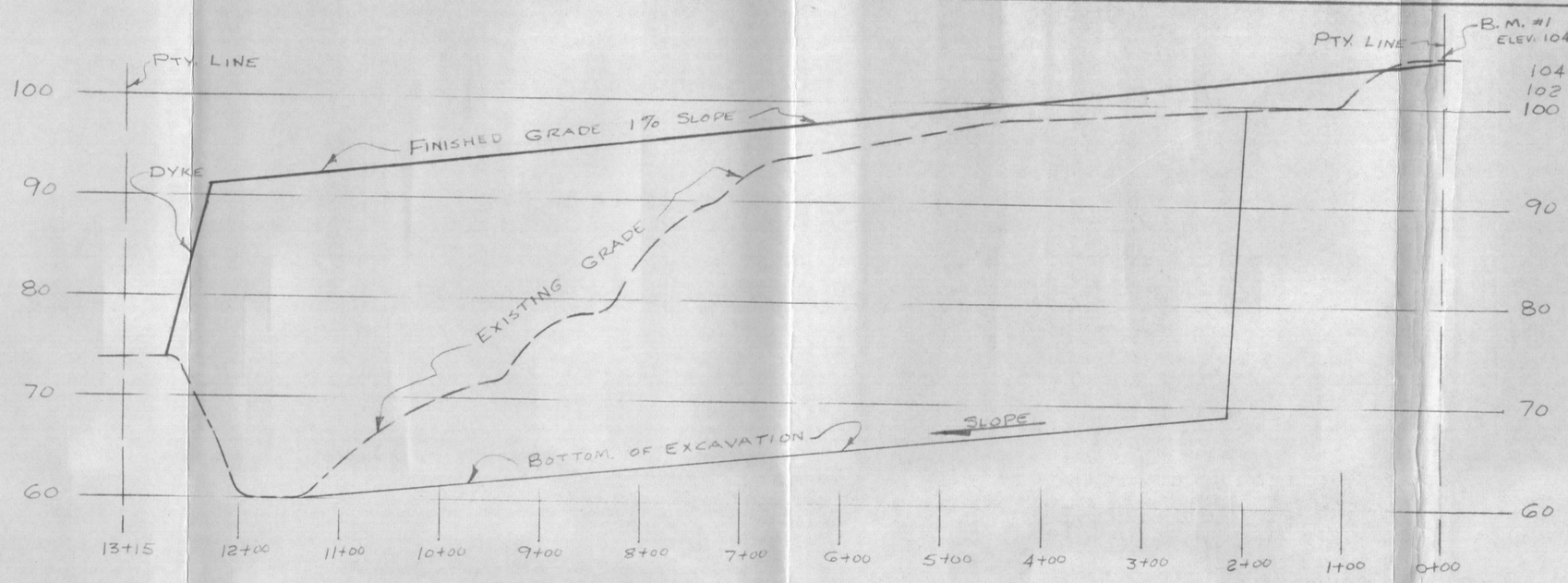


PLOT PLAN
CLIFFDALE LANDFILL

71ST TOWNSHIP CUMBERLAND COUNTY, NC.

DATE: Nov. 1974
SCALE: 1" = 100'

PLOT PLAN



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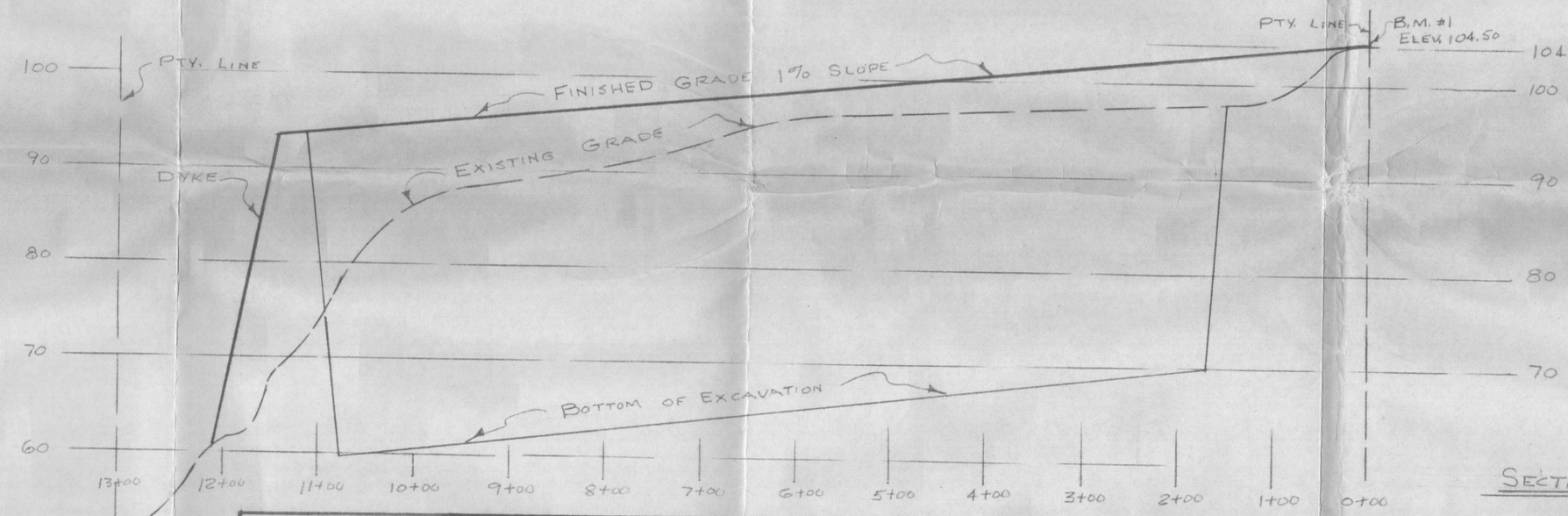

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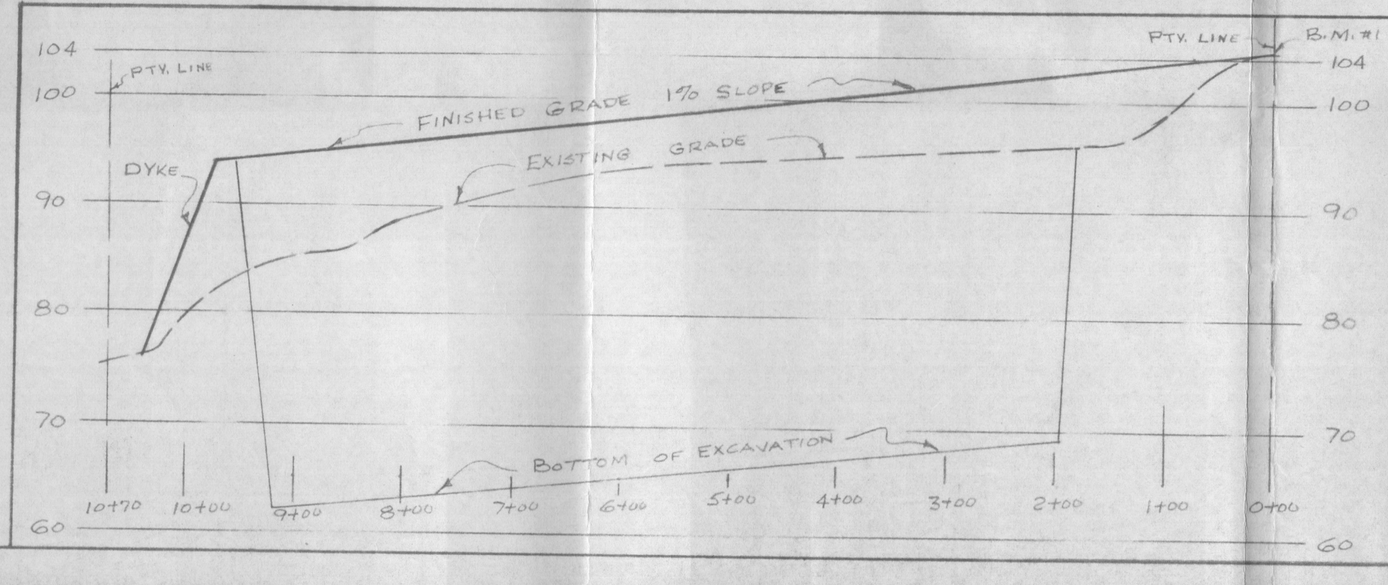


SECTION "A"

CROSS SECTIONS

CLIFFDALE LANDFILL

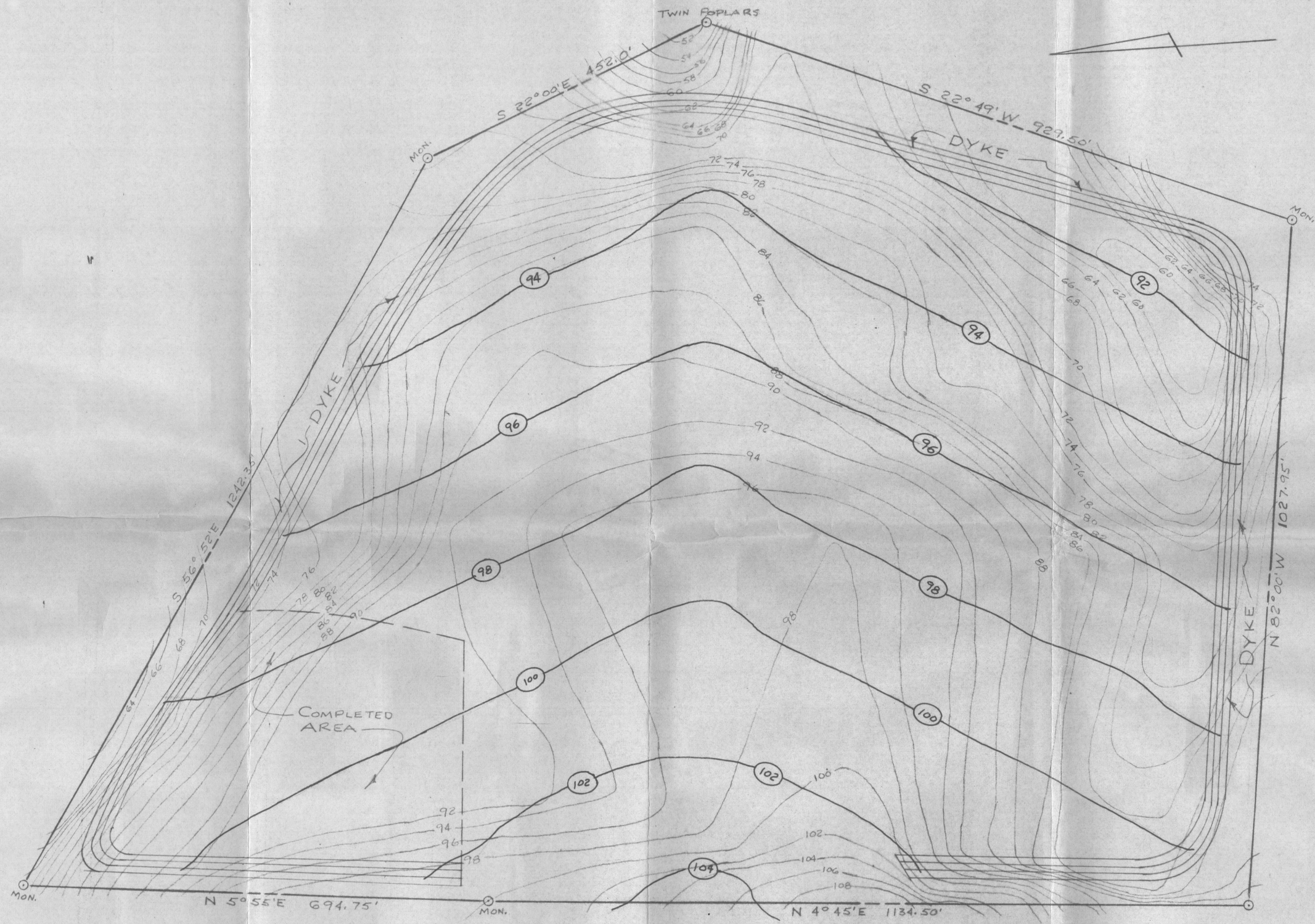
71ST TWSP. CUMBERLAND CO.

DATE: NOV. 1974

SCALE: HORIZ. 1"=100' VERT. 1"=10'

SHEET 2 OF 3

G.F.



CLIFFDALE LANDFILL

71 SI TOWNSHIP CUMBERLAND COUNTY, NC

DATE: NOV. 1974

SCALE: 1" = 100'

FINISHED ELEVATIONS

G.E

May 23, 1972

Mr. Lacy Williams, Jr., R.S.
Director of Environmental Health
Cumberland County Health Department
P. O. Box 470
Fayetteville, North Carolina 28302

Dear Mr. Williams:

The required information for site appraisal concerning the proposed sanitary landfill site off SR 1400 in the Lake Rim area has been reviewed and the site found suitable for sanitary landfill operations.

Information required for the operational plan appraisal has been reviewed for work Phase I and is hereby approved for operations meeting the requirements of the N. C. State Board of Health "Rules and Regulations Providing Standards for Solid Waste Disposal." A separation distance of at least three feet is to be maintained at all times between trench excavated bottom and the ground water table.

It is suggested that a provision in the trench preparation include leaving three feet of the earth material to be excavated from the trench bottom to be scooped for daily and final cover. This feature should reduce trench preparation cost and provide cover material at the immediate working face of the trench.

Prior to operations in the work Phase II area, submit the required information for operational plan review.

Sincerely,

Sidney H. Usry, Chief
Solid Waste & Vector Control Section
Sanitary Engineering Division

JCP:jp

Enclosure

cc: Mr. Fred Wood

(75)

N. C. STATE BOARD OF HEALTH
CHECK-OFF SHEET FOR PROPOSED SANITARY LANDFILL SITES

COUNTY Cumberland LOCATION Lakeview Area (SR 1700) ACRES 40

PROPERTY OWNER Cumberland Co PROPOSED OPERATOR Cumberland Co
Lewis Sanitation Services

1. Is this site within the boundaries of a public water supply watershed? Watershed _____ (GK) YES ____ NO ✓
2. Does any portion of this site contain floodplain areas? YES ✓ NO ____
3. Are there public or private wells nearby that could be affected? YES ____ NO ✓
   Nearest well in feet _____ (Elaborate in Comments Section)
4. Are there springs present on the site? Number _____ YES ____ NO ✓
5. Will this site require dyking? YES ✓ NO ____
6. Will this site require piping of surface drainage? YES ____ NO ✓
7. Not precluding required boring information, does this site have adequate cover material for the sanitary landfill development? YES ✓ NO ____
8. Will this site require diversion of surface water? YES ____ NO ✓
   Receiving stream for surface drainage from site Little Rockfish Crk
9. Will this site require extensive preparation, such as clearing? YES ✓ NO ____
   (Elaborate in Comments Section)
10. Will this site require a new all-weather access road? YES ✓ NO ____
    (Elaborate in Comments Section)
11. Evaluate the following:

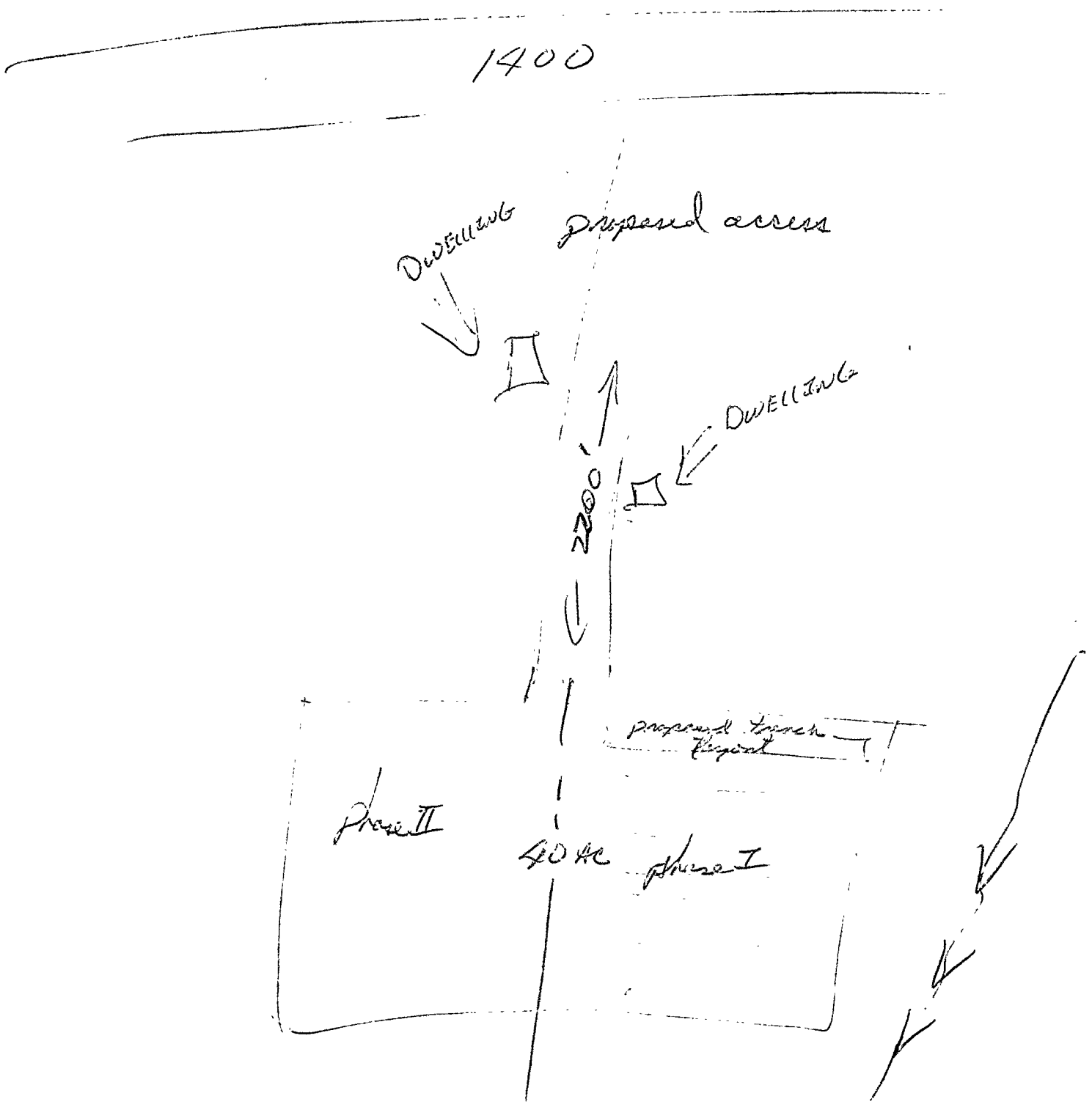
	POOR	GOOD	EXCELLENT
A. Surface soil conditions as related to cover requirements	____	✓	____
B. Location as related to population density	____	✓	____
C. Accessibility to users	____	✓	____

12. Based on the observations made above and otherwise, do you recommend that the requestor proceed with the requirements of Section IX of the North Carolina State Board of Health "Rules and Regulations Providing Standards for Solid Waste Disposal"? YES ✓ NO ____
13. COMMENTS: (Include any requirements noted by you for the sanitary landfill development and operation) 2. Very minor per. coverage.
    5. Cover Sections @ End of Proposed Trenches
    9. Heavy Growth of Sumac Trees, Blackjack, Pine 10. To be Built by N.C. Highway Dept.
14. Number of borings recommended for a representative sampling of the site 12
15. Percent of usable land 75%. Include sketch of site on back of this form.

17 May 1972
(DATE)

A. C. Perkins
N. C. State Board of Health
District Sanitarian for Solid Waste
or
Sanitary Engineer

SBH FORM 1350 (1/72)
Sanitary Engineering


1400
Dwelling
Proposed access
Dwelling
200'
proposed trench
Phase II
40 ac
Phase I

RECEIVED
60
MAR

N. C. STATE BOARD OF HEALTH
CHECK-OFF SHEET FOR PROPOSED SANITARY LANDFILL SITES

SANITARY ENGINEERING
DIVISION

COUNTY Cumberland LOCATION Lakerim Area ACRES 6.2

PROPERTY OWNER Mr M.D. Gillis PROPOSED OPERATOR Lewis Sanitation Service

1.	Is this site within the boundaries of a public water supply watershed? Watershed _____	YES _____	NO ✓
2.	Does any portion of this site contain floodplain areas?	YES _____	NO ✓
3.	Are there public or private wells nearby that could be affected? Nearest well in feet 1200 (Elaborate in Comments Section)	YES _____	NO ✓
4.	Are there springs present on the site? Number _____	YES _____	NO ✓
5.	Will this site require dyking?	YES ✓	NO _____
6.	Will this site require piping of surface drainage?	YES _____	NO ✓
7.	Not precluding required boring information, does this site have adequate cover material for the sanitary landfill development?	YES ✓	NO _____
8.	Will this site require diversion of surface water? Receiving stream for surface drainage from site Little Rockfish Creek	YES ✓	NO _____
9.	Will this site require extensive preparation, such as clearing? (Elaborate in Comments Section)	YES ✓	NO _____
10.	Will this site require a new all-weather access road? (Elaborate in Comments Section)	YES ✓	NO _____

11. Evaluate the following:	POOR	GOOD	EXCELLENT
A. Surface soil conditions as related to cover requirements	_____	✓	_____
B. Location as related to population density	_____	✓	_____
C. Accessibility to users	_____	✓	_____

12. Based on the observations made above and otherwise, do you recommend that the requestor proceed with the requirements of Section IX of the North Carolina State Board of Health "Rules and Regulations Providing Standards for Solid Waste Disposal"? YES ✓ * NO _____

13. COMMENTS: (Include any requirements noted by you for the sanitary landfill development and operation) * This site joins a lake owned by the State Wild Life Commission. Mr Williams is going to contact the wildlife people and get their reaction.

14. Number of borings recommended for a representative sampling of the site 5

15. Percent of usable land 25%. Include sketch of site on back of this form.

March 22 1972
(DATE)

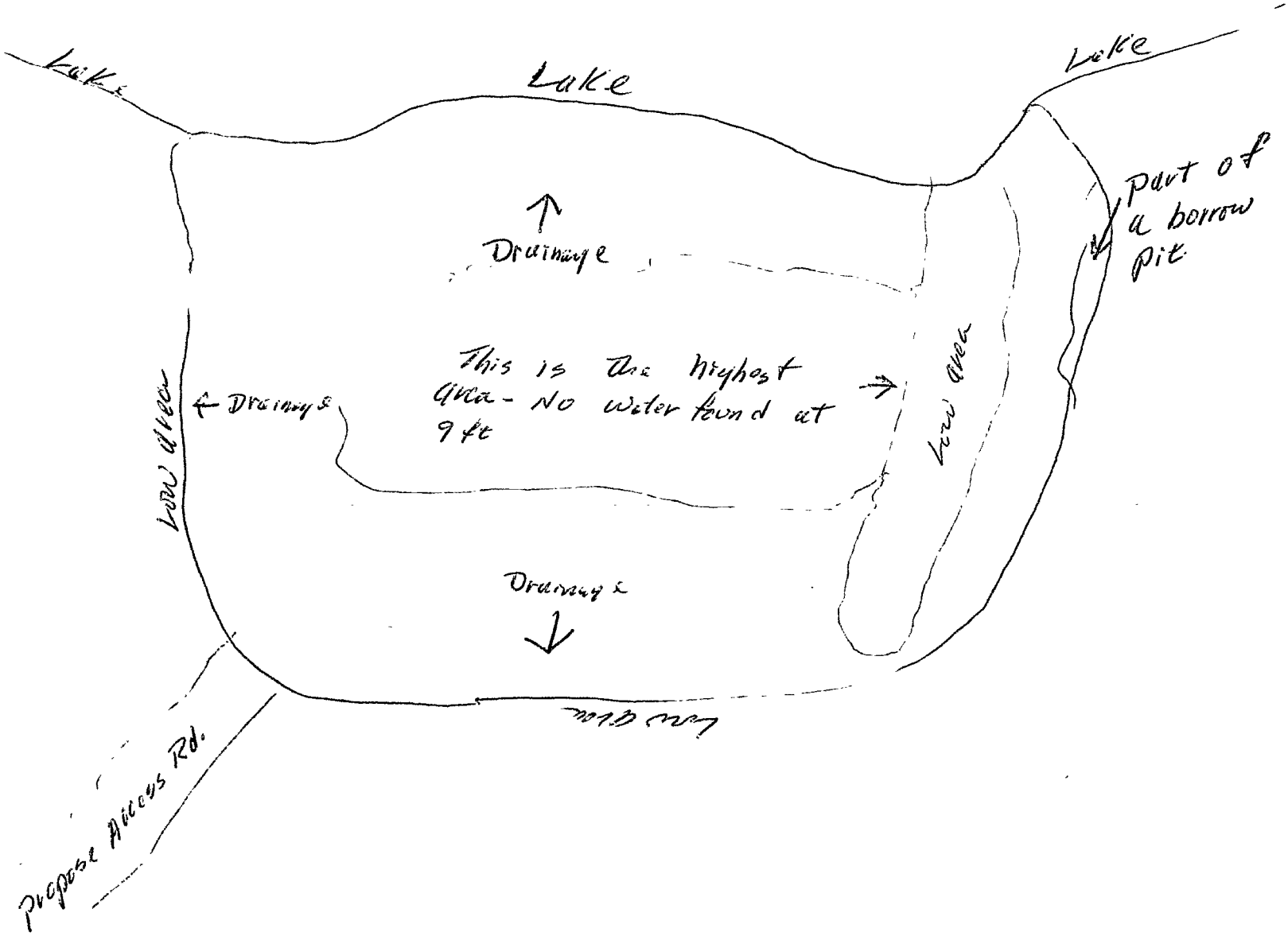
Fred J. Wood
N. C. State Board of Health
District Sanitarian for Solid Waste
or
Sanitary Engineer

SBH FORM 1350 (1/72)
Sanitary Engineering

I believe the biggest problem will be Wind blown paper in the lake.

This site is on a Knoll will drainage in all directions

Before this site can be approved the Wildlife people will have to be consulted.



(70)

71st Site

Files

N. C. STATE BOARD OF HEALTH
CHECK-OFF SHEET FOR PROPOSED SANITARY LANDFILL SITES

COUNTY Cumberland Co LOCATION Lake Rim area SR1400 ACRES 41.5

PROPERTY OWNER Lowell F. Harris PROPOSED OPERATOR Lewis Sanitation Service
County owned property

1. Is this site within the boundaries of a public water supply watershed? Watershed _____ YES _____ NO ✓
2. Does any portion of this site contain floodplain areas? YES _____ NO ✓
3. Are there public or private wells nearby that could be affected? YES _____ NO ✓
   Nearest well in feet 700 (Elaborate in Comments Section)
4. Are there springs present on the site? Number _____ YES _____ NO ✓
5. Will this site require dyking? YES _____ NO ✓
6. Will this site require piping of surface drainage? YES _____ NO ✓
7. Not precluding required boring information, does this site have adequate cover material for the sanitary landfill development? YES ✓ NO _____
8. Will this site require diversion of surface water? YES ✓ NO _____
   Receiving stream for surface drainage from site _____
9. Will this site require extensive preparation, such as clearing? YES ✓ NO _____
   (Elaborate in Comments Section)
10. Will this site require a new all-weather access road? YES ✓ NO _____
    (Elaborate in Comments Section)
11. Evaluate the following:

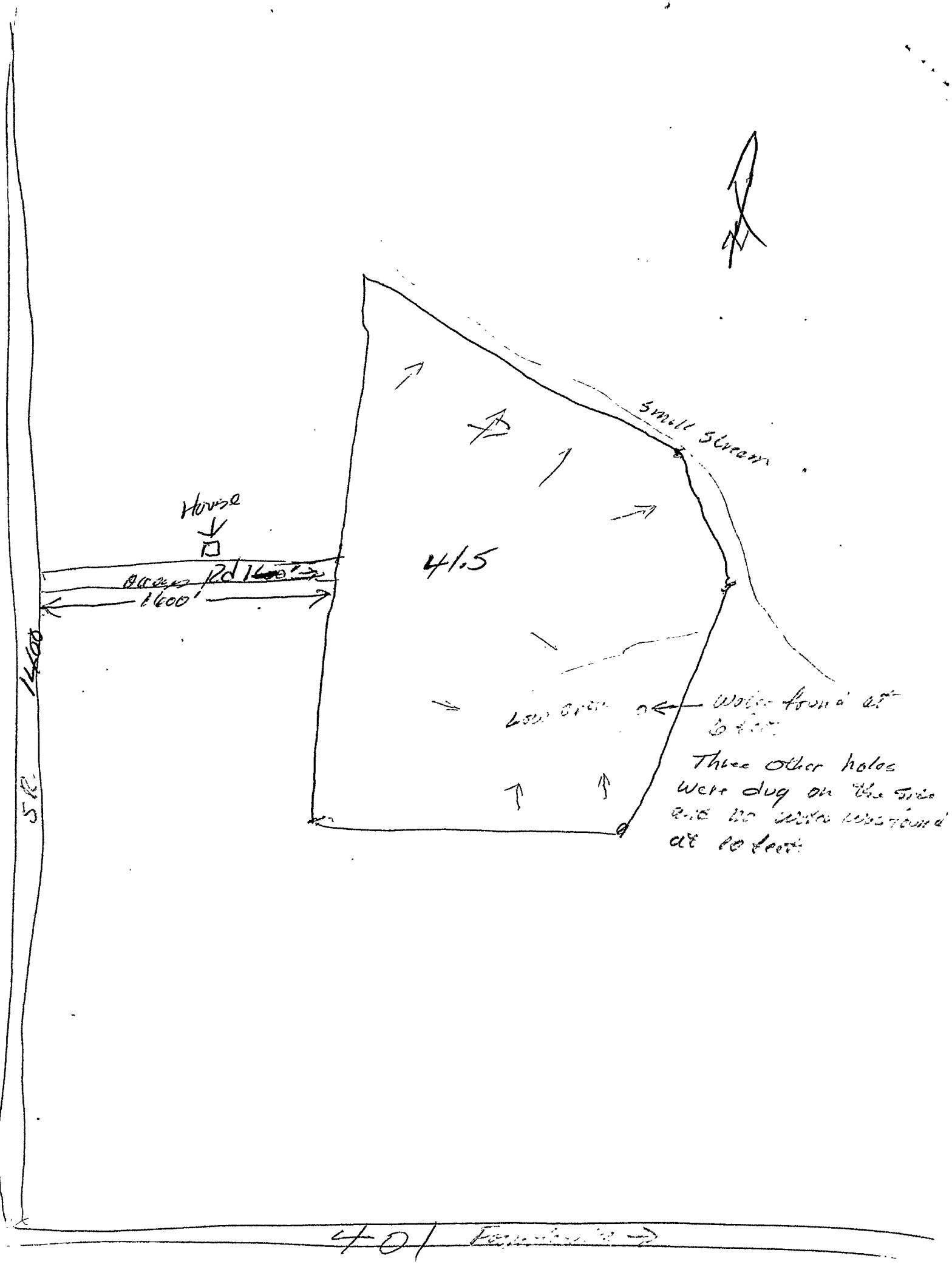
	POOR	GOOD	EXCELLENT
A. Surface soil conditions as related to cover requirements	_____	_____	✓
B. Location as related to population density	_____	✓	_____
C. Accessibility to users	_____	✓	_____

12. Based on the observations made above and otherwise, do you recommend that the requestor proceed with the requirements of Section IX of the North Carolina State Board of Health "Rules and Regulations Providing Standards for Solid Waste Disposal"? YES ✓ NO _____
13. COMMENTS: (Include any requirements noted by you for the sanitary landfill development and operation) This looks like a very good site
14. Number of borings recommended for a representative sampling of the site 5
15. Percent of usable land 100%. Include sketch of site on back of this form.

April 6 1972
(DATE)

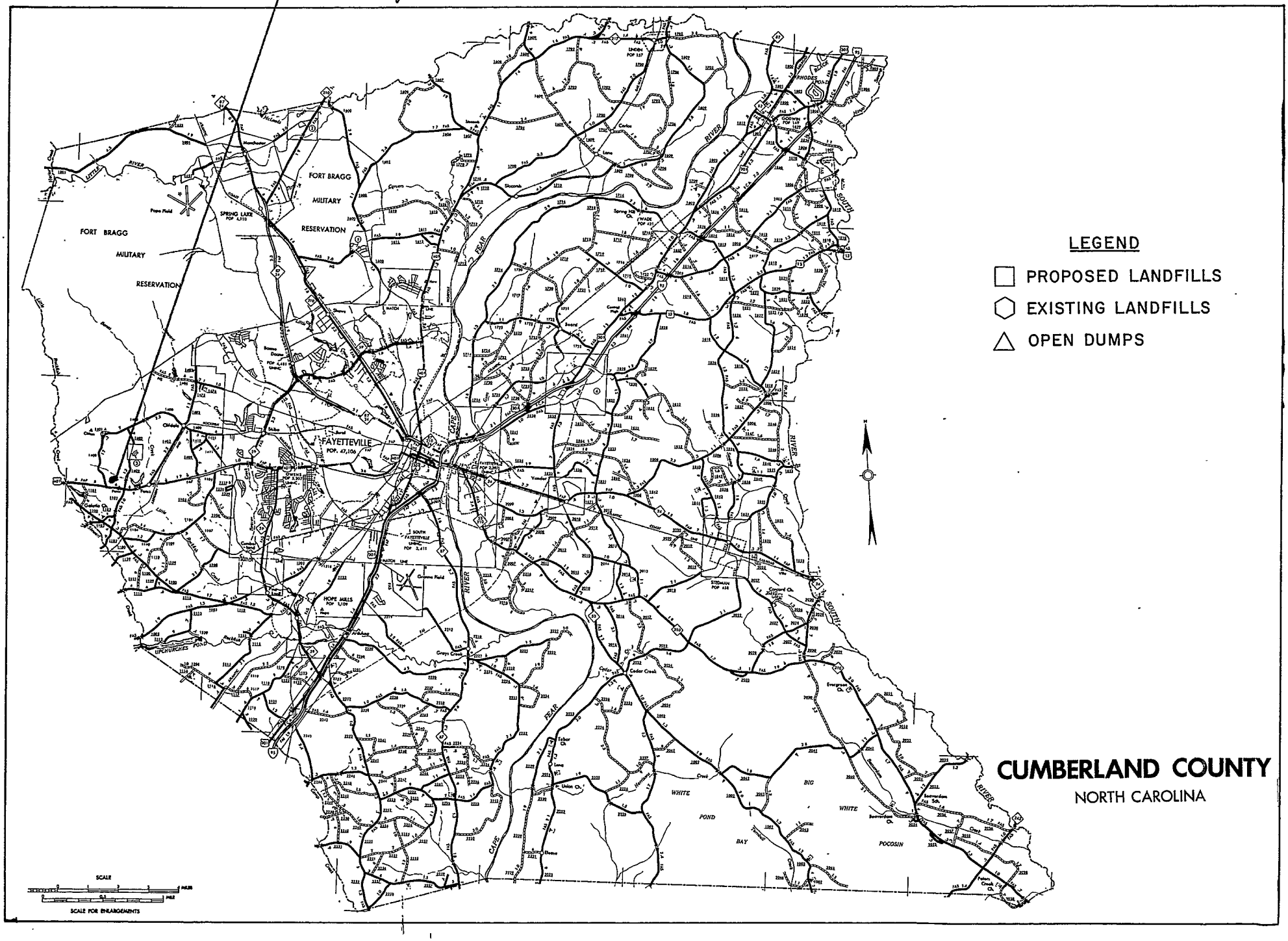
Jud Garwood
N. C. State Board of Health
District Sanitarian for Solid Waste
or
Sanitary Engineer

SBH FORM 1350 (1/72)
Sanitary Engineering



House
Access Rd 1600'
1600'
41.5
Small Stream
Low area
Water found at 6 feet
Three other holes were dug on the site and no water was found at 10 feet
1400
5 R.
401

Harris property



Soil and Water Conservation District
P. O. Box 4323
Fayetteville, N. C. 28306

April 6, 1972

Mr. Terry Dover
Cumberland County Health Dept.
P. O. Box 470
Fayetteville, N. C. 28302

Dear Mr. Dover:

This is in reply to your request for soils information on proposed landfill site in Seventy-First township.

On the basis of the latest information that is available from the Soil Conservation Service, we submit the attached information.

Sincerely yours,

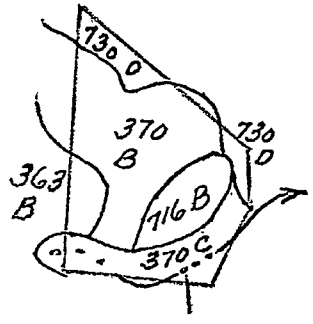
Clifton McNeill
Chairman

CM/ja

Attachment

RECEIVED
APR 7 1972
ENVIRONMENTAL HEALTH
DIVISION

Cumberland County Health Department
Proposed Landfill Site
Approximate Scale 1" = 1320'
Soil Conservation Service



Soils:

370B Wagram loamy sand, 0-6% slopes
363B Lucy loamy sand, 0-6% slopes
716B Wakulla sand, 0-6% slopes
370C Wagram loamy sand, 6-10% slopes
730D Troup sand, 8-15% slopes

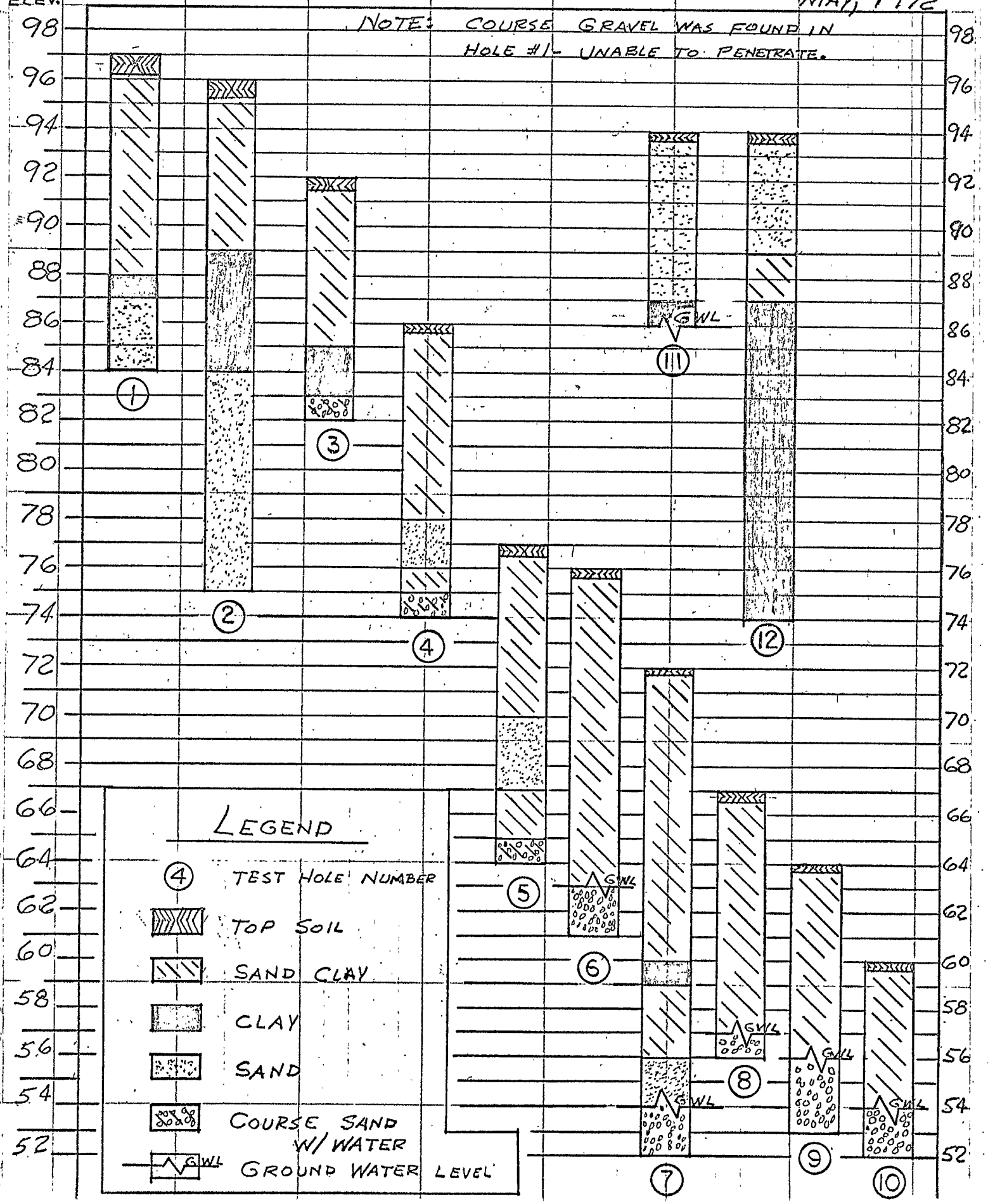
Degree of soil limitation for landfill site.

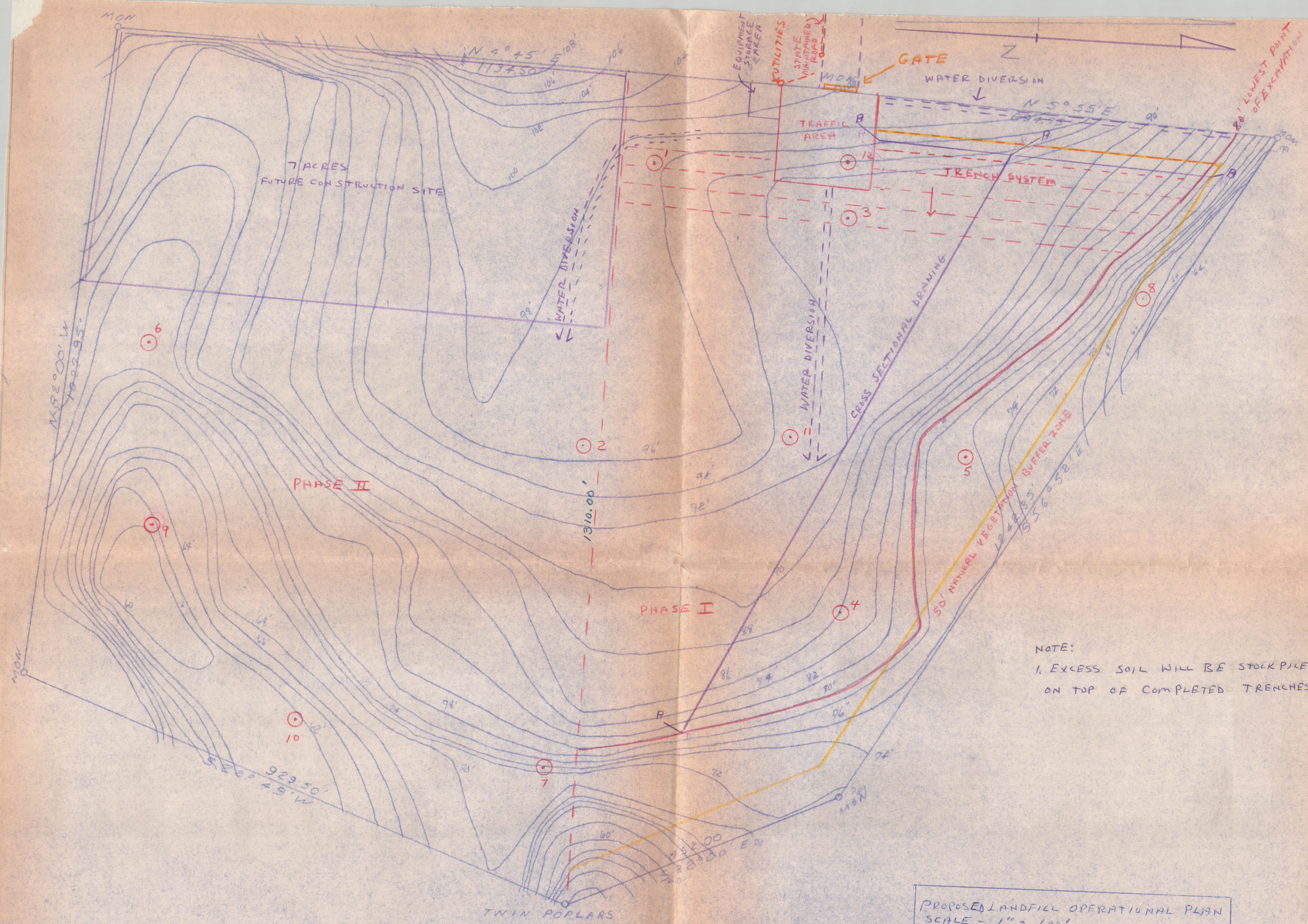
370B Slight limitation
370C Slight limitation
363B Slight limitation
730D Moderate limitation due to moderately rapid permeability which affects ability of soil to retard movement of landfill leachate.
176B Severe limitation due to rapid permeability which affects ability of soil to retard movement of landfill leachate.

4-5-72

TEST BORINGS OF PROPOSED
SEVENTY-FIRST AREA SANITARY LANDFILL
MAY, 1972

NOTE: COURSE GRAVEL WAS FOUND IN HOLE #1 - UNABLE TO PENETRATE.





NOTE:

1. EXCESS SOIL WILL BE STOCKPILED ON TOP OF COMPLETED TRENCHES.

PROPOSED LANDFILL OPERATIONAL PLAN
SCALE - 1" = 100'

71ST AREA, CUMBERLAND COUNTY, N.C.

MAY 16, 1972

Health Department
County of Cumberland
Fayetteville, North Carolina 28302

May 17, 1972

RECEIVED
MAY 18 1972
SANITARY ENGINEERING
DIVISION

North Carolina State Board of Health
Sanitary Engineering Division
Solid Waste and Vector Control Section
Raleigh, North Carolina

SUBJECT: 71st Area Landfill
Cumberland County, North Carolina

Gentlemen:

In accordance with instructions outlined in the State Board of Health Bulletin Number 411 dated March 11, 1971, we are enclosing three copies each of the following for the proposed landfill.

I. Topographic maps, one inch equals 100 feet with 2 feet contour intervals showing boundaries of property owned by County of Cumberland.

   A. Proposed area for a county operated landfill with dimensions.

   B. Locations of soil borings.

   C. Access and entrance roads to the site.

   D. Location of cross section made on drawing.

   E. Proposed direction for trenching operations.

   F. Proposed location of equipment storage.

   G. Proposed location of ditches for diversion of upland drainage.

II. Aerial photographs (scale 1" = 400')

   A. Landfill location.

   B. Dwellings.

   C. Private water supplies.

   D. Streams.

   E. Lakes.

III. Soil report from U. S. Soil Conservation Service.

IV. Test boring results.

V. Cross sectional drawings.

A. Vertical and horizontal view.

B. Present land elevations.

C. Proposed fill (finished) elevations.

VI. Pertinent information for the proposed landfill and its operation is as follows:

A. Population and area served:

1. 35,000 estimated total.

a. Louis Sanitation Company is presently serving approximately 25,000 persons.

b. It is estimated that 10,000 people will be served by depositing individually at the site.

2. General area to be served will be Seventy-First Township, Cumberland County.

B. Anticipated type, quantity and source of material to be disposed of at site: household, commercial and industrial refuse, estimated 400 cubic yards per day.

C. 1. Initial plan for development of approximately twenty acres, or one-half of total site, beginning on the N. W. side of the property.

2. Utilizing a trench method of disposal.

3. The trenches shall be approximately 25 feet in width at the base and a maximum of 10 feet in depth with sloped sides, bottom of trench sloped to drain.

4. Refuse cells shall be constructed in an orderly manner, maximum depth being no greater than 8 feet compacted as densely as practical and covered after each day of operation with a compacted layer of at least 6 inches of suitable cover. All completed cells shall be covered with at least 2 feet of compacted earth, sloped no greater than 1 percent to allow surface water run-off.

5. Surface water shall be diverted from working area of landfill by diversion ditches.

D. Initial preparation of landfill will be performed by dragline and bulldozer. Daily maintenance operation will be performed by 32,000 pound tracked loader, or necessary equivalent machine.

E. At the present time, Louis Sanitation Company is charged with the responsibility of daily maintenance as per franchised agreement between Cumberland County and said company. In the event changes are made regarding this phase of responsibility, State Board of Health will be notified.

F. Sanitary landfill site is intended for use as a county recreation area after completion.

G. Anticipated lifetime of project will be approximately three and one-half years for phase I.

H. Landfill operational hours will be 9:00 a. m. to 5:00 p. m., Monday through Friday, and 9:00 a. m. to 1:00 p. m., Saturday. Landfill to be closed on Sunday. Operational hours as set forth by local board of health regulations. Instructional signs posted at the site entrance shall include: hours of operation, other instructions and general information.

I. An attendant will be on duty at the site at all times when it is open for public use.

J. An approved pit privy will be installed on the site for proper sewage disposal.

K. The sanitary landfill site will be operated in accordance to the rules and regulations and standards for solid waste disposal as set forth by the North Carolina State Board of Health.

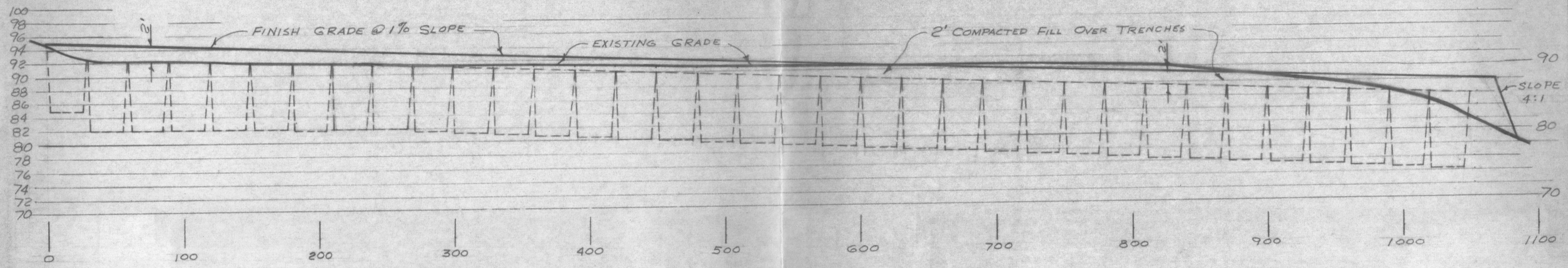
Very truly yours,

Lacy Williams, Jr.

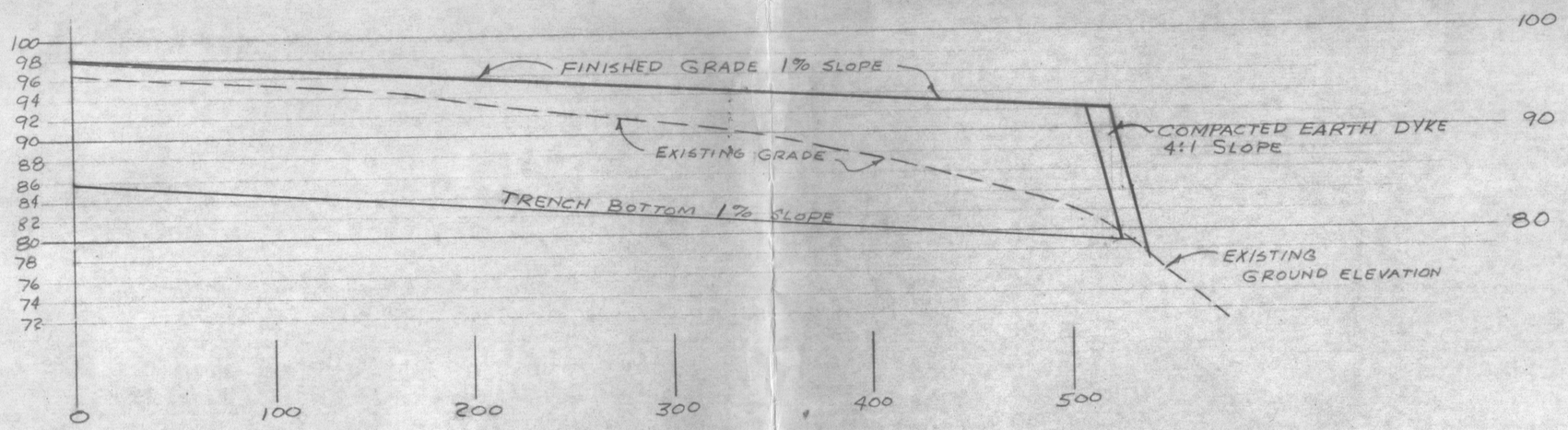
Lacy Williams, Jr., R. S.
Director of Environmental Health

LWJr:jbr
Enclosures

NOTE:
WASTE TO BE 3' ABOVE GROUND WATER LEVEL AT ALL TIMES.



CROSS SECTION A-A Scale: HORIZ. 1"=50' VERT. 1"=10'



CROSS SECTION B-B. Scale: HORIZ. 1"=50' VERT. 1"=10'

CROSS SECTIONS
PROPOSED 71ST AREA LANDFILL
CUMBERLAND COUNTY, N.C.
MAY, 1972

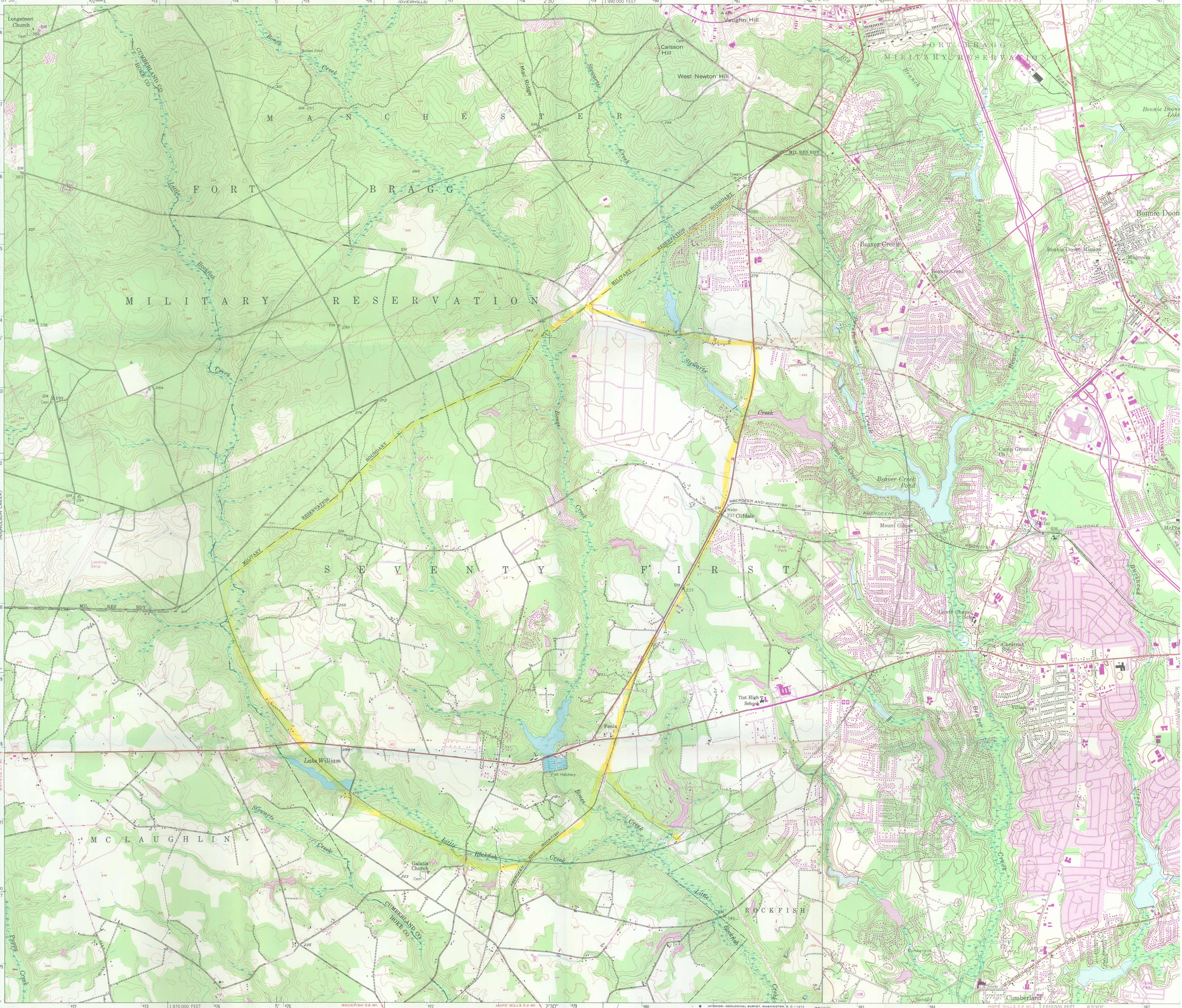
UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

UNITED STATES
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

Cumberland County Landfill
NcD980502900

CLIFDALE QUADRANGLE
NORTH CAROLINA
7.5 MINUTE SERIES (TOPOGRAPHIC)
SE/4 CLIFDALE 15' QUADRANGLE

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



Mapped by the Army Map Service
Edited and published by the Geological Survey

Control by USGS, USC&GS, and CE

Topography from aerial photographs by multiplex methods
Aerial photographs taken 1946-1947. Field check 1948

Polyconic projection. 1927 North American datum
10,000-foot grid based on North Carolina coordinate system

1000-meter Universal Transverse Mercator grid ticks, zone 17, shown in blue

Revisions shown in purple compiled by the Geological Survey from aerial photographs taken 1971. This information not field checked

UTM GRID AND 1971 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, WASHINGTON, D.C. 20242
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Entire area gw PWS & private

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—1973

ROAD CLASSIFICATION

HARD-SURFACE ALL WEATHER ROADS — DRY WEATHER ROADS
Heavy-duty — 4 LANE | 6 LANE — Improved dirt
Medium-duty — 4 LANE | 6 LANE — Unimproved dirt
Loose-surface, graded, or narrow hard-surface
U. S. Route — State Route

CLIFDALE, N. C.
SE/4 CLIFDALE 15' QUADRANGLE
N3500—W7900/7.5

EDITION OF 1950
PHOTOREVISED 1971
AMS 5154 II SE—SERIES V842

Mapped by the Army Map Service
Published for civil use by the Geological Survey

Control by USGS, NOS/NOAA, and USCE

Topography by photogrammetric methods from aerial photographs taken 1946–1947. Planimetric detail revised from aerial photographs taken 1955. Field checked 1957

Polyconic projection. 10,000-foot grid ticks based on North Carolina coordinate system. 1000-meter Universal Transverse Mercator grid ticks, zone 17, shown in blue. 1927 North American Datum. To place on the predicted North American Datum 1983 move the projection lines 12 meters south and 22 meters west as shown by dashed corner ticks

Red tint indicates areas in which only landmark buildings are shown

There may be private inholdings within the boundaries of the National or State reservations shown on this map

UTM GRID AND 1982 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

THIS MAP
FOR SALE
A FOLDER DESCRIB

EPA DID NOT MAIL
TO FACILITY

DATE: August 22, 1995

SUBJECT: REMOVAL FROM EPA'S CERCLIS INVENTORY

FROM: Matthew J. Robbins, Brownfields Coordinator
Waste Management Division, Region IV

TO: CUMBERLAND COUNTY LDFL
CLIFFDALE RD AND ST RD 1400
FAYETTEVILLE
NC 28301

EPA has identified the Brownfields Initiative as one of the Agency's top priorities. The term "brownfields" refers to previously used properties that may lie vacant because potential contamination makes them unmarketable to the private sector. EPA has recently announced a comprehensive Brownfields strategy, including Pilot grants to municipalities, to stimulate economic revitalization.

One part of the strategy has been for EPA to review its complete inventory of Superfund sites. These sites have been screened and determined to require no remedial action under the Federal Superfund Program based on information available as well as on conditions and policies that currently exist. This is to notify you that EPA has removed your facility from EPA's computer inventory known as CERCLIS. THIS DOES NOT INDICATE THAT THE STATE HAS MADE A SIMILAR DETERMINATION.

If you have any questions, please call me at 404/347-5059 ext. 6214.

cc: State Agency

North Carolina Department of Human Resources
Division of Health Services
P.O. Box 2091 • Raleigh, North Carolina 27602-2091

James G. Martin, Governor
David T. Flaherty, Secretary

Ronald H. Levine, M.D., M.P.H.
State Health Director

September 12, 1987

Ms. Denise Smith
EPA NC CERCLA Project Officer
EPA Region IV Waste Division
345 Courtland Street, N.E.
Atlanta, GA 30365

Dear Ms. Smith:

Subject: Preliminary Assessment Report
Cumberland County Landfill, NC D980502900
Cliffdale Rd. (SR 1400)
Fayetteville, NC 28301

Enclosed please find the Preliminary Assessment report for the subject site. This priority is based on review of available data.

The Cumberland County Landfill is located on Cliffdale Rd. (SR 1400) approximately 6 miles west of Fayetteville, NC. Fayetteville is in central Cumberland County. The site has always been privately owned, but was leased by Cumberland County for use as a municipal landfill. The county operated the site from around 1971 to 1973.

E.I. Dupont, Fayetteville Works reported disposing of 2700 tons of plant waste at this site between 1971 and 1973. Dupont now indicates that this was non-hazardous plant trash similar to waste currently disposed at the Bladen County Landfill. No other specific waste disposals have been reported at this site.

The site is currently being used as a horse farm. It is approximately 800 feet west of Bones Creek. Lake Rim, less than 2 miles downstream of the site is used for recreational boating and fishing. Outflow from the lake goes to the Fayetteville Fish Hatchery which has been in operation there since the 1930's. There are no monitoring wells on site, however, the nearest drinking water well is less than 2,000 feet from the site at Colony Village MHP. It appears that all residents, at least 10,000 people, within 3 miles of the site are dependent on groundwater for drinking water supply.

Currently, there is no documentation of disposal of hazardous substances at this site. There have also been no known releases from the site. However, there are significant groundwater and surface water targets which could be impacted in the event of a release. Sampling and inspection are therefore suggested. Based on the available data, a medium prioity for inspection is recommended.

On September 3, 1987, this Preliminary Assessment was reviewed by CERCLA Unit personnel; and by the following representatives from the North Carolina Department of Natural Resources and Community Development, Division of Environmental Management: Glenn Ross, Air Quality Section; and Vince Schneider, Water Quality Section.

If you have any questions, please call me at (919) 733-2801.

Sincerely,

Pat DeRosa

Pat DeRosa, Waste Management Specialist
CERCLA Unit
Solid and Hazardous Waste Management Branch
Environmental Health Section

PD/pd/0472b.37

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D980502900

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER				
Cumberland County Landfill	Cliffdale Rd. (SR 1400)				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 COUNTY**	**07 COUNTY CODE**	**08 CONG DIST**
Fayetteville	NC	28301	Cumberland	26	07

09 COORDINATES LATITUDE	LONGITUDE
35 03 42.__	079 02 23.__

10 DIRECTIONS TO SITE (Starting from nearest public road)

Take US 401 South to Fayetteville. Turn right onto the Central Business Loop to Hay St. Turn right onto Hay St. and continue west into Morganton Rd.~ 1½ miles. Bear left at fork onto Cliffdale Rd. (SR 1400). Continue 6 miles west, site on left just past Bones Creek.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)			
Mrs. Hepner				
03 CITY	**04 STATE**	**05 ZIP CODE**	**06 TELEPHONE NUMBER**	
Fayetteville	NC	28301	( )	
07 OPERATOR (If known and different from owner)	**08 STREET (Business, mailing, residential)**			
Cumberland County Health Dept.	227 Fountainhead Lane			
09 CITY	**10 STATE**	**11 ZIP CODE**	**12 TELEPHONE NUMBER**	
Fayetteville	NC	28301	(919) 483-9046	

13 TYPE OF OWNERSHIP (Check one)

☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL

☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)

☐ A. RCRA 3001 DATE RECEIVED: __/__/__ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: __/__/__ (MONTH DAY YEAR) ☒ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION

☐ YES DATE __/__/__ (MONTH DAY YEAR)
☒ NO

BY (Check all that apply)

☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)

CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)	03 YEARS OF OPERATION		
☐ A. ACTIVE ☒ B. INACTIVE ☐ C. UNKNOWN	~ 1971 (BEGINNING YEAR)	1973 (ENDING YEAR)	☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED

E.I. Dupont, Fayetteville Works reported disposing of 2700 tons of waste at this site between 1971 - 1973(Eckhardt List). Dupont currently indicates that this was non-hazardous plant trash similar to waste currently disposed at the Bladen County Landfill. This site was operated as a county landfill. No hazardous wastes are known to be disposed here. No monitoring wells on site.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION

Fayetteville Fish Hatchery and Lake Rim less than 2 miles downstream. Site is currently used as a horse farm.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)

☐ A. HIGH (Inspection required promptly) ☒ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)		03 TELEPHONE NUMBER
Lacy Williams, Environmental Health Section	Cumberland County Health Dept.		(919) 483-9046
04 PERSON RESPONSIBLE FOR ASSESSMENT	**05 AGENCY**	**06 ORGANIZATION**	**07 TELEPHONE NUMBER**	**08 DATE**
Pat DeRosa	NC DHR	St HWM Br.	(919) 733-2801	8/18/87 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D980502900

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES *(Check all that apply)*

- [X] A. SOLID
- [ ] B. POWDER, FINES
- [ ] C. SLUDGE
- [ ] D. OTHER _____ *(Specify)*
- [ ] E. SLURRY
- [ ] F. LIQUID
- [ ] G. GAS

02 WASTE QUANTITY AT SITE
(Measures of waste quantities must be independent)

TONS 2700

CUBIC YARDS _____

NO. OF DRUMS _____

03 WASTE CHARACTERISTICS *(Check all that apply)*

- [ ] A. TOXIC
- [ ] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [ ] D. PERSISTENT
- [ ] E. SOLUBLE
- [ ] F. INFECTIOUS
- [ ] G. FLAMMABLE
- [ ] H. IGNITABLE
- [ ] I. HIGHLY VOLATILE
- [ ] J. EXPLOSIVE
- [ ] K. REACTIVE
- [ ] L. INCOMPATIBLE
- [X] M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES *(See Appendix for most frequently cited CAS Numbers)*

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION

V. FEEDSTOCKS *(See Appendix for CAS Numbers)*

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

See attached list of references 1 - 8.

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION	
01 STATE	02 SITE NUMBER
NC	D980502900

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — [X] POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: > 10,000 — 04 NARRATIVE DESCRIPTION

None reported. The nearest well is < 2,000 feet from the site at Colony Village MHP. City water is not available to most residents. At least 10,000 people depend on groundwater from private and community wells.

01 [X] B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — [X] POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

None reported. The nearest creek, Bones Creek, is 800 ft. east of the site. Lake Rim, < 2 miles downstream, is used for recreation. The Fayetteville Fish Hatchery is also < 2 miles downstream.

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 [X] F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: _____) — [X] POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres) — 04 NARRATIVE DESCRIPTION

None reported.

01 ☐ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D980502900

II. HAZARDOUS CONDITIONS AND INCIDENTS *(Continued)*

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION *(Include name(s) of species)*

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES *(Spills/runoff/standing liquids/leaking drums)* — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

V. SOURCES OF INFORMATION *(Cite specific references, e. g., state files, sample analysis, reports)*

See attached list of references 1 - 10.

PA REFERENCES

Cumberland County Landfill
NCD980502900

1. USGS 7.5' Quadrangle Map: Cliffdale, NC 1948 (photorevised 1982).

2. CERCLA File: Cumberland County Landfill, NCD980502900, 698 Ann St., Fayetteville, NC. Solid and Hazardous Waste Management Branch, NC DHR, Raleigh, NC.

3. US EPA, Regional ERRIS List Inventory, by County, ERS-RPT-20, Report Date, July 31, 1987.

4. Pamphlet: Cumberland County Sanitary Landfills, April 1971. Solid Waste File: Cumberland County. Solid and Hazardous Waste Management Branch, NC DHR, Raleigh, NC.

5. Memo to file from Pat DeRosa, NC CERCLA Unit, August 17, 1987. Telephone conversation with Terry Dover, Solid and Hazardous Waste Management Branch, Fayetteville, NC.

6. Memo to file from Pat DeRosa, NC CERCLA Unit, August 17, 1987. Telephone conversation with Tom Olcott, EI Dupont, Fayetteville, NC.

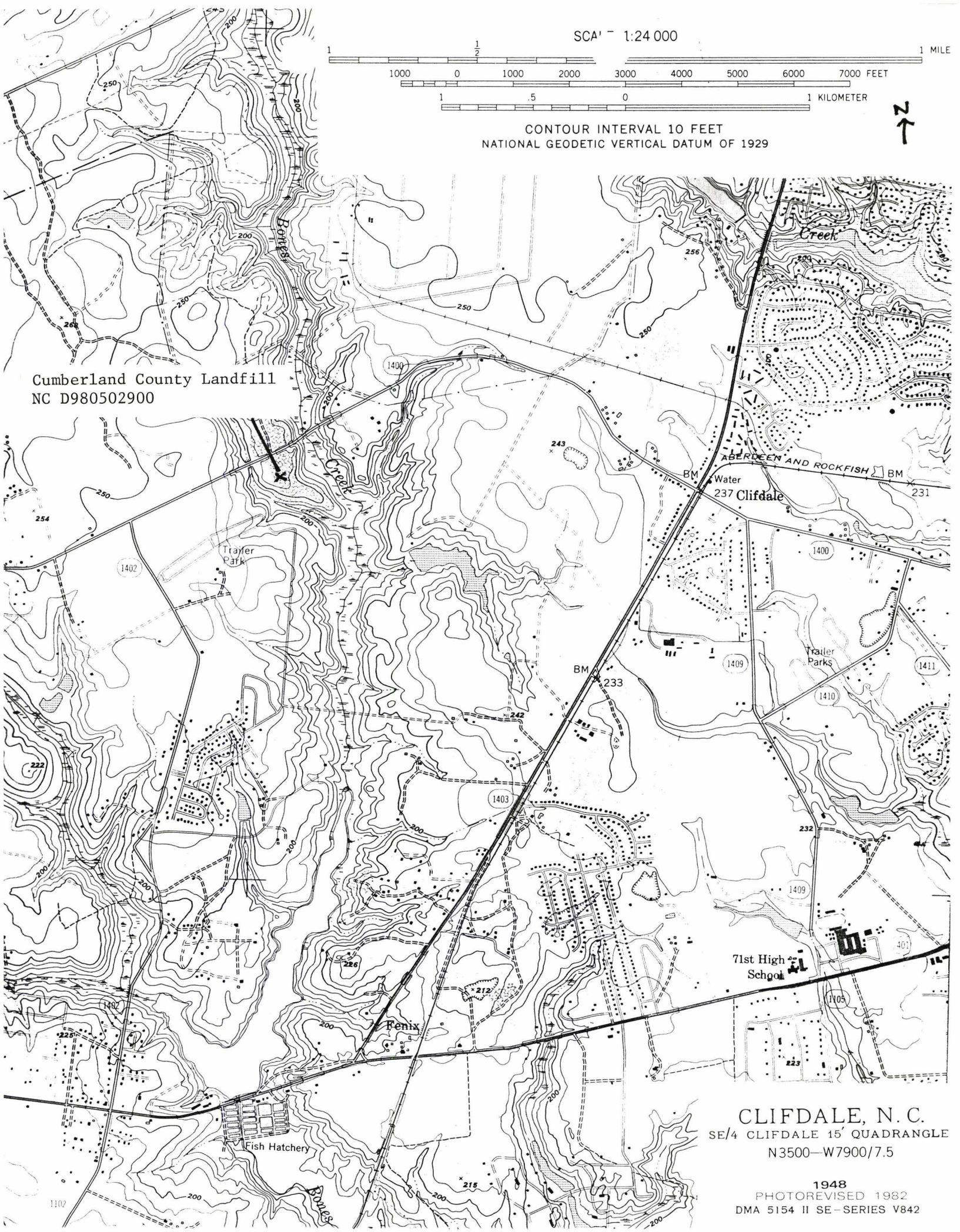
7. Memo to file from Pat DeRosa, NC CERCLA Unit, August 17, 1987. Telephone conversation with Keith Ashley, NC Wildlife Commission, Fayetteville, NC.

8. Memo to file from Pat DeRosa, NC CERCLA Unit, September 10, 1987. Telephone conversation with Lacy Williams, Cumberland County Health Department, Fayetteville, NC.

9. Memo to file from Pat DeRosa, NC CERCLA Unit, September 10, 1987. Personal communication with Dick Caspar, Water Supply Branch, NC DHR, Raleigh, NC.

10. Water Map, City of Fayetteville and Vicinity, 1984. Public Works Commission, Fayetteville, NC.

PD/pb/0472b.35



CLIFDALE, N. C.

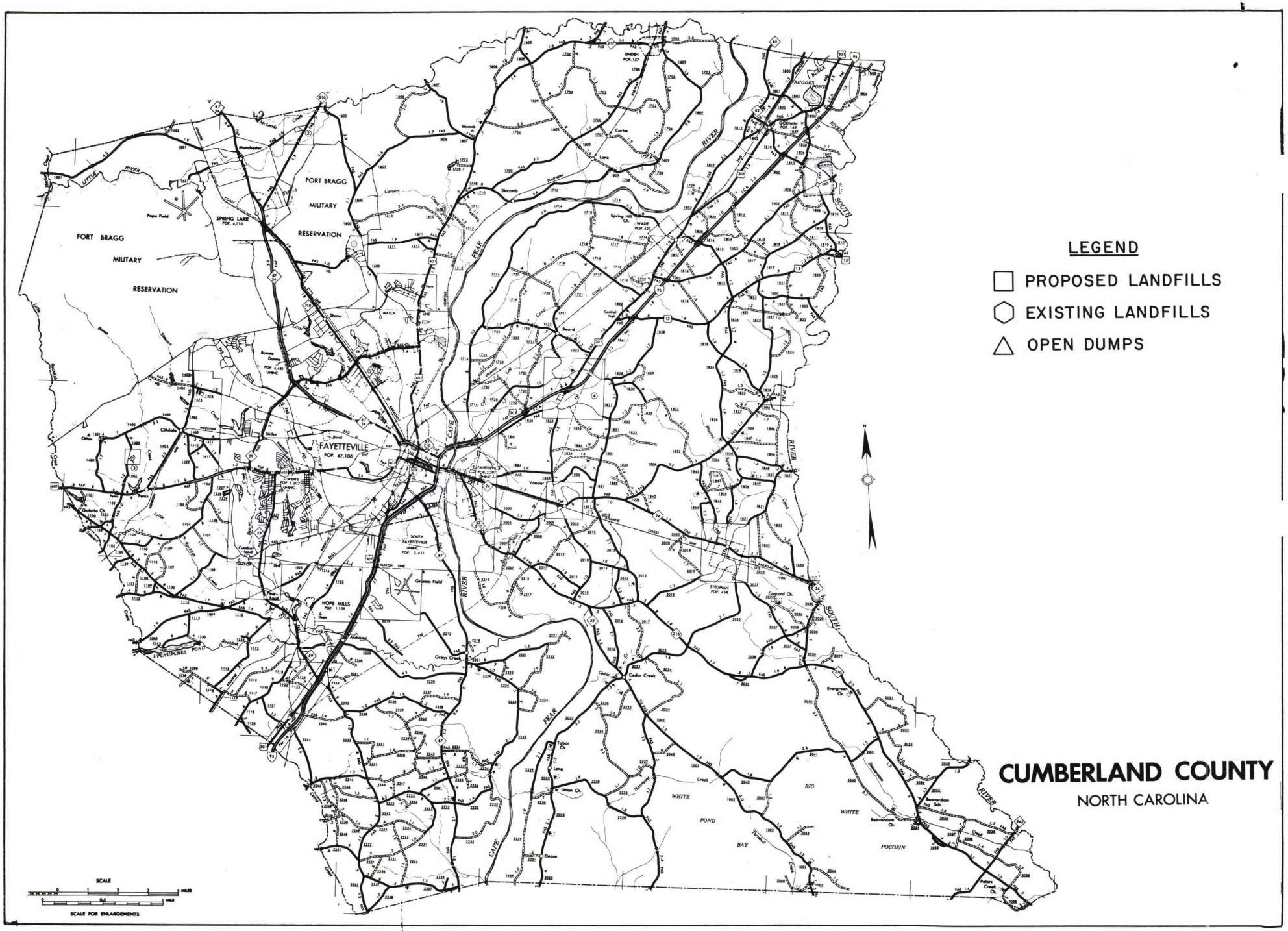
SE/4 CLIFDALE 15′ QUADRANGLE

N3500—W7900/7.5

1948

PHOTOREVISED 1982

DMA 5154 II SE—SERIES V842


LEGEND
PROPOSED LANDFILLS
EXISTING LANDFILLS
OPEN DUMPS
CUMBERLAND COUNTY
NORTH CAROLINA
FORT BRAGG MILITARY RESERVATION
FAYETTEVILLE POP. 47,106
SPRING LAKE POP. 4,110
HOPE MILLS POP. 1,109
STEDMAN POP. 458
GODWIN POP. 149
WADE POP. 421
LINDEN POP. 157
RIVER
CAPE FEAR
LITTLE RIVER
SOUTH RIVER
LUMBER RIVER
LITCHURCHES POND
RHODES POND
WHITE POND
BIG WHITE POCOSIN
BAY
SCALE
SCALE FOR ENLARGEMENTS

SITE: NUMBER 2004 PAGE 1 FOR THIS SITE
CUMBERLAND COUNTY LANDFILL
~~BUNCE ROAD~~ S.R. 1400 present Co. landfill
CUMBERLAND COUNTY,NC X----

COMPANY: COMPANY-FACILITY NUMBER 7053
BORDEN CHEMICAL DIV
X----
FAYETTEVILLE PLANT
1411 INDUSTRIAL DR
FAYETTEVILLE,NC 28301

FIRST YEAR USED: 1974
LAST YEAR USED: 1979

HUNDRED TONS: 2
THOUSAND CUBIC YDS.: .
THOUSAND GALLONS: .

COMPOSITION OF WASTE:

G. org
ORGAN1

Amides, amines imides
ORGAN10

Resins
ORGAN12

LEGEND: IF LISTED, THEN PRESENT IN WASTED. IF NOT LISTED, THEN ITEM NOT PRESENT, NOT KNOWN IF PRESENT, OR DATA MISSING.

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION: 4 | SITE NUMBER (To be assigned by HQ): 2004

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and onsite inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II (Preliminary Assessment). File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: Cumberland Co. Landfill (Fay)
B. STREET (or other identifier): Bunce Rd
C. CITY: Fayetteville
D. STATE:
E. ZIP CODE:
F. COUNTY NAME: Cumberland

G. OWNER/OPERATOR (If known)
1. NAME: * Note: have no knowledge of this site At Above Address
2. TELEPHONE NUMBER:

H. TYPE OF OWNERSHIP
☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☐ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION
~~Sanitary~~ landfill

J. HOW IDENTIFIED (i.e., citizen's complaints, OSHA citations, etc.)
E & K. Rep.

K. DATE IDENTIFIED (mo., day, & yr.):

L. PRINCIPAL STATE CONTACT
1. NAME:
2. TELEPHONE NUMBER:

II. PRELIMINARY ASSESSMENT (complete this section last)

A. APPARENT SERIOUSNESS OF PROBLEM
☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☐ 4. NONE ☐ 5. UNKNOWN

B. RECOMMENDATION
☐ 1. NO ACTION NEEDED (no hazard)
☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:
☐ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:
☐ 4. SITE INSPECTION NEEDED (low priority)

C. PREPARER INFORMATION
1. NAME: Gordon Layton
2. TELEPHONE NUMBER: 733-2178
3. DATE (mo., day, & yr.): 2/22/80

III. SITE INFORMATION

A. SITE STATUS
☐ 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if intermittently.)
☐ 2. INACTIVE (Those sites which no longer receive wastes.)
☐ 3. OTHER (specify): (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?
☐ 1. NO ☐ 2. YES (specify generator's four-digit SIC Code):

C. AREA OF SITE (in acres):
D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES
1. LATITUDE (deg.-min.-sec.):
2. LONGITUDE (deg.-min.-sec.):

E. ARE THERE BUILDINGS ON THE SITE?
☐ 1. NO ☐ 2. YES (specify):

Continue On Reverse

IV. CHARACTERIZATION OF SITE ACTIVITY

the major site activity(i nd details relating to each activity by markir 'X' in the appropriate boxes.

A. TRANSPORTER	B. STORER	X	C. T. TER	X	D. DISPOSER
1. RAIL	1. PILE		1. FILTRATION		1. LANDFILL
2. SHIP	2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
RGE	3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
4. TRUCK	4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
5. PIPELINE	5. TANK, BELOW GROUND		5. CHEM./PHYS. TREATMENT		5. MIDNIGHT DUMPING
6. OTHER *(specify)*:	6. OTHER *(specify)*:		6. BIOLOGICAL TREATMENT		6. INCINERATION
			7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
			8. SOLVENT RECOVERY		8. OTHER *(specify)*:
			9. OTHER *(specify)*:		

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

V. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1 UNKNOWN ☐ 2. LIQUID ☐ 3. SOLID ☐ 4. SLUDGE ☐ 5. GAS

B. WASTE CHARACTERISTICS

☐ 1. UNKNOWN ☐ 2. CORROSIVE ☐ 3. IGNITABLE ☐ 4 RADIOACTIVE ☐ 5 HIGHLY VOLATILE
☐ 6. TOXIC ☐ 7. REACTIVE ☐ 8 INERT ☐ 9 FLAMMABLE

☐ 10. OTHER *(specify)*:

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

2. Estimate the amount *(specify unit of measure)* of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE
X (1) PAINT, PIGMENTS	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER *(specify)*:	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER *(specify)*:	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER *(specify)*:			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER *(specify)*:
			(6) CYANIDE	(6) OTHER *(specify)*:	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER *(specify)*		

Continue On Page 3

V. WASTE RELATED INFORMATION *(continued)*

ST SUBSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE *(place in descending order of hazard)*.

ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD *(mark 'X')*	C. ALLEGED INCIDENT *(mark 'X')*	D. DATE OF INCIDENT *(mo., day, yr.)*	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
OTHER *(specify)*:				

Continue On Reverse

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

☐ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☐ 3. STATE PERMIT *(specify)*: _____

☐ 4. AIR PERMITS ☐ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER

☐ 7. RCRA STORER ☐ 8. RCRA TREATER ☐ 9. RCRA DISPOSER

☐ 10. OTHER *(specify)*: _____

B. IN COMPLIANCE?

☐ 1. YES ☐ 2. NO ☐ 3. UNKNOWN

4. WITH RESPECT TO *(list regulation name & number)*: _____

VIII. PAST REGULATORY ACTIONS

☐ A. NONE ☐ B. YES *(summarize below)*

IX. INSPECTION ACTIVITY *(past or on-going)*

☐ A. NONE ☐ B. YES *(complete items 1,2,3, & 4 below)*

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION *(mo., day, & yr.)*	3. PERFORMED BY: *(EPA/State)*	4. DESCRIPTION

X. REMEDIAL ACTIVITY *(past or on-going)*

☐ A. NONE ☐ B. YES *(complete items 1, 2, 3, & 4 below)*

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION *(mo., day, & yr.)*	3. PERFORMED BY: *(EPA/State)*	4. DESCRIPTION

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment *(Section II)* information on the first page of this form.

SITE: NUMBER 2015 PAGE 1 FOR THIS SITE
CUMBERLAND COUNTY LANDFILL
CLIFFDALE RD
FAYETTEVILLE,NC X----

not present site, First Co. site

COMPANY: COMPANY-FACILITY NUMBER 16028
E.I. DUPONT DE NEMOURS & CO INC
PLASTIC PRODUCTS & RESINS
FAYETTEVILLE WORKS
P.O. DRAWER Z
FAYETTEVILLE,NC 28303

FIRST YEAR USED: 1971
LAST YEAR USED: 1973

HUNDRED TONS: 27
THOUSAND CUBIC YDS.: .
THOUSAND GALLONS: .

COMPOSITION OF WASTE:

G Org
ORGAN1

Amides
amines
imines
ORGAN10

Resins
ORGAN12

G Inorg
INORG1

Salts
INORG2

LEGEND: IF LISTED, THEN PRESENT IN WASTED. IF NOT LISTED, THEN ITEM NOT PRESENT, NOT KNOWN IF PRESENT, OR DATA MISSING.

EPA

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION	SITE NUMBER (to be assigned by Hq)
IV	205

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II *(Preliminary Assessment)*. File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force *(EN-335)*; 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: Cumberland County Landfill

B. STREET (or other identifier): Cliffdale Rd SR 1400

C. CITY: Fayetteville

D. STATE: NC

E. ZIP CODE: 28301

F. COUNTY NAME: Cumberland

G. OWNER/OPERATOR (If known)

1. NAME: E I Dupont Fayetteville Works

2. TELEPHONE NUMBER:

H. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☑ 3. COUNTY ☐ 4 MUNICIPAL ☐ 5 PRIVATE ☐ 6 UNKNOWN

I. SITE DESCRIPTION

Landfill

J. HOW IDENTIFIED *(i.e., citizen's complaints, OSHA citations, etc.)*

Ect Report

K. DATE IDENTIFIED *(mo., day, & yr.)*

L. PRINCIPAL STATE CONTACT

1. NAME: Bill Meyer

2. TELEPHONE NUMBER: (919) 733-2178

II. PRELIMINARY ASSESSMENT *(complete this section last)*

APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☐ 4 NONE ☑ 5 UNKNOWN

B. RECOMMENDATION

☐ 1. NO ACTION NEEDED *(no hazard)*

☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR: _____
b. WILL BE PERFORMED BY: _____

☑ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR: _____
b. WILL BE PERFORMED BY: _____

☐ 4. SITE INSPECTION NEEDED *(low priority)*

C. PREPARER INFORMATION

1. NAME: Terry F. Dunn

2. TELEPHONE NUMBER: (919) 733-2178

3. DATE *(mo., day, & yr.)*:

III. SITE INFORMATION

A. SITE STATUS

☐ 1. ACTIVE *(Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)*

☑ 2. INACTIVE *(Those sites which no longer receive wastes.)* 1971-1973

☐ 3. OTHER *(specify)*: _____ *(Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)*

B. IS GENERATOR ON SITE?

☑ 1. NO ☐ 2. YES *(specify generator's four-digit SIC Code)*: _____

C. AREA OF SITE *(in acres)*: 10

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES

1. LATITUDE *(deg.-min.-sec.)*:

2. LONGITUDE *(deg.-min.-sec.)*:

E. ARE THERE BUILDINGS ON THE SITE?

☑ 1. NO ☐ 2. YES *(specify)*: _____

Continue On Reverse

Continued From Front

IV. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

'X'	A. TRANSPORTER	'X'	B. STORER	'X'	C. TREATER	'X'	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION	X	1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS. TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

First landfill operated by Cumberland County closed 1973

V. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1 UNKNOWN ☐ 2. LIQUID ☑ 3. SOLID ☐ 4. SLUDGE ☐ 5. GAS

B. WASTE CHARACTERISTICS

☐ 1. UNKNOWN ☐ 2. CORROSIVE ☐ 3. IGNITABLE ☐ 4 RADIOACTIVE ☐ 5 HIGHLY VOLATILE
☑ 6. TOXIC ☐ 7 REACTIVE ☐ 8. INERT ☐ 9 FLAMMABLE

☐ 10. OTHER (specify): _____

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT 27	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE hundred tons	UNIT OF MEASURE
'X' (1) PAINT, PIGMENTS	'X' (1) OILY WASTES	'X' (1) HALOGENATED SOLVENTS	'X' (1) ACIDS	'X' (1) FLYASH	'X' (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	(6) OTHER (specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify)		

From Page 2

V. WASTE RELATED INFORMATION (continued)

3. LIST SUBSTANCES OF GR ST CONCERN WHICH MAY BE ON THE SITE (pl descending order of hazard).

ORGANICS — Amides, Amines - Imides

Inorganics - Mercaptans

7. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
OTHER (specify):				

Continue On Reverse

Continued From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

☐ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☐ 3. STATE PERMIT *(specify)*: _____

☐ 4. AIR PERMITS ☐ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER

☐ 7. RCRA STORER ☐ 8. RCRA TREATER ☐ 9. RCRA DISPOSER

☐ 10. OTHER *(specify)*: _____

B. IN COMPLIANCE?

☐ 1. YES ☐ 2. NO ☐ 3. UNKNOWN

4. WITH RESPECT TO *(list regulation name & number)*: _____

VIII. PAST REGULATORY ACTIONS

☐ A. NONE ☐ B. YES *(summarize below)*

IX. INSPECTION ACTIVITY *(past or on-going)*

☐ A. NONE ☐ B. YES *(complete items 1,2,3, & 4 below)*

1. TYPE OF ACTIVITY	2 DATE OF PAST ACTION *(mo., day, & yr.)*	3 PERFORMED BY: *(EPA/State)*	4. DESCRIPTION

X. REMEDIAL ACTIVITY *(past or on-going)*

☐ A. NONE ☐ B. YES *(complete items 1, 2, 3, & 4 below)*

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION *(mo., day, & yr.)*	3. PERFORMED BY: *(EPA/State)*	4. DESCRIPTION

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment *(Section II)* information on the first page of this form.

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION: IV

SITE NUMBER (To be assigned by Hq): 2015

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II (*Preliminary Assessment*). File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (*EN-335*); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: Cumberland Co. Landfill

B. STREET (*or other identifier*): SR. 1400 Cliffdale Rd.

C. CITY: Fayetteville

D. STATE: NC

E. ZIP CODE:

F. COUNTY NAME: Cumberland

G. OWNER/OPERATOR (*if known*)

1. NAME: Cumberland Co.

2. TELEPHONE NUMBER: 919 868-3166

H. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☒ 3. COUNTY ☐ 4. MUNICIPAL ☐ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION: Sanitary Landfill

J. HOW IDENTIFIED (*i.e., citizen's complaints, OSHA citations, etc.*): Fed. Reg.

K. DATE IDENTIFIED (*mo., day, & yr.*):

L. PRINCIPAL STATE CONTACT

1. NAME: Bill Meyer

2. TELEPHONE NUMBER: 733-2178

II. PRELIMINARY ASSESSMENT (*complete this section last*)

A. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☒ 4. NONE ☐ 5. UNKNOWN

B. RECOMMENDATION

☑ 1. NO ACTION NEEDED (*no hazard*)

☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☐ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:
b. WILL BE PERFORMED BY:

☐ 4. SITE INSPECTION NEEDED (*low priority*)

C. PREPARER INFORMATION

1. NAME: Carolyn Linton

2. TELEPHONE NUMBER: 733-2178

3. DATE (*mo., day, & yr.*): 2/22/80

III. SITE INFORMATION

A. SITE STATUS

☐ 1. ACTIVE (*Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if intermittently.*)

☒ 2. INACTIVE (*Those sites which no longer receive wastes.*): Closed 1974

☐ 3. OTHER (*specify*): (*Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.*)

B. IS GENERATOR ON SITE?

☑ 1. NO ☐ 2. YES (*specify generator's four-digit SIC Code*):

C. AREA OF SITE (*in acres*): 20

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES

1. LATITUDE (*deg.—min.—sec.*):
2. LONGITUDE (*deg.—min.—sec.*):

E. ARE THERE BUILDINGS ON THE SITE?

☑ 1. NO ☐ 2. YES (*specify*):

Continue On Reverse

IV. CHARACTERIZATION OF SITE ACTIVITY

major site activi) and details relating to each activity by m 'X' in the appropriate boxes.

	A. TRANSPORTER		B. STORER		C. TREATER		D. DISPOSER
	AIR		1. PILE		1. FILTRATION	X	1. LANDFILL
	SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS. TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

V. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1 UNKNOWN ☐ 2. LIQUID ☒ 3. SOLID ☐ 4. SLUDGE ☐ 5. GAS

B. WASTE CHARACTERISTICS

☐ 1. UNKNOWN ☐ 2. CORROSIVE ☐ 3. IGNITABLE ☐ 4 RADIOACTIVE ☐ 5 HIGHLY VOLATILE
☒ 6. TOXIC ☐ 7 REACTIVE ☐ 8. INERT ☐ 9 FLAMMABLE

☐ 10. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

NO

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT 200	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE tons	UNIT OF MEASURE
'X' (1) PAINT, PIGMENTS	'X' (1) OILY WASTES	'X' (1) HALOGENATED SOLVENTS	'X' (1) ACIDS	'X' (1) FLYASH	'X' (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	X (6) OTHER (specify): INDUSTRIAL SOLIDS	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify)		

Continue On Page 3

V. WASTE RELATED INFORMATION (continued)

BSTANCES OF GRE ST CONCERN WHICH MAY BE ON THE SITE (pl in descending order of hazard).

ORGANICS

ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER	X			
9 DAMAGE TO ORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
2 THER (specify):				

VII. PERMIT INFORMATION

A. ALL APPLICABLE PERMITS HELD BY THE SITE.

☐ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☑ 3. STATE PERMIT (specify): Solid Waste

☐ 4. AIR PERMITS ☐ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER

☐ 7. RCRA STORER ☐ 8. RCRA TREATER ☐ 9. RCRA DISPOSER

☐ 10. OTHER (specify):

B. IN COMPLIANCE?

☑ 1. YES ☐ 2. NO ☐ 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number): NC Solid Waste Rules

VIII. PAST REGULATORY ACTIONS

☑ A. NONE ☐ B. YES (summarize below)

IX. INSPECTION ACTIVITY (past or on-going)

☐ A. NONE ☑ B. YES (complete items 1,2,3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
Inspection	10/11/79	STATE	Routine Quarterly

X. REMEDIAL ACTIVITY (past or on-going)

☑ A. NONE ☐ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment *(Section II)* information on the first page of this form.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

REGION: 4 | SITE NUMBER (to be assigned by Hq): 2015

GENERAL INSTRUCTIONS: Complete Sections I and III through XV of this form as completely as possible. Then use the information on this form to develop a Tentative Disposition (Section II). File this form in its entirety in the regional Hazardous Waste Log File. Be sure to include all appropriate Supplemental Reports in the file. Submit a copy of the forms to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Tack Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: Cumberland City Landfill
B. STREET (or other identifier): Clyfdale Rd
C. CITY: Faye Heville
D. STATE: N.C.
E. ZIP CODE: 28301
F. COUNTY NAME: Cumberland

G. SITE OPERATOR INFORMATION
1. NAME: Cumberland County Board of Commissions
2. TELEPHONE NUMBER: 919-483-4897
3. STREET: Clyfdale Rd SR 1400
4. CITY: Fayetteville
5. STATE: N.C.
6. ZIP CODE: 28301

H. REALTY OWNER INFORMATION (if different from operator of site)
1. NAME: S/A
2. TELEPHONE NUMBER: S/A
3. CITY:
4. STATE:
5. ZIP CODE:

I. SITE DESCRIPTION: LANDFILL

J. TYPE OF OWNERSHIP
☐ 1. FEDERAL ☐ 2. STATE ☒ 3. COUNTY ☐ 4. MUNICIPAL ☐ 5. PRIVATE

II. TENTATIVE DISPOSITION (complete this section last)

A. ESTIMATE DATE OF TENTATIVE DISPOSITION (mo., day, & yr.): 1971 - 1973

B. APPARENT SERIOUSNESS OF PROBLEM
☐ 1. HIGH ☐ 2. MEDIUM ☒ 3. LOW ☐ 4. NONE

PREPARER INFORMATION
NAME: Andrew L. Robinson Jr
2. TELEPHONE NUMBER: 919-486 1191
3. DATE (mo., day, & yr.): 10-24-80

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION
1. NAME: Andrew L. Robinson Jr
2. TITLE: District Sanitarian
3. ORGANIZATION: N.C. Solid & Hazardous Waste Management Branch
4. TELEPHONE NO. (area code & no.): 919-486 1191

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.

C. SITE REPRESENTATIVES INTERVIEWED (corporate officials, workers, residents)

1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS

OCT 27 1980

Continued From Front

III. INSPECTION INFORMATION (continued)

D. GENERATOR INFORMATION (sources of waste)

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED
E.I. Dupont De Nemour Co Inc	(919) 483-4681	Rt. 1, Box Z Faye, N.C.	Amides, Amines, Organics, Inorganics, Mercaptans

E. TRANSPORTER/HAULER INFORMATION

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE TRANSPORTED

F. IF WASTE IS PROCESSED ON SITE AND ALSO SHIPPED TO OTHER SITES, IDENTIFY OFF-SITE FACILITIES USED FOR DISPOSAL.

1. NAME	2. TELEPHONE NO.	3. ADDRESS

G. DATE OF INSPECTION (mo., day, & yr.)	H. TIME OF INSPECTION	I. ACCESS GAINED BY: (credentials must be shown in all cases)
10-6-80	2:00 P.M	☒ 1. PERMISSION ☐ 2. WARRANT

J. WEATHER (describe)
Dry

IV. SAMPLING INFORMATION

A. Mark 'X' for the types of samples taken and indicate where they have been sent e.g., regional lab, other EPA lab, contractor, etc. and estimate when the results will be available.

1. SAMPLE TYPE	2. SAMPLE TAKEN (mark 'X')	3. SAMPLE SENT TO:	4. DATE RESULTS AVAILABLE
a. GROUNDWATER			
b. SURFACE WATER			
c. WASTE			
d. AIR			
e. RUNOFF			
f. SPILL			
g. SOIL			
h. VEGETATION			
i. OTHER (specify)			

B. FIELD MEASUREMENTS TAKEN (e.g., radioactivity, explosivity, PH, etc.)

1. TYPE	2. LOCATION OF MEASUREMENTS	3. RESULTS

Continued From Page 2

IV. SAMPLING INFORMATION *(continued)*

C. PHOTOS

1. TYPE OF PHOTOS
   ☐ a. GROUND ☐ b. AERIAL
2. PHOTOS IN CUSTODY OF:

D. SITE MAPPED?

☐ YES. SPECIFY LOCATION OF MAPS:

E. COORDINATES

1. LATITUDE *(deg.-min.-sec.)*
2. LONGITUDE *(deg.-min.-sec.)*

V. SITE INFORMATION

A. SITE STATUS

☐ 1. ACTIVE *(Those inductrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)*

☐ 2. INACTIVE *(Those sites which no longer receive wastes.)*

☐ 3. OTHER *(specify)*: _____
(Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?

☐ 1. NO ☐ 2. YES *(specify generator's four-digit SIC Code)*: _____ _____

C. AREA OF SITE *(in acres)*

D. ARE THERE BUILDINGS ON THE SITE?

☐ 1. NO ☐ 2. YES *(specify)*:

VI. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity*(ies)* and details relating to each activity by marking 'X' in the appropriate boxes.

'X'	A. TRANSPORTER	'X'	B. STORER	'X'	C. TREATER	'X'	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION	X	1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS./TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER *(specify)*:		6. OTHER *(specify)*:		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER *(specify)*:
					9. OTHER *(specify)*:		

E. SUPPLEMENTAL REPORTS: If the site falls within any of the categories listed below, Supplemental Reports must be completed. Indicate which Supplemental Reports you have filled out and attached to this for..

☐ 1. STORAGE ☐ 2. INCINERATION ☒ 3. LANDFILL ☐ 4. SURFACE IMPOUNDMENT ☐ 5. DEEP WELL

☐ 6. CHEM/BIO/PHYS TREATMENT ☐ 7. LANDFARM ☐ 8. OPEN DUMP ☐ 9. TRANSPORTER ☐ 10. RECYCLOR/RECLAIMER

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1. LIQUID ☒ 2. SOLID ☐ 3. SLUDGE ☐ 4. GAS

B. WASTE CHARACTERISTICS

☐ 1. CORROSIVE ☐ 2. IGNITABLE ☐ 3. RADIOACTIVE ☐ 4. HIGHLY VOLATILE
☐ 5. TOXIC ☐ 6. REACTIVE ☐ 7. INERT ☐ 8. FLAMMABLE

☐ 9. OTHER *(specify)*:

WASTE CATEGORIES

Are records of wastes available? Specify items such as manifests, inventories, etc. below.

Continued From Front

VII. WASTE [illegible]ATED INFORMATION *(continued)*

2. Estimate the amount *(specify unit of measure)* of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT 27	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE Hundred Tons	UNIT OF MEASURE
X (1) PAINT, PIGMENTS	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY, PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER *(specify)*:	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER *(specify)*:	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMELTING WASTES	(4) MUNICIPAL
(5) OTHER *(specify)*:			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER *(specify)*:
			(6) CYANIDE	(6) OTHER *(specify)*:	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER *(specify)*:		

D. LIST SUBSTANCES OF GREATEST CONCERN WHICH ARE ON THE SITE *(place in descending order of hazard)*

1. SUBSTANCE	2. FORM *(mark 'X')*			3. TOXICITY *(mark 'X')*				4. CAS NUMBER	5. AMOUNT	6. UNIT
	a. SOLID	b. LIQ.	c. VAPOR	a. HIGH	b. MED.	c. LOW	d. NONE			

VIII. HAZARD DESCRIPTION

FIELD EVALUATION HAZARD DESCRIPTION: Place an 'X' in the box to indicate that the listed hazard exists. Describe the hazard in the space provided.

☐ A. HUMAN HEALTH HAZARDS

None

Continue On Page 5

Continued From Page 4

VIII. HAZARD DESCRIPTION (Continued)

☐ B. NON-WORKER INJURY/EXPOSURE

☐ C. WORKER INJURY/EXPOSURE

☐ D. CONTAMINATION OF WATER SUPPLY

☐ E. CONTAMINATION OF FOOD CHAIN

☐ F. CONTAMINATION OF GROUND WATER

☐ G. CONTAMINATION OF SURFACE WATER

Continued From Front

VIII. h RD DESCRIPTION *(continued)*

☐ H. DAMAGE TO FLORA/FAUNA

☐ I. FISH KILL

☐ J. CONTAMINATION OF AIR

☐ K. NOTICEABLE ODORS

☐ L. CONTAMINATION OF SOIL

☐ M. PROPERTY DAMAGE

Continued From Page 6

VIII. HAZARD DESCRIPTION (continued)

☐ N. FIRE OR EXPLOSION

☐ O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

☐ P. SEWER, STORM DRAIN PROBLEMS

☐ Q. EROSION PROBLEMS

☐ R. INADEQUATE SECURITY

☐ S. INCOMPATIBLE WASTES

Continue On Reverse

VIII. HAZARD DESCRIPTION *(continued)*

☐ T. MIDNIGHT DUMPING

☐ U. OTHER *(specify)*:

IX. POPULATION DIRECTLY AFFECTED BY SITE

A. LOCATION OF POPULATION	B. APPROX. NO. OF PEOPLE AFFECTED	C. APPROX. NO. OF PEOPLE AFFECTED WITHIN UNIT AREA	D. APPROX. NO. OF BUILDINGS AFFECTED	E. DISTANCE TO SITE *(specify units)*
1. IN RESIDENTIAL AREAS				
2. IN COMMERCIAL OR INDUSTRIAL AREAS				
3. IN PUBLICLY TRAVELLED AREAS				
4. PUBLIC USE AREAS *(parks, schools, etc.)*				

X. WATER AND HYDROLOGICAL DATA

A. DEPTH TO GROUNDWATER *(specify unit)*	B. DIRECTION OF FLOW	C. GROUNDWATER USE IN VICINITY
D. POTENTIAL YIELD OF AQUIFER	E. DISTANCE TO DRINKING WATER SUPPLY *(specify unit of measure)*	F. DIRECTION TO DRINKING WATER SUPPLY

G. TYPE OF DRINKING WATER SUPPLY

☒ 1. NON-COMMUNITY < 15 CONNECTIONS

☐ 2. COMMUNITY *(specify town)*: _____ > 15 CONNECTIONS

☐ 3. SURFACE WATER

☒ 4. WELL

Continue On Page 9

Continued From Page 8

X. WATER AND HYDROLOGICAL DATA (continued)

A. LIST ALL DRINKING WATER WELLS WITHIN A 1/4 MILE RADIUS OF SITE

1. WELL	2. DEPTH (specify unit)	3. LOCATION (proximity to population/buildings)	4. NON-COMMUNITY (mark 'X')	5. COMMUNITY (mark 'X')

I. RECEIVING WATER

1. NAME

☐ 2. SEWERS ☐ 3. STREAMS/RIVERS

☐ 4. LAKES/RESERVOIRS ☐ 5. OTHER (specify):

6. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS

XI. SOIL AND VEGITATION DATA

LOCATION OF SITE IS IN:

☐ A. KNOWN FAULT ZONE ☐ B. KARST ZONE ☐ C. 100 YEAR FLOOD PLAIN ☐ D. WETLAND

☐ E. A REGULATED FLOODWAY ☐ F. CRITICAL HABITAT ☐ G. RECHARGE ZONE OR SOLE SOURCE AQUIFER

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

Mark 'X' to indicate the type(s) of geological material observed and specify where necessary, the component parts.

'X'	A. OVERBURDEN	'X'	B. BEDROCK (specify below)	'X'	C. OTHER (specify below)
	1. SAND	X			
	2. CLAY	X			
	3. GRAVEL				

XIII. SOIL PERMEABILITY

☐ A. UNKNOWN ☐ B. VERY HIGH (100,000 to 1000 cm/sec.) ☐ C. HIGH (1000 to 10 cm/sec.)

☐ D. MODERATE (10 to .1 cm/sec.) ☐ E. LOW (.1 to .001 cm/sec.) ☐ F. VERY LOW (.001 to .00001 cm/sec.)

G. RECHARGE AREA

☐ 1. YES ☐ 2. NO 3. COMMENTS:

H. DISCHARGE AREA

☐ 1. YES ☐ 2. NO 3. COMMENTS:

I. SLOPE

1. ESTIMATE % OF SLOPE: 5%

2. SPECIFY DIRECTION OF SLOPE, CONDITION OF SLOPE, ETC.: Direction Toward Rock Fish Creek

J. OTHER GEOLOGICAL DATA

Continue On Reverse

Continued From Front

XIV. PERMIT INFORMATION

List all applicable permits held by the site and provide the related information.

A. PERMIT TYPE (e.g., RCRA, State, NPDES, etc.)	B. ISSUING AGENCY	C. PERMIT NUMBER	D. DATE ISSUED (mo., day, & yr.)	E. EXPIRATION DATE (mo., day, & yr.)	F. IN COMPLIANCE (mark 'X')		
					1. YES	2. NO	3. UNKNOWN

XV. PAST REGULATORY OR ENFORCEMENT ACTIONS

☐ NONE ☐ YES *(summarize in this space)*

NOTE: Based on the information in Sections III through XV, fill out the Tentative Disposition *(Section II)* information on the first page of this form.

LANDFILLS SITE INSPECTION REPORT
(Supplemental Report)

INSTRUCTION
Answer and Explain as Necessary. 2015

1. EVIDENCE OF SITE INSTABILITY *(Erosion, Settling, Sink Holes, etc)*
☐ YES ☒ NO

2. EVIDENCE OF IMPROPER DISPOSAL OF BULK LIQUIDS, SEMI-SOLIDS AND SLUDGES INTO THE LANDFILL
☐ YES ☒ NO

3. CHECK RECORDS OF CELL LOCATION AND CONTENTS AND BENCHMARK
☒ YES ☐ NO

4. WASTES SURROUNDED BY SORBENT MATERIAL
☐ YES ☐ NO

5. DIVERSION STRUCTURES ARE EFFECTIVELY CONSTRUCTED AND PROPERLY MAINTAINED
☐ YES ☒ NO

6. EVIDENCE OF PONDING OF WATER ON SITE
☐ YES ☒ NO

7. EVIDENCE OF IMPROPER/INADEQUATE DRAINING
☐ YES ☒ NO

8. ADEQUATE LEACHATE COLLECTION SYSTEM *(If "Yes", specify Type)*
☒ YES ☐ NO

8a. SURFACE LEACHATE SPRING
☐ YES ☒ NO

9. RECORDS OF LEACHATE ANALYSIS
☐ YES ☒ NO

10. GAS MONITORING
☒ YES ☐ NO

11. GROUNDWATER MONITORING WELLS
☐ YES ☒ NO

ARTIFICIAL MEMBRANE LINER INSTALLED
☐ YES ☒ NO

13. SPECIFIC CONTAINMENT MEASURES *(Clay Bottom, Sides, etc)*
☐ YES ☒ NO

14. FIXATION *(Stabilization)* OF WASTE
☐ YES ☒ NO

15. ADEQUATE CLOSURE OF INACTIVE PORTION OF FACILITY
☒ YES ☐ NO

16. COVER *(Type)*
Sand/ C/A4

16a. THICKNESS
At least 2'

16b. PERMEABILITY

16c. DAILY APPLICATION
☐ YES ☐ NO

EPA

POTENTIAL HAZARDOUS WASTE SITE
TENTATIVE DISPOSITION

REGION	SITE NUMBER
IV	2015

File this form in the regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force *(EN-335)*; 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET	
Cumberland City Landfill	Cliffdale Rd., SR 1400	
C. CITY	**D. STATE**	**E. ZIP CODE**
Fayetteville	N.C.	28301

II. TENTATIVE DISPOSITION

Indicate the recommended action*(s)* and agency*(ies)* that should be involved by marking 'X' in the appropriate boxes.

RECOMMENDATION	MARK 'X'	ACTION AGENCY			
		EPA	STATE	LOCAL	PRIVATE
A. NO ACTION NEEDED -- NO HAZARD	X				
B. INVESTIGATIVE ACTION(S) NEEDED *(If yes, complete Section III.)*					
C. REMEDIAL ACTION NEEDED *(If yes, complete Section IV.)*					
D. ENFORCEMENT ACTION NEEDED *(if yes, specify in Part E whether the case will be primarily managed by the EPA or the State and what type of enforcement action is anticipated.)*					

E. RATIONALE FOR DISPOSITION

No visible evidence of health Hazards

F. INDICATE THE ESTIMATED DATE OF FINAL DISPOSITION *(mo., day, & yr.)*	G. IF A CASE DEVELOPMENT PLAN IS NECESSARY, INDICATE THE ESTIMATED DATE ON WHICH THE PLAN WILL BE DEVELOPED *(mo., day, & yr.)*
10-24-80	

H. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*
Andrew Robinson	919-484-1191	10-24-80

III. INVESTIGATIVE ACTIVITY NEEDED

A. IDENTIFY ADDITIONAL INFORMATION NEEDED TO ACHIEVE A FINAL DISPOSITION.

B. PROPOSED INVESTIGATIVE ACTIVITY *(Detailed Information)*

1. METHOD FOR OBTAINING NEEDED ADDITIONAL INFO.	2. SCHEDULED DATE OF ACTION *(mo, day, & yr)*	3. TO BE PERFORMED BY *(EPA, Contractor, State, etc.)*	4. ESTIMATED MANHOURS	5. REMARKS
a. TYPE OF SITE INSPECTION (1)				
(2)				
(3)				
b. TYPE OF MONITORING (1)				
(2)				
c. TYPE OF SAMPLING (1)				
(2)				

EPA Form T2070-4 (10-79)

Continue On Reverse

Continued From Front

III. INVESTIGATIVE ACTIVITY NEEDED and PART B - PROPOSED INVESTIGATIVE ACTIVITY *(Continued)*

d. TYPE OF LAB ANALYSIS (1)				
(2)				
e. OTHER *(specify)* (1)				
(2)				

C. ELABORATE ON ANY OF THE INFORMATION PROVIDED IN PART B *(on front & above)* AS NEEDED TO IDENTIFY ADDITIONAL INVESTIGATIVE WORK.

D. ESTIMATED MANHOURS BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL ESTIMATED MANHOURS FOR INVESTIGATIVE ACTIVITIES	1. ACTION AGENCY	2. TOTAL ESTIMATED MANHOURS FOR INVESTIGATIVE ACTIVITIES
a. EPA		b. STATE	
c. EPA CONTRACTOR		d. OTHER *(specify)*	

IV. REMEDIAL ACTIONS

A. SHORT TERM/EMERGENCY STRATEGY *(On Site & Off-Site)*: List all emergency actions needed to bring site under immediate control, e.g., restrict access, provide alternate water supply, etc. See instructions for a list of Key Words for each of the actions to be used in the space below.

1. ACTION	2. EST. START DATE *(mo,day,&yr)*	3. EST. END DATE *(mo,day,&yr)*	4. ACTION AGENCY *(EPA, State, Private Party)*	5. ESTIMATED COST	6. SPECIFY 311 OR OTHER ACTION; INDICATE THE MAGNITUDE OF THE WORK REQUIRED
				$	
				$	
				$	
				$	
				$	
				$	

B. LONG TERM STRATEGY *(On Site & Off-Site)*: List all long term solutions, e.g., excavation, removal, ground water monitoring wells, etc. See instructions for a list of Key Words for each of the actions to be used in the spaces below.

1. ACTION	2. EST. START DATE *(mo,day,&yr)*	3. EST. END DATE *(mo,day,&yr)*	4. ACTION AGENCY *(EPA, State Private Party)*	5. ESTIMATED COST	6. SPECIFY 311 OR OTHER ACTION; INDICATE THE MAGNITUDE OF THE WORK REQUIRED
				$	
				$	
				$	
				$	
				$	
				$	

C. ESTIMATED MANHOURS AND COST BY ACTION AGENCY

1. ACTION AGENCY	2. TOTAL EST. MANHOURS FOR REMEDIAL ACTIVITIES	3. TOTAL EST. COST FOR REMEDIAL ACTIVITIES	1. ACTION AGENCY	2. TOTAL EST. MANHOURS FOR REMEDIAL ACTIVITIES	3. TOTAL EST. COST FOR REMEDIAL ACTIVITIES
a. EPA			b. STATE		
c. PRIVATE PARTIES			d. OTHER *(specify)*		

SITE: NUMBER 2015 PAGE 1 FOR THIS SITE
CUMBERLAND COUNTY LANDFILL
CLIFFDALE RD
FAYETTEVILLE,NC X----

Not present site, first Co. site

COMPANY: COMPANY-FACILITY NUMBER 16028
E.I. DUPONT DE NEMOURS & CO INC
PLASTIC PRODUCTS & RESINS
FAYETTEVILLE WORKS
P.O. DRAWER Z
FAYETTEVILLE,NC 28303

FIRST YEAR USED: 1971
LAST YEAR USED: 1973

HUNDRED TONS: 27
THOUSAND CUBIC YDS.: .
THOUSAND GALLONS: .

COMPOSITION OF WASTE:

G. Org
ORGAN1

Amides
amines
imines
ORGAN10

Resins
ORGAN12

G. Inorg
INORG1

Salts
INORG2

LEGEND: IF LISTED, THEN PRESENT IN WASTED. IF NOT LISTED, THEN ITEM NOT PRESENT, NOT KNOWN IF PRESENT, OR DATA MISSING.

EPA

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION	SITE NUMBER (To be assigned by Hq)
IV	205

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II *(Preliminary Assessment)*. File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force *(EN-335)*; 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME	B. STREET (or other identifier)	
Cumberland County Landfill	Cliffdale Rd	SR. 1400

C. CITY	D. STATE	E. ZIP CODE	F. COUNTY NAME
Fayetteville	NC	28301	Cumberland

G. OWNER/OPERATOR *(If known)*

1. NAME	2. TELEPHONE NUMBER
E.I. Dupont Fayetteville Works	

H. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☑ 3. COUNTY ☐ 4 MUNICIPAL ☐ 5 PRIVATE ☐ 6 UNKNOWN

I. SITE DESCRIPTION

Landfill

J. HOW IDENTIFIED *(i.e., citizen's complaints, OSHA citations, etc.)*	K. DATE IDENTIFIED *(mo., day, & yr.)*
Ect Report	

L. PRINCIPAL STATE CONTACT 1. NAME	2. TELEPHONE NUMBER
Bill Meyer	(919) 733-2178

II. PRELIMINARY ASSESSMENT *(complete this section last)*

A. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☐ 4 NONE ☑ 5 UNKNOWN

B. RECOMMENDATION

☐ 1. NO ACTION NEEDED *(no hazard)*

☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR: _____
b. WILL BE PERFORMED BY: _____

☑ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR: _____
b. WILL BE PERFORMED BY: _____

☐ 4. SITE INSPECTION NEEDED *(low priority)*

C. PREPARER INFORMATION

1. NAME	2. TELEPHONE NUMBER	3. DATE *(mo., day, & yr.)*
Terry F. Dixon	(919) 733-2178	

III. SITE INFORMATION

A. SITE STATUS

☐ 1. ACTIVE *(Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)*

☑ 2. INACTIVE *(Those sites which no longer receive wastes.)* 1971-1973

☐ 3. OTHER *(specify)*: _____ *(Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)*

B. IS GENERATOR ON SITE?

☑ 1. NO ☐ 2. YES *(specify generator's four-digit SIC Code)*: _____

C. AREA OF SITE *(in acres)*	D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES 1. LATITUDE *(deg.-min.-sec.)*	2. LONGITUDE *(deg.-min.-sec.)*
10		

E. ARE THERE BUILDINGS ON THE SITE?

☑ 1. NO ☐ 2. YES *(specify)*: _____

Continue On Reverse

Continued From Front

IV. CHARACTERIZATION OF SITE ACTI

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

'X'	A. TRANSPORTER	'X'	B. STORER	'X'	C. TREATER	'X'	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION	X	1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS. TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

First landfill operated by Cumberland County closed 1973

V. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1 UNKNOWN ☐ 2. LIQUID ☑ 3. SOLID ☐ 4. SLUDGE ☐ 5. GAS

B. WASTE CHARACTERISTICS

☐ 1. UNKNOWN ☐ 2. CORROSIVE ☐ 3. IGNITABLE ☐ 4 RADIOACTIVE ☐ 5 HIGHLY VOLATILE
☑ 6. TOXIC ☐ 7 REACTIVE ☐ 8. INERT ☐ 9 FLAMMABLE

☐ 10. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT 27	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE hundred tons	UNIT OF MEASURE
'X' (1) PAINT, PIGMENTS	'X' (1) OILY WASTES	'X' (1) HALOGENATED SOLVENTS	'X' (1) ACIDS	'X' (1) FLYASH	'X' (1) LABORATORY PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER (specify):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/ MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMLTG. WASTES	(4) MUNICIPAL
(5) OTHER (specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
			(6) CYANIDE	(6) OTHER (specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER (specify)		

inued From Page 2

V. WASTE RELATED INFORMATION (contir

3. LIST SUBSTANCES OF GREATEST ERN WHICH MAY BE ON THE SITE (place in de ing order of hazard).

ORGANICS — Amides, Amines - Imides
INORGANICS - MERCAPTANS

4. ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (mark 'X')	C. ALLEGED INCIDENT (mark 'X')	D. DATE OF INCIDENT (mo., day, yr.)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER				
DAMAGE TO LORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
THER (specify):				

Continue On Reverse

Continued From Front

VII. PERMIT INFORMATION

A. INDICATE ALL APPLICABLE PERMITS HELD BY THE SITE.

☐ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☐ 3. STATE PERMIT *(specify)*: _____

☐ 4. AIR PERMITS ☐ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER

☐ 7. RCRA STORER ☐ 8. RCRA TREATER ☐ 9. RCRA DISPOSER

☐ 10. OTHER *(specify)*: _____

B. IN COMPLIANCE?

☐ 1. YES ☐ 2. NO ☐ 3. UNKNOWN

4. WITH RESPECT TO *(list regulation name & number)*: _____

VIII. PAST REGULATORY ACTIONS

☐ A. NONE ☐ B. YES *(summerize below)*

IX. INSPECTION ACTIVITY *(past or on-going)*

☐ A. NONE ☐ B. YES *(complete items 1,2,3, & 4 below)*

1. TYPE OF ACTIVITY	2 DATE OF PAST ACTION (mo., day, & yr.)	3 PERFORMED BY: (EPA/State)	4. DESCRIPTION

X. REMEDIAL ACTIVITY *(past or on-going)*

☐ A. NONE ☐ B. YES *(complete items 1, 2, 3, & 4 below)*

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment *(Section II)* information on the first page of this form.

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT

REGION: IV

SITE NUMBER (To be assigned by Hq): 2015

NOTE: This form is completed for each potential hazardous waste site to help set priorities for site inspection. The information submitted on this form is based on available records and may be updated on subsequent forms as a result of additional inquiries and on-site inspections.

GENERAL INSTRUCTIONS: Complete Sections I and III through X as completely as possible before Section II (Preliminary Assessment). File this form in the Regional Hazardous Waste Log File and submit a copy to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force (EN-335); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: Cumberland Co. Landfill

B. STREET (or other identifier): SR. 1400 Cliffdale Rd.

C. CITY: Fayetteville

D. STATE: NC

E. ZIP CODE:

F. COUNTY NAME: Cumberland

G. OWNER/OPERATOR (If known)

1. NAME: Cumberland Co.

2. TELEPHONE NUMBER: 919 868-3166

H. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☒ 3. COUNTY ☐ 4. MUNICIPAL ☐ 5. PRIVATE ☐ 6. UNKNOWN

I. SITE DESCRIPTION

Sanitary Landfill

J. HOW IDENTIFIED (i.e., citizen's complaints, OSHA citations, etc.)

Fed. Reg.

K. DATE IDENTIFIED (mo., day, & yr.)

L. PRINCIPAL STATE CONTACT

1. NAME: Bill Meyer

2. TELEPHONE NUMBER: 733-2178

II. PRELIMINARY ASSESSMENT (complete this section last)

A. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☐ 3. LOW ☒ 4. NONE ☐ 5. UNKNOWN

B. RECOMMENDATION

☑ 1. NO ACTION NEEDED (no hazard)

☐ 2. IMMEDIATE SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:

☐ 3. SITE INSPECTION NEEDED
a. TENTATIVELY SCHEDULED FOR:

b. WILL BE PERFORMED BY:

b. WILL BE PERFORMED BY:

☐ 4. SITE INSPECTION NEEDED (low priority)

C. PREPARER INFORMATION

1. NAME: Coordinator Linton

2. TELEPHONE NUMBER: 733-2178

3. DATE (mo., day, & yr.): 2/22/80

III. SITE INFORMATION

A. SITE STATUS

☐ 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

☑ 2. INACTIVE (Those sites which no longer receive wastes.) Closed 1974

☐ 3. OTHER (specify) (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?

☑ 1. NO ☐ 2. YES (specify generator's four-digit SIC Code):

C. AREA OF SITE (In acres): 20

D. IF APPARENT SERIOUSNESS OF SITE IS HIGH, SPECIFY COORDINATES

1. LATITUDE (deg.-min.-sec.)

2. LONGITUDE (deg.-min.-sec.)

E. ARE THERE BUILDINGS ON THE SITE?

☑ 1. NO ☐ 2. YES (specify):

Continue On Reverse

IV. CHARACTERIZATION OF SITE ACTIVITY

...major site activity(ies) ... details relating to each activity by marking ... the appropriate boxes.

	A. TRANSPORTER		B. STORER		C. TREATER		D. DISPOSER
	AIR		1. PILE		1. FILTRATION	X	1. LANDFILL
	SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS. TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SPECIFY DETAILS OF SITE ACTIVITIES AS NEEDED

V. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1 UNKNOWN ☐ 2. LIQUID ☒ 3. SOLID ☐ 4. SLUDGE ☐ 5. GAS

B. WASTE CHARACTERISTICS

☐ 1. UNKNOWN ☐ 2. CORROSIVE ☐ 3. IGNITABLE ☐ 4 RADIOACTIVE ☐ 5 HIGHLY VOLATILE
☒ 6. TOXIC ☐ 7 REACTIVE ☐ 8. INERT ☐ 9 FLAMMABLE

☐ 10. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

NO

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT 200	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE tons	UNIT OF MEASURE
☐ (1) PAINT, PIGMENTS	☐ (1) OILY WASTES	☐ (1) HALOGENATED SOLVENTS	☐ (1) ACIDS	☒ (1) FLYASH	☒ (1) LABORATORY PHARMACEUT.
☐ (2) METALS SLUDGES	☐ (2) OTHER (specify):	☐ (2) NON-HALOGNTD. SOLVENTS	☐ (2) PICKLING LIQUORS	☐ (2) ASBESTOS	☐ (2) HOSPITAL
☐ (3) POTW		☐ (3) OTHER (specify):	☐ (3) CAUSTICS	☐ (3) MILLING/ MINE TAILINGS	☐ (3) RADIOACTIVE
☐ (4) ALUMINUM SLUDGE			☐ (4) PESTICIDES	☐ (4) FERROUS SMLTG. WASTES	☐ (4) MUNICIPAL
☐ (5) OTHER (specify):			☐ (5) DYES/INKS	☐ (5) NON-FERROUS SMLTG. WASTES	☐ (5) OTHER (specify):
			☐ (6) CYANIDE	☒ (6) OTHER (specify): INDUSTRIAL SOLIDS	
			☐ (7) PHENOLS		
			☐ (8) HALOGENS		
			☐ (9) PCB		
			☐ (10) METALS		
			☐ (11) OTHER (specify)		

Continue On Page 3

V. WASTE RELATED INFORMATION (continued)

BSTANCES OF GREATEST CONCERN WHICH MAY BE ON THE SITE (*place in descending order of hazard*).

ORG. C

ADDITIONAL COMMENTS OR NARRATIVE DESCRIPTION OF SITUATION KNOWN OR REPORTED TO EXIST AT THE SITE.

VI. HAZARD DESCRIPTION

A. TYPE OF HAZARD	B. POTENTIAL HAZARD (*mark 'X'*)	C. ALLEGED INCIDENT (*mark 'X'*)	D. DATE OF INCIDENT (*mo., day, yr.*)	E. REMARKS
1. NO HAZARD				
2. HUMAN HEALTH				
3. NON-WORKER INJURY/EXPOSURE				
4. WORKER INJURY				
5. CONTAMINATION OF WATER SUPPLY				
6. CONTAMINATION OF FOOD CHAIN				
7. CONTAMINATION OF GROUND WATER				
8. CONTAMINATION OF SURFACE WATER	X			
9. DAMAGE TO FLORA/FAUNA				
10. FISH KILL				
11. CONTAMINATION OF AIR				
12. NOTICEABLE ODORS				
13. CONTAMINATION OF SOIL				
14. PROPERTY DAMAGE				
15. FIRE OR EXPLOSION				
16. SPILLS/LEAKING CONTAINERS/ RUNOFF/STANDING LIQUIDS				
17. SEWER, STORM DRAIN PROBLEMS				
18. EROSION PROBLEMS				
19. INADEQUATE SECURITY				
20. INCOMPATIBLE WASTES				
21. MIDNIGHT DUMPING				
22. OTHER (*specify*):				

VII. PERMIT INFORMATION

A. ALL APPLICABLE PERMITS HELD BY THE SITE.

☐ 1. NPDES PERMIT ☐ 2. SPCC PLAN ☑ 3. STATE PERMIT (specify): Solid Waste

☐ 4. AIR PERMITS ☐ 5. LOCAL PERMIT ☐ 6. RCRA TRANSPORTER

☐ 7. RCRA STORER ☐ 8. RCRA TREATER ☐ 9. RCRA DISPOSER

☐ 10. OTHER (specify):

B. IN COMPLIANCE?

☑ 1. YES ☐ 2. NO ☐ 3. UNKNOWN

4. WITH RESPECT TO (list regulation name & number): NC Solid Waste Rules

VIII. PAST REGULATORY ACTIONS

☑ A. NONE ☐ B. YES (summarize below)

IX. INSPECTION ACTIVITY (past or on-going)

☐ A. NONE ☑ B. YES (complete items 1,2,3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION
Inspection	10/11/79	STATE	Routine Quarterly

X. REMEDIAL ACTIVITY (past or on-going)

☐ A. NONE ☐ B. YES (complete items 1, 2, 3, & 4 below)

1. TYPE OF ACTIVITY	2. DATE OF PAST ACTION (mo., day, & yr.)	3. PERFORMED BY: (EPA/State)	4. DESCRIPTION

NOTE: Based on the information in Sections III through X, fill out the Preliminary Assessment *(Section II)* information on the first page of this form.

EPA

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT

REGION	SITE NUMBER (to be assigned by Hq)
IV	2015

GENERAL INSTRUCTIONS: Complete Sections I and III through XV of this form as completely as possible. Then use the information on this form to develop a Tentative Disposition (*Section II*). File this form in its entirety in the regional Hazardous Waste Log File. Be sure to include all appropriate Supplemental Reports in the file. Submit a copy of the forms to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Tack Force (*EN-335*); 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: Cumberland Cty Landfill
B. STREET (or other identifier): Cliffdale Rd
C. CITY: Faye Heville
D. STATE: N.C.
E. ZIP CODE: 28301
F. COUNTY NAME: Cumberland

G. SITE OPERATOR INFORMATION
1. NAME: Cumberland County Board of Commissions
2. TELEPHONE NUMBER: 919-483-4897
3. STREET: Cliffdale Rd SR 1400
4. CITY: Fayetteville
5. STATE: N.C.
6. ZIP CODE: 28301

H. REALTY OWNER INFORMATION (*if different from operator of site*)
1. NAME: S/A
2. TELEPHONE NUMBER:
3. CITY:
4. STATE:
5. ZIP CODE:

I. SITE DESCRIPTION: LANDFILL

J. TYPE OF OWNERSHIP
☐ 1. FEDERAL ☐ 2. STATE ☒ 3. COUNTY ☐ 4. MUNICIPAL ☐ 5. PRIVATE

II. TENTATIVE DISPOSITION (*complete this section last*)

A. ESTIMATE DATE OF TENTATIVE DISPOSITION (*mo., day, & yr.*): 1971 - 1973

B. APPARENT SERIOUSNESS OF PROBLEM
☐ 1. HIGH ☐ 2. MEDIUM ☒ 3. LOW ☐ 4. NONE

PREPARER INFORMATION
1. NAME: Andrew L. Robinson Jr
2. TELEPHONE NUMBER: 919-486 1191
3. DATE (*mo., day, & yr.*): 10-24-80

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION
1. NAME: Andrew L. Robinson Jr
2. TITLE: District Sanitarian
3. ORGANIZATION: N.C. Solid & Hazardous Waste Management Branch
4. TELEPHONE NO. (*area code & no.*): 919-486 1191

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.

C. SITE REPRESENTATIVES INTERVIEWED (*corporate officials, workers, residents*)

1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS

RECEIVED OCT 27 2000

Continue On Reverse

Continued From Front

III. INSPECTION INFORMATION (continued)

D. GENERATOR INFORMATION (sources of waste)

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED
EI Dupont De Nemour Co Inc	(919) 489-4681	Rd. Box Z Faye, N.C.	Amides Amines Organics Inorganics Mercaptans

E. TRANSPORTER/HAULER INFORMATION

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE TRANSPORTED

F. IF WASTE IS PROCESSED ON SITE AND ALSO SHIPPED TO OTHER SITES, IDENTIFY OFF-SITE FACILITIES USED FOR DISPOSAL.

1. NAME	2. TELEPHONE NO.	3. ADDRESS

G. DATE OF INSPECTION (mo., day, & yr.)	H. TIME OF INSPECTION	I. ACCESS GAINED BY: (credentials must be shown in all cases)
10-6-80	2:00 P.M	[X] 1. PERMISSION [ ] 2. WARRANT

J. WEATHER (describe)

Dry

IV. SAMPLING INFORMATION

A. Mark 'X' for the types of samples taken and indicate where they have been sent e.g., regional lab, other EPA lab, contractor, etc. and estimate when the results will be available.

1. SAMPLE TYPE	2. SAMPLE TAKEN (mark 'X')	3. SAMPLE SENT TO:	4. DATE RESULTS AVAILABLE
a. GROUNDWATER			
b. SURFACE WATER			
c. WASTE			
d. AIR			
e. RUNOFF			
f. SPILL			
g. SOIL			
h. VEGETATION			
i. OTHER (specify)			

B. FIELD MEASUREMENTS TAKEN (e.g., radioactivity, explosivity, PH, etc.)

1. TYPE	2. LOCATION OF MEASUREMENTS	3. RESULTS

Continued From Page 2

IV. SAMPLING INFORMATION (continued)

C. PHOTOS

1. TYPE OF PHOTOS
☐ a. GROUND ☐ b. AERIAL

2. PHOTOS IN CUSTODY OF:

D. SITE MAPPED?

☐ YES. SPECIFY LOCATION OF MAPS:

E. COORDINATES

1. LATITUDE (deg.-min.-sec.)

2. LONGITUDE (deg.-min.-sec.)

V. SITE INFORMATION

A. SITE STATUS

☐ 1. ACTIVE (Those inductrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

☐ 2. INACTIVE (Those sites which no longer receive wastes.)

☐ 3. OTHER (specify): _____
(Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?

☐ 1. NO ☐ 2. YES (specify generator's four-digit SIC Code): _____

C. AREA OF SITE (in acres)

D. ARE THERE BUILDINGS ON THE SITE?

☐ 1. NO ☐ 2. YES (specify):

VI. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

X	A. TRANSPORTER	X	B. STORER	X	C. TREATER	X	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION	X	1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE		3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK		4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS./TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):		6. OTHER (specify):		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY		8. OTHER (specify):
					9. OTHER (specify):		

E. SUPPLEMENTAL REPORTS: If the site falls within any of the categories listed below, Supplemental Reports must be completed. Indicate which Supplemental Reports you have filled out and attached to this for..

☐ 1. STORAGE ☐ 2. INCINERATION ☒ 3. LANDFILL ☐ 4. SURFACE IMPOUNDMENT ☐ 5. DEEP WELL

☐ 6. CHEM/BIO/PHYS TREATMENT ☐ 7. LANDFARM ☐ 8. OPEN DUMP ☐ 9. TRANSPORTER ☐ 10. RECYCLOR/RECLAIMER

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

☐ 1. LIQUID ☒ 2. SOLID ☐ 3. SLUDGE ☐ 4. GAS

B. WASTE CHARACTERISTICS

☐ 1. CORROSIVE ☐ 2. IGNITABLE ☐ 3. RADIOACTIVE ☐ 4. HIGHLY VOLATILE
☐ 5. TOXIC ☐ 6. REACTIVE ☐ 7. INERT ☐ 8. FLAMMABLE

☐ 9. OTHER (specify):

C. WASTE CATEGORIES
Are records of wastes available? Specify items such as manifests, inventories, etc. below.

Continue On Reverse

Continued From Front

II. WASTE RELATED INFORMATION (con 1)

2. Estimate the amount (specify unit of measure) of waste by category; mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT	AMOUNT	AMOUNT	AMOUNT	AMOUNT 27	AMOUNT
UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE	UNIT OF MEASURE Hundred Tons	UNIT OF MEASURE
X (1) PAINT, PIGMENTS	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY, PHARMACEUT.
(2) METALS SLUDGES	(2) OTHER(specify):	(2) NON-HALOGNTD. SOLVENTS	(2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(3) POTW		(3) OTHER(specify):	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(4) ALUMINUM SLUDGE			(4) PESTICIDES	(4) FERROUS SMELTING WASTES	(4) MUNICIPAL
(5) OTHER(specify):			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER(specify):
			(6) CYANIDE	(6) OTHER(specify):	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			(11) OTHER(specify):		

D. LIST SUBSTANCES OF GREATEST CONCERN WHICH ARE ON THE SITE (place in descending order of hazard)

1. SUBSTANCE	2. FORM (mark 'X')			3. TOXICITY (mark 'X')				4. CAS NUMBER	5. AMOUNT	6. UNIT
	a. SOLID	b. LIQ.	c. VAPOR	a. HIGH	b. MED.	c. LOW	d. NONE			

VIII. HAZARD DESCRIPTION

FIELD EVALUATION HAZARD DESCRIPTION: Place an 'X' in the box to indicate that the listed hazard exists. Describe the hazard in the space provided.

☐ A. HUMAN HEALTH HAZARDS

None

Continued From Page 4

VIII. HAZARD DESCRIPTION (continue

☐ B. NON-WORKER INJURY/EXPOSURE

☐ C. WORKER INJURY/EXPOSURE

☐ D. CONTAMINATION OF WATER SUPPLY

☐ E. CONTAMINATION OF FOOD CHAIN

☐ F. CONTAMINATION OF GROUND WATER

☐ G. CONTAMINATION OF SURFACE WATER

VIII. HAZARD DESCRIPTION (continued)

☐ H. DAMAGE TO FLORA/FAUNA

☐ I. FISH KILL

☐ J. CONTAMINATION OF AIR

☐ K. NOTICEABLE ODORS

☐ L. CONTAMINATION OF SOIL

☐ M. PROPERTY DAMAGE

Continue On Page 7

Continued From Page 6

VIII. HAZARD DESCRIPTION *(continued)*

☐ N. FIRE OR EXPLOSION

☐ O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

☐ P. SEWER, STORM DRAIN PROBLEMS

☐ Q. EROSION PROBLEMS

☐ R. INADEQUATE SECURITY

☐ S. INCOMPATIBLE WASTES

Continue On Reverse

VIII. HAZARD DESCRIPTION *(continued)*

☐ T. MIDNIGHT DUMPING

☐ U. OTHER *(specify)*:

IX. POPULATION DIRECTLY AFFECTED BY SITE

A. LOCATION OF POPULATION	B. APPROX. NO. OF PEOPLE AFFECTED	C. APPROX. NO. OF PEOPLE AFFECTED WITHIN UNIT AREA	D. APPROX. NO. OF BUILDINGS AFFECTED	E. DISTANCE TO SITE *(specify units)*
1. IN RESIDENTIAL AREAS				
2. IN COMMERCIAL OR INDUSTRIAL AREAS				
3. IN PUBLICLY TRAVELLED AREAS				
4. PUBLIC USE AREAS *(parks, schools, etc.)*				

X. WATER AND HYDROLOGICAL DATA

A. DEPTH TO GROUNDWATER *(specify unit)*	B. DIRECTION OF FLOW	C. GROUNDWATER USE IN VICINITY
D. POTENTIAL YIELD OF AQUIFER	E. DISTANCE TO DRINKING WATER SUPPLY *(specify unit of measure)*	F. DIRECTION TO DRINKING WATER SUPPLY

G. TYPE OF DRINKING WATER SUPPLY

☒ 1. NON-COMMUNITY < 15 CONNECTIONS*

☐ 2. COMMUNITY *(specify town)*: > 15 CONNECTIONS

☐ 3. SURFACE WATER

☒ 4. WELL

Continue On Page 9

Continued From Page 8

X. WATER AND HYDROLOGICAL DATA (continued)

H. LIST ALL DRINKING WATER WELLS WITHIN A 1/4 MILE RADIUS OF SITE

1. WELL	2. DEPTH (specify unit)	3. LOCATION (proximity to population/buildings)	4. NON-COMMUNITY (mark 'X')	5. COMMUNITY (mark 'X')

I. RECEIVING WATER

1. NAME

☐ 2. SEWERS ☐ 3. STREAMS/RIVERS

☐ 4. LAKES/RESERVOIRS ☐ 5. OTHER (specify):

J. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS

XI. SOIL AND VEGITATION DATA

LOCATION OF SITE IS IN:

☐ A. KNOWN FAULT ZONE ☐ B. KARST ZONE ☐ C. 100 YEAR FLOOD PLAIN ☐ D. WETLAND

☐ E. A REGULATED FLOODWAY ☐ F. CRITICAL HABITAT ☐ G. RECHARGE ZONE OR SOLE SOURCE AQUIFER

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

Mark 'X' to indicate the type(s) of geological material observed and specify where necessary, the component parts.

'X'	A. OVERBURDEN	'X'	B. BEDROCK (specify below)	'X'	C. OTHER (specify below)
	1. SAND	X			
	2. CLAY	X			
	3. GRAVEL				

XIII. SOIL PERMEABILITY

☐ A. UNKNOWN ☐ B. VERY HIGH (100,000 to 1000 cm/sec.) ☐ C. HIGH (1000 to 10 cm/sec.)

☐ D. MODERATE (10 to .1 cm/sec.) ☒ E. LOW (.1 to .001 cm/sec.) ☐ F. VERY LOW (.001 to .00001 cm/sec.)

G. RECHARGE AREA

☐ 1. YES ☒ 2. NO 3. COMMENTS:

H. DISCHARGE AREA

☐ 1. YES ☒ 2. NO 3. COMMENTS:

I. SLOPE

1. ESTIMATE % OF SLOPE: 5%

2. SPECIFY DIRECTION OF SLOPE, CONDITION OF SLOPE, ETC.: Directing Toward Rock Fish CREEK

J. OTHER GEOLOGICAL DATA

Continued From Front

XIV. PERMIT INFORMATION

List all applicable permits held by the site and provide the related information.

A. PERMIT TYPE (e.g., RCRA, State, NPDES, etc.)	B. ISSUING AGENCY	C. PERMIT NUMBER	D. DATE ISSUED (mo., day, & yr.)	E. EXPIRATION DATE (mo., day, & yr.)	F. IN COMPLIANCE (mark 'X')		
					1. YES	2. NO	3. UNKNOWN

XV. PAST REGULATORY OR ENFORCEMENT ACTIONS

☐ NONE ☐ YES (summarize in this space)

NOTE: Based on the information in Sections III through XV, fill out the Tentative Disposition (*Section II*) information on the first page of this form.

LANDFILLS SITE INSPECTION REPORT
(Supplemental Report)

INSTRUCTION
Answer and Explain as Necessary. 2015

1. EVIDENCE OF SITE INSTABILITY *(Erosion, Settling, Sink Holes, etc)*
☐ YES ☒ NO

2. EVIDENCE OF IMPROPER DISPOSAL OF BULK LIQUIDS, SEMI-SOLIDS AND SLUDGES INTO THE LANDFILL
☐ YES ☒ NO

3. CHECK RECORDS OF CELL LOCATION AND CONTENTS AND BENCHMARK
☒ YES ☐ NO

4. WASTES SURROUNDED BY SORBENT MATERIAL
☐ YES ☐ NO

5. DIVERSION STRUCTURES ARE EFFECTIVELY CONSTRUCTED AND PROPERLY MAINTAINED
☐ YES ☒ NO

6. EVIDENCE OF PONDING OF WATER ON SITE
☐ YES ☒ NO

7. EVIDENCE OF IMPROPER/INADEQUATE DRAINING
☐ YES ☒ NO

8. ADEQUATE LEACHATE COLLECTION SYSTEM *(If "Yes", specify Type)*
☒ YES ☐ NO

8a. SURFACE LEACHATE SPRING
☐ YES ☒ NO

9. RECORDS OF LEACHATE ANALYSIS
☐ YES ☒ NO

10. GAS MONITORING
☒ YES ☐ NO

11. GROUNDWATER MONITORING WELLS
☐ YES ☒ NO

ARTIFICIAL MEMBRANE LINER INSTALLED
☐ YES ☒ NO

13. SPECIFIC CONTAINMENT MEASURES *(Clay Bottom, Sides,etc)*
☐ YES ☒ NO

14. FIXATION *(Stabilization)* OF WASTE
☐ YES ☒ NO

15. ADEQUATE CLOSURE OF INACTIVE PORTION OF FACILITY
☒ YES ☐ NO

16. COVER*(Type)*
Sand/ Clay

16a. THICKNESS
At least 2'

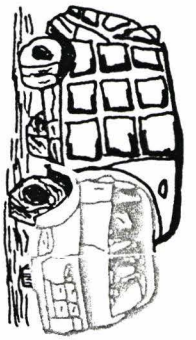
16b. PERMEABILITY

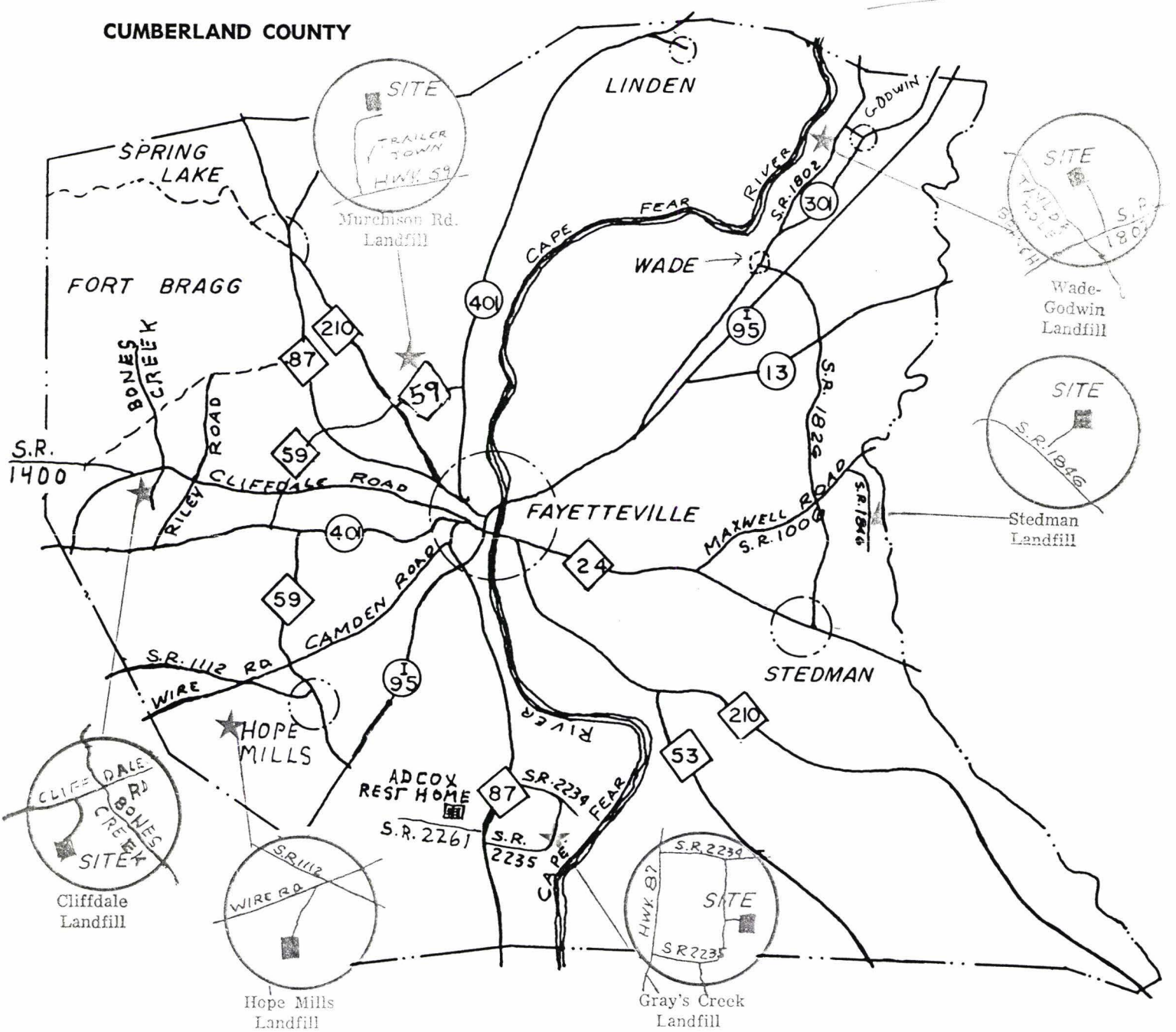
16c. DAILY APPLICATION
☐ YES ☐ NO

U. S. ENVIRONMENTAL PROTECTION AGENCY
REGIONAL ERRIS SITE INVENTORY
BY COUNTY

A ID NO.	SITE NAME	CITY NAME	CNTY NAME	SITE DISC DATE	EVE TYP CDE	PA DATE COMP	EVE TYP CDE	SI DATE STRT	SI DATE COMP	NO SO CO	RC ST IN	N P L
)080891039	LACKEY IND WHSE	WHITEVILLE	COLUMBUS	80/07/01	PA1	86/07/18						
)991278631	LCP CHEMS-NC INC	RIEGELWOOD	COLUMBUS	79/11/01	PA1	82/08/01				02	1	
)991278045	RECON DRUM CO	COLUMBUS	COLUMBUS	80/09/01	PA1	85/12/24						6
)000828616	USS AGRI-CHEMICALS FARM SERVI*	WHITEVILLE	COLUMBUS	81/06/01	PA2	85/12/24				01		
)024766719	WRIGHT CHEMICAL CORP	RIEGLEWOOD	COLUMBUS	83/03/01	PA1	86/05/15						
)045924065	AMF HATTERAS YACHTS	NEW BERN	CRAVEN	80/08/01	PA1	85/06/27						7
)003193588	BARBOUR BOAT WORKS INC	NEW BERN	CRAVEN	80/08/01	PA1	85/09/25						
)003201837	ENCEE CHEMICAL SALES INC	BRIDGETON	CRAVEN	80/08/01	PA1	85/06/27						6
)003190584	EVERHART LUMBER CO	NEW BERN	CRAVEN	83/08/01	PA1	84/03/01	SI1	84/06/01	84/06/01			
)981929854	ROWE'S CORNER DRUM DUMP	ROWES CORNER	CRAVEN									
)981474075	ROWES CORNER DUMP	ROWES CORNER	CRAVEN	86/04/23	PA1	86/12/10						
)003197704	SALT WOOD PRODUCTS INC	COVE CITY	CRAVEN	80/08/01	PA1	85/11/21						7
)980848840	SCOTT'S CREEK BATTERY SITE	NEW BERN	CRAVEN	84/05/01	PA1	86/12/10	SI1	84/06/01	84/06/01			
)075550517	SWISS BEAR INC	NEW BERN	CRAVEN	80/08/01	PA1	85/06/01						6
)981928088	THE TEXT, NEW BERN	NEW BERN	CRAVEN	87/03/10								
170027261	USMC AIR STATION CHERRY POINT	CHERRY POINT	CRAVEN	80/08/01	PA1	83/01/01				12	1	
)980802839	USMC SLOCUM CRK MARINE CORPS *	CHERRY POINT	CRAVEN	83/08/18								
)003189024	BORDEN CHEMICAL FAYETTEVILLE *	FAYETTEVILLE	CUMBERLAND	79/11/01	PA1	85/09/18	SI1		87/02/07			6
)003188828	CAPE FEAR WOOD PRESERVING	FAYETTEVILLE	CUMBERLAND	84/08/01	PA1	86/10/10	SI1	85/10/05	86/06/18			
)003188844	CAROLINA TRANSFORMER	FAYETTEVILLE	CUMBERLAND	78/12/01	PA1	79/04/01	SI1	78/11/01	79/04/01			
)024548133	CLARKE & PROCTOR TURPENTINE C*	FAYETTEVILLE	CUMBERLAND	80/08/01	PA1	85/09/18						6
980502892	CREEK BRIDGE	FAYETTEVILLE	CUMBERLAND	79/11/01	PA1	85/09/18						
980502900	CUMBERLAND COUNTY LDFL	FAYETTEVILLE	CUMBERLAND	79/11/01	PA1	80/02/01	SI1	80/10/01	80/10/01			
							SI2	80/10/01	80/10/01			
047368642	DUPONT EI DE NEMOURS/FAYETTVI*	FAYETTEVILLE	CUMBERLAND	79/11/01	PA1	80/03/01					2	
)003198934	FASCO INDUSTRIES INC	FAYETTEVILLE	CUMBERLAND	80/08/01	PA1	85/09/16						6
980502934	FAYETTEVILLE LDFL	FAYETTEVILLE	CUMBERLAND	80/02/01	PA1	80/02/01						
981928021	HOLLINGS WORTH PROPERTY	FAYETTEVILLE	CUMBERLAND	87/03/25								
980502983	HOPE MILLS LDFL	CUMBERLAND CO	CUMBERLAND	79/11/01	PA1	80/02/01						
048958615	KELLY-SPRINGFIELD TIRE CO	FAYETTEVILLE	CUMBERLAND	80/08/01	PA1	85/02/01						6
980503031	MILAN YARD LDFL	FAYETTEVILLE	CUMBERLAND	79/11/01	PA1	85/09/18						
088563242	MONSANTO COMPANY	FAYETTEVILLE	CUMBERLAND	79/11/01	PA1	80/03/01				02	6	
					PA2	85/06/01						
981744717	PARKER FARM	FAYETTEVILLE	CUMBERLAND	86/09/22								
570024475	POPE AFB	POPE AIR FORCE*	CUMBERLAND	80/08/01	PA1	83/01/01				01	6	
990714479	ROHM & HAAS CO CARODEL PLANT	FAYETTEVILLE	CUMBERLAND	80/08/01	PA1	85/09/18					7	
039047485	ROHM & HAAS INC	FAYETTEVILLE	CUMBERLAND	79/11/01	PA1	80/03/01	SI1	80/10/01	80/10/01			
							SI2	80/10/01	80/10/01			
)00623199	TEXACO INC	FAYETTEVILLE	CUMBERLAND	80/08/01	PA1	85/06/01						6
210020121	USA XVIII ARBN CORPS & FORT B*	FORT BRAGG	CUMBERLAND	80/08/01	PA1	83/01/01				01	6	
980803001	WHALEHEAD BEACH	COROLLA	CURRITUCK	83/10/01								
981750425	BUXTON DUMP	BUXTON	DARE	86/10/15	PA1	87/06/13	SI1		87/06/17			
)00648402	BATTERY TECH (DURACELL LEXING*	LEXINGTON	DAVIDSON	80/08/01	PA1	86/10/10	SI1	86/01/27	86/03/18		7	
)60295417	BURLINGTON FURNITURE/CENT MAI*	LEXINGTON	DAVIDSON	80/08/01							6	
)91278581	BURLINGTON FURNITURE/LUMBER P*	LEXINGTON	DAVIDSON	81/06/01	PA1	86/07/18	SI1		87/05/13	01		
)60298809	CLASSIC FURNITURE CORP	THOMASVILLE	DAVIDSON	80/08/01	PA1	85/09/25					6	
)39129697	DUPONT, E I CO	DENTON	DAVIDSON	80/03/01	PA1	80/03/01						
					PA2	85/06/27						
)00475608	E. I. DUPONT COMPANY	DENTON	DAVIDSON	79/11/01								
)80557581	LEXINGTON MUNI LDFL	LEXINGTON	DAVIDSON	81/06/01	PA1	84/05/01				01		
)00616384	LILLY CO DRUM RECOND PLT	THOMASVILLE	DAVIDSON	80/08/01	PA1	84/12/01					6	
)03238756	MASONITE CORP CUSTOM COMPONEN*	THOMASVILLE	DAVIDSON	80/08/01	PA1	84/08/01					6	

CUMBERLAND COUNTY SANITARY LANDFILLS





WHAT IS A COUNTY LANDFILL?

A county landfill is a place operated by franchised solid waste collectors and in conjunction with the County of Cumberland for the proper disposal of solid waste. Four landfills are operated by county franchised refuse collectors, and Cumberland County is now operating two other landfills under direct supervision of the Cumberland County Health Department. It is an effort by the Board of County Commissioners and the County Board of Health to prevent the health hazards and offensiveness created by the improper dumping or burning of garbage, trash and other refuse.

WHO CAN USE COUNTY LANDFILL FACILITIES? IS THERE A CHARGE?

Any person may dispose of his individual residential garbage at any landfill without charge, providing the load does not exceed three 32 gallon standard garbage cans per trip.

Fees for commercial users are set at 35 cents per cubic yard, or a minimum of $1.00 per load. Further information on landfill use, fees, etc., may be obtained from the Environmental Health Division, Cumberland County Health Department, telephone 483-9046.

WHERE ARE THE LANDFILLS LOCATED AND WHEN ARE THEY OPEN?

There are six county landfills. Operational hours are 9:00 a.m. until 5:00 p.m., Monday through Friday, and from 9 a.m. until 1:00 p.m. on Saturday.

(1) Cliffdale landfill is located on Cliffdale Road (S.R. 1400) near Bones Creek and Colony Village Mobile Home Park between Reilly Road (S.R. 1403 or Black Jack Road) and State Road 1402.

(2) Murchison Road landfill is located behind Trailertown Mobile Home Park. Enter on entrance road to Trailertown, off County Club Drive (Highway 59), continue straight on dirt road to entrance of landfill site.

(3) Hope Mills landfill is located off Camden Road (Wire Road or S.R. 1003) south of intersection of Camden Road and Highway N. C. 59 near Koonce's Store. Turn left at sign, Whittington Stables, continue on dirt road one-half mile. Landfill on left.

(4) Stedman landfill is located on S.R. 1846 between Maxwell Road (S.R. 1006) and S.R. 1847.

(5) Wade-Godwin-Falcon landfill is located on S.R. 1802 (Culbreth Road) between Godwin and U.S. Highway 301, near Taylor Hole Branch.

(6) Grays Creek landfill is located between S.R. 2234 and S.R. 2235 off Highway N. C. 87, approximately 11 miles south of Fayetteville, behind Grays Creek Superette.

WHAT MAY BE DISPOSED OF AT A COUNTY LANDFILL?

Almost any type of garbage, trash or refuse that accumulates around a residence may be disposed of at a county landfill. Rubble such as tree stumps, logs, limbs and scrap building debris may be disposed of at Hope Mills, Murchison Road and Cliffdale locations. No junked vehicles or tires allowed. No poisonous or inflammable material accepted at these sites without permission of Cumberland County Health Director. Special arrangements must be made before disposing of large animals.

A special disposal site is open for disposal of tires only between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday. A permit is required and a small fee is charged. Permits may be obtained at Cumberland County Health Department between the hours of 8:00 a.m. and 3:00 p.m.

WHAT REGULATIONS CONTROL THE ACCUMULATION AND DISPOSAL OF SOLID WASTE?

Cumberland County Board of Health regulations prohibit the accumulation of garbage or refuse on any premises except when stored in an approved container. The regulations also prohibit the disposal of garbage or refuse except in an approved sanitary manner. When an owner or tenant permits garbage or refuse to accumulate on his property, he is responsible for its proper disposal even if it was dumped there without his permission. His only recourse is to be willing and able to prove in the courts who dumped the garbage or refuse and that it was without his permission.

WHO CAN I CONTACT TO REMOVE SOLID WASTES FROM MY PREMISES ON A SCHEDULED BASIS?

There are two franchised collectors operating in Cumberland County. They are Liebers Sanitation Service and Louis Sanitation Service, Inc.

PLEASE KEEP OUR COUNTY CLEAN! 4/71

August 17, 1987

TO: File

FROM: Pat DeRosa PD

RE: Fayetteville Landfill, NCD980502934
Cumberland Co. Landfill, NCD980502900

On August 13, 1987, I spoke by telephone with Terry Dover, Solid and Hazardous Waste Management Branch Fayetteville, NC (919) 486-1191 regarding old landfill sites in the Fayetteville area. Regarding the Fayetteville Landfill on Gray St., Terry was not aware of any site on Gray St. He knew of 3 sites in that area (1) Milan Yard Landfill (2) an old municipal landfill behind the sewage plant, and (3) a small demolition landfill, filled in by the city near Cross Creek. Terry said that Borden could have used Milan Yard and/or the treatment plant site which were both municipal landfills.

Regarding the Cumberland County Landfill on Cliffdale Rd., (SR1400), Terry identified 2 former sites. The first site was leased by the county and located in the south side of Cliffdale Rd. just west of Bones Creek. The second site was once owned by the county and located 2 miles west and south of the first site, also on SR1400. The current Cumberland County Landfill on Ann St. opened in April 1980.

PD/pb/0472b.22

August 17, 1987

TO: File

FROM: Pat DeRosa PD

RE: Cumberland County Landfill
NC D980502900

On August 17, 1987, I spoke by telephone with Tom Olcott, Environmental Control Coordinator, E.I. Dupont, Fayetteville, NC (919) 483-4681 regarding the reported disposal of waste from Dupont at the subject site. This disposal occurred between 1971-1973 as reported on the Eckhardt List. Mr. Olcott said that Dupont had disposed of plant trash off site but had not disposed of any chemical waste off site. Plant trash could have included paper, wood, garbage, cardboard, scrap metal, glass laminates, nylon strapping, and sodium bicarbonate residue from empty packaging. Other solid wastes were incinerated. Process waste and domestic waste went to the secondary WWTP on the Dupont site and sludge went to lagoons on site.

PD/pb/0472b.19

August 17, 1987

TO: File

FROM: Pat DeRosa PD

RE: Cumberland County Landfill
NCD980502900

On August 17, 1987, I spoke by telephone with Keith Ashley, Fisheries Biologist, NC Wildlife Commission (919) 866-4250 regarding surface water usage within 3 miles downstream of the subject site. Mr. Ashley said that the Fayetteville Fish Hatchery, indicated on the USGS topograhic map, is still in use and has been since the 1930's. Additional information about monitoring at the hatchery might be available from Marshall Ray or Bob Curry at (919) 867-6390. Lake Rim, which supplies the hatchery, is also used for recreational fishing, boating, and some swimming.

PD/pb/0472b.21

September 11, 1987

TO: File

FROM: Pat DeRosa PD

RE: Cumberland County Landfill
NC D980502900

On September 11, 1987, I spoke by telephone with Lacy Williams, Enviromental Health Section, Cumberland County Health Dept. (919) 483-9046 regarding the current ownership and usage of the subject site. Mr. Williams said that the property was purchased in 1984 by a Mrs. Hepner of Fayetteville, NC. He said the property is currently used as a horse farm or stable. He said the old landfill site is next to an adjoining property used as a NC DOT borrow pit.

PD/pd/0444b.65

September 10, 1987

TO: File

FROM: Pat DeRosa PD

RE: Fayetteville Landfill NCD980502934
Cumberland County Landfill NCD980502900

I spoke today with Dick Caspar, Water Supply Branch, NC DHR, Raleigh, NC, (919) 733-2321 regarding water supply intakes within 3 miles downstream of the subject sites. According to Branch records, there are no surface water intakes within 3 miles downstream of either site.

PD/pb/0472b.32

REGION IV RCRA/NPL POLICY QUESTIONNAIRE FOR INITIAL SCREENING

Site Name Cumberland County Landfill

City Fayetteville State NC

Facility I.D. Number NCD 980 502 900

Type of Facility: Generator_____ Transporter_____ TSD_____

I. RCRA APPLICABILITY

	yes	no
Does the facility have RCRA interim status?	_____	X
Does the facility have a final or post-closure permit? If so, date issued_____	_____	X
Is the facility a non-notifier that has been identified by States or EPA?	_____	X
Is the facility a known or possible protective filer?	_____	X
Have RCRA wastes been stored onsite for longer than 90 days since November 19, 1980?	_____	X
Have RCRA wastes been disposed onsite since November 19, 1980?	_____	X

STOP HERE IF ALL ANSWERS TO QUESTIONS IN SECTION I ARE NO

II. FINANCIAL STATUS

	yes	no
Is the facility owned by an entity that has filed for bankruptcy under federal laws (Chapter 7 or 11) or State laws?	_____	_____

If yes, what has it filed under?

Chapter 7_____ Chapter 11 _____ Other _____

III. ENFORCEMENT

RCRA Status	yes	no
Has the facility lost authorization to operate via LOIS, 3005(c) permit denial, 3008(h) IS termination, 3005(d) permit revocation?	_____	_____
Has the facilities interim status been terminated via another mechanism (i.e. administrative termination)?	_____	_____

IV. CERCLA STATUS

What CERCLA financed remedial or removal activities have been initiated at the site? (RI/FS, RD/RA, O&M, forward planning, and removal; does not include enforcement or PA/SI activities).

V. Enforcement Status	yes	no
In general, would you characterize the facility as demonstrating an unwillingness to undertake corrective action based on prior State, CERCLA or RCRA actions?	_____	_____

If yes, please describe and cite the authorities exercised.

	yes	no
Is the owner/operator a party to any enforcement action at the site?	_____	_____

If not, why not?

Are any PRPs (including owner/operators) undertaking remedial studies or action in response to CERCLA enforcement authorities? What is the extent/ type of work that has been completed (RI/FS, etc.) and who (generators, owner/operator, etc.) is conducting the work?

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

EPA

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D980502900

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site)	02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER
Cumberland County Landfill	Cliffdale Rd (SR 1400)

03 CITY	04 STATE	05 ZIP CODE	06 COUNTY	07 COUNTY CODE	08 CONG DIST
Fayetteville	NC	28301	Cumberland	26	07

09 COORDINATES LATITUDE	LONGITUDE
35 03 42.	079 02 23.

10 DIRECTIONS TO SITE (Starting from nearest public road)
Take US 401 South to Fayetteville. Turn right onto the Central Business Loop to Hay St. Turn right onto Hay St + continue west onto Morganton Rd ~ 1½ miles. Bear left at fork onto Cliffdale Rd (SR1400). Continue 6 miles west, site on left just past Bones Creek.

III. RESPONSIBLE PARTIES

01 OWNER (If known)	02 STREET (Business, mailing, residential)
Mrs. Hepner	

03 CITY	04 STATE	05 ZIP CODE	06 TELEPHONE NUMBER
Fayetteville	NC	28301	( )

07 OPERATOR (If known and different from owner)	08 STREET (Business, mailing, residential)
Cumberland County Health Dept.	227 Fountainhead Lane

09 CITY	10 STATE	11 ZIP CODE	12 TELEPHONE NUMBER
Fayetteville	NC	28301	(919) 483-9046

13 TYPE OF OWNERSHIP (Check one)
☒ A. PRIVATE ☐ B. FEDERAL: _____ (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL
☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN

14 OWNER/OPERATOR NOTIFICATION ON FILE (Check all that apply)
☐ A. RCRA 3001 DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: ___/___/___ (MONTH DAY YEAR) ☒ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION
☐ YES DATE ___/___/___ (MONTH DAY YEAR)
☒ NO

BY (Check all that apply)
☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☐ D. OTHER CONTRACTOR
☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S): _____

02 SITE STATUS (Check one)	03 YEARS OF OPERATION	
☐ A. ACTIVE ☒ B. INACTIVE ☐ C. UNKNOWN	~1971 (BEGINNING YEAR)	1973 (ENDING YEAR) ☐ UNKNOWN

04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED
E.I. Dupont, Fayetteville Works reported disposing of 2700 tons of waste at this site between 1971-1973 (Eckhardt List). Dupont currently indicates that this was non-hazardous plant trash similar to waste currently disposed at NE Bladen County Sanitary Landfill.

05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION
This site was operated as a county landfill. NO hazardous wastes are known to be disposed here. No monitoring wells on site. Fayetteville Fish Hatchery + Lake Rim less than 2 mile downstream.

V. PRIORITY ASSESSMENT Site is currently used as horse farm.

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents)
☐ A. HIGH (Inspection required promptly) ☐ B. MEDIUM (Inspection required) ☒ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
Lacy Williams, Environmental Health Section	Cumberland County Health Dept.	(919) 483-9046

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Pat DeRosa	NC DHR	S+HWM Br.	(919) 733-2801	8 / 18 / 87 (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D980502900

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES *(Check all that apply)*

- [X] A. SOLID
- [ ] B. POWDER, FINES
- [ ] C. SLUDGE
- [ ] D. OTHER _____ (Specify)
- [ ] E. SLURRY
- [ ] F. LIQUID
- [ ] G. GAS

02 WASTE QUANTITY AT SITE
(Measures of waste quantities must be independent)

TONS 2700
CUBIC YARDS _____
NO. OF DRUMS _____

03 WASTE CHARACTERISTICS *(Check all that apply)*

- [ ] A. TOXIC
- [ ] B. CORROSIVE
- [ ] C. RADIOACTIVE
- [ ] D. PERSISTENT
- [ ] E. SOLUBLE
- [ ] F. INFECTIOUS
- [ ] G. FLAMMABLE
- [ ] H. IGNITABLE
- [ ] I. HIGHLY VOLATILE
- [ ] J. EXPLOSIVE
- [ ] K. REACTIVE
- [ ] L. INCOMPATIBLE
- [X] M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE			
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES *(See Appendix for most frequently cited CAS Numbers)*

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION

V. FEEDSTOCKS *(See Appendix for CAS Numbers)*

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION *(Cite specific references, e.g., state files, sample analysis, reports)*

See attached list of references 1–8.

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D980502900

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 [X] A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — [X] POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: >10,000 — 04 NARRATIVE DESCRIPTION
None reported. The nearest well is <2,000 feet from the site at Colony Village MHP. City water is not available to most residents. At least 10,000 people depend on groundwater from private + community wells.

01 [X] B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — [X] POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION
None reported. The nearest creek, Bones Creek, is 500 ft. east of the site. Lake Rim is, <2 miles downstream, is used for recreation. The Fayetteville Fish Hatchery is also <2 miles downstream.

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 [X] F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: _____) — [X] POTENTIAL — ☐ ALLEGED
03 AREA POTENTIALLY AFFECTED: _____ (Acres) — 04 NARRATIVE DESCRIPTION
None reported.

01 ☐ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) — ☐ POTENTIAL — ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ — 04 NARRATIVE DESCRIPTION

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
NC	D980502950

II. HAZARDOUS CONDITIONS AND INCIDENTS *(Continued)*

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION *(Include name(s) of species)*

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES *(Spills/runoff/standing liquids/leaking drums)* — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS

V. SOURCES OF INFORMATION *(Cite specific references, e. g., state files, sample analysis, reports)*

See attached list of references 1-10.

24IHSSF501

DocumentID NCD980502900

Site Name CUMBERLAND COUNTY LANDFILL

DocumentType Notification Form (NF)

RptSegment 1

DocDate 4/22/1988

DocRcvd 4/25/1988

Box SF501

AccessLevel PUBLIC

Division WASTE MANAGEMENT

Section SUPERFUND

Program IHS (IHS)

DocCat Facility

COPY

N.C. Department of Human Resources
Division of Health Services

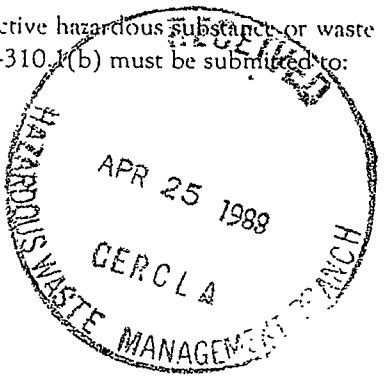
For Agency Use Only
SITE # S L S 2 6 0 1 0 0 1 7 6

SECTION A

NOTIFICATION OF AN INACTIVE HAZARDOUS SUBSTANCE OR WASTE DISPOSAL SITE

North Carolina General Statutes Section 130A-310 provides for protection of the public from inactive hazardous substance or waste disposal sites. Notification information, required by North Carolina General Statutes Section 130A-310.1(b) must be submitted to:

Superfund Unit
Division of Health Services
P.O. Box 2091
Raleigh, NC 27602-2091



Please read instructions before completing.

Please type or print in black ink.

A. SITE NAME AND PERSON REQUIRED TO NOTIFY:

1. Site Name CLIFFDALE LANDFILL / Cumberland Co Ldfl
(One site per form)

2. Person Completing Form:
Name L. S. CARTER
Mailing Address 698 ANN ST.
City FAYETTEVILLE State NC Zip Code 28301
Telephone (919) 483-4897

- [ ] Present Owner
- [ ] Past Owner
- [ ] Present Operator
- [ ] Past Operator
- [X] Other (specify) Director, County Solid Waste Management

3. Present Owner:
Name CUMBERLAND COUNTY
Mailing Address P.O. Box 1829
City FAYETTEVILLE State N.C. Zip Code 28302
Telephone (919) 483-8131

- [ ] Corporation
- [ ] Partnership
- [ ] Individual
- [X] Other Responsible Party (specify) COUNTY

4. Other
Mailing Address
City State Zip Code
Telephone ( )

- [ ] Past Owner
- [ ] Present Operator
- [ ] Past Operator
- [ ] Other Responsible Party (specify)

5. Other
Mailing Address
City State Zip Code
Telephone ( )

- [ ] Past Owner
- [ ] Present Operator
- [ ] Past Operator
- [ ] Other Responsible Party (specify)

Site Name CLIFFDALE

B. SITE LOCATION:

1. Street or Route Address 7583 LOWELL HARRIS ROAD
   City or Town FAYETTEVILLE, N.C. 28304
   County CUMBERLAND COUNTY

2. Directions to the Site *(Use state road numbers where possible.)*

   U.S. 401 South from Fayetteville to Raeford
   Turn off on SR 1400 (Cliffdale Road)
   Turn off on LOWELL HARRIS Road - proceed in Cliffdale Landfill Gate.
   (SR 2749)

3. Attach a Department of Transportation map or a USGS map showing the location of the site or facility. Label the map with the site name.

4. Check the appropriate description of the area surrounding the site. *(More than one may apply.)*

   - [X] Residential
   - [ ] Business
   - [ ] Other (*specify*) _____
   - [ ] Industrial
   - [ ] Pasture Land
   - [X] Forest Land
   - [X] Farm Land

C. TYPE AND YEARS OF OPERATION:

1. Type of Operation State permitted sanitary landfill — [ ] Present [X] Past
   Standard Industrial Classification Code (SIC) N/A
   Years of Operation (Dates) from 07/72 to 07/80

2. Type of Operation _____ — [ ] Present [ ] Past
   Standard Industrial Classification Code (SIC) _____
   Years of Operation (Dates) from __/__ to __/__

3. Type of Operation _____ — [ ] Present [ ] Past
   Standard Industrial Classification Code (SIC) _____
   Years of Operation (Dates) from __/__ to __/__

D. ENVIRONMENTAL PERMIT HISTORY:

If no environmental permit has been issued, check "None" for each type of permit. Complete for each of the following.

Type of Permit	None	Permit Number	Date Issued	Expiration Date	Comments
1. NPDES	[ ]		__/__	__/__	
2. Air	[ ]		__/__	__/__	
3. RCRA	[ ]		__/__	__/__	
4. RCRA interim status	[ ]		__/__	__/__	
5. State	[ ]		__/__	__/__	
a. Non-discharge	[ ]		__/__	__/__	
b. High productivity well	[ ]		__/__	__/__	
c. Other (*specify*) *	[ ]	5846	05/86	05/91	(Methane Control System)
6. Local (*specify*) _____	[ ]		__/__	__/__	
7. Other (*specify*) _____	[ ]		__/__	__/__	

* Permit for Construction and operation of air pollution abatement facilities or emission sources (DNER & CD)

Site Name CLIFFDALE

E. CURRENT ENVIRONMENTAL PERMITS:

If no environmental permit has been issued, check "None" for each type of permit. Complete for each of the following.

Type of Permit	None	Permit Number	Date Issued	Expiration Date	Comments
1. NPDES	☐		__/__/__	__/__/__	
2. Air	☐		__/__/__	__/__/__	
3. RCRA	☐		__/__/__	__/__/__	
4. RCRA interim status	☐		__/__/__	__/__/__	
5. State	☐		__/__/__	__/__/__	
a. Non-discharge	☐		__/__/__	__/__/__	
b. High productivity well	☐		__/__/__	__/__/__	
c. Other (*specify*) ✓	☐	(See par D)	__/__/__	__/__/__	
6. Local (*specify*)	☐		__/__/__	__/__/__	
7. Other (*specify*)	☐		__/__/__	__/__/__	

F. KNOWN OR SUSPECTED RELEASE OF HAZARDOUS SUBSTANCE OR WASTE TO THE ENVIRONMENT:

(More than one may apply.)

Environmental Media	Known	Suspected	Date of Known or Suspected Release	Likely	Unlikely	None	Comments
1. Groundwater	☐	☐	__/__/__	☐	☐	☒	
2. Surface water	☐	☐	__/__/__	☐	☐	☒	
3. Surface soil	☐	☐	__/__/__	☐	☐	☒	
4. Subsurface soil	☐	☐	__/__/__	☐	☐	☒	
5. Air	☐	☐	__/__/__	☐	☐	☒	

G. PHYSICAL STATE OF HAZARDOUS SUBSTANCE OR WASTE AS DEPOSITED: *(More than one may apply.)*

1. ☒ Solid
2. ☐ Powder
3. ☐ Liquid
4. ☐ Sludge
5. ☐ Non-Containerized Gas
6. ☐ Containerized Gas
7. ☐ Other *(describe)* _____

H. HAZARDOUS SUBSTANCE OR WASTE DISPOSAL AND STORAGE METHOD: *(More than one may apply.)*

1. ☐ Piles
2. ☐ Land treatment
3. ☒ Landfill
4. ☐ Tanks, underground
5. ☐ Tanks, above ground
6. ☐ Septic tanks
7. ☐ Impoundment
8. ☐ Underground injection
9. ☐ Drums, above ground
10. ☐ Drums, above ground, in open
11. ☐ Drums, below ground
12. ☐ Other (*specify*) _____

I. HAZARDOUS SUBSTANCE OR WASTE TYPE USED OR DISPOSED ON SITE: *(More than one may apply.)*

1. ☐ Organics
2. ☐ Inorganics
3. ☐ Solvents
4. ☐ Pesticides
5. ☐ Heavy metals
6. ☐ Acids
7. ☐ Bases
8. ☐ PCBs
9. ☒ Mixed municipal waste
10. ☐ Unknown
11. ☐ Other (*specify*) _____

Site Name CLIFFDALE

J. HAZARDOUS SUBSTANCE OR WASTE QUANTITY: *(More than one may apply.)*

1. Pounds:
   - ☐ less than 10 pounds
   - ☐ 10 pounds or more, but less than 100 pounds
   - ☐ 100 pounds or more, but less than 1000 pounds
   - ☐ 1000 pounds or more
   - ☒ Unknown

2. Drums:
   - ☐ less than 10 drums
   - ☐ 10 drums or more, but less than 100 drums
   - ☐ 100 drums or more, but less than 1000 drums
   - ☐ 1000 drums or more
   - ☒ Unknown

3. Cubic Feet:
   - ☐ less than 10 cubic feet
   - ☐ 10 cubic feet or more, but less than 100 cubic feet
   - ☐ 100 cubic feet or more, but less than 1000 cubic feet
   - ☐ 1000 cubic feet or more
   - ☒ Unknown

4. Gallons:
   - ☐ less than 10 gallons
   - ☐ 10 gallons or more, but less than 100 gallons
   - ☐ 100 gallons or more, but less than 1000 gallons
   - ☐ 1000 gallons or more
   - ☒ Unknown

5. Total area of site:
   - ☐ less than 1 acre
   - ☐ 1 acre or more, but less than 5 acres
   - ☐ 5 acres or more, but less than 10 acres
   - ☒ 10 acres or more
   - ☐ Unknown

K. SOURCE OF HAZARDOUS SUBSTANCE OR WASTE USED OR DISPOSED ON SITE:
(More than one may apply)

	Used On Site	On-Site Disposal	Off-Site Disposal
1. Mining	☐	☐	☐
2. Construction	☐	☐	☐
3. Textiles	☐	☐	☐
4. Fertilizer	☐	☐	☐
5. Paper/printing	☐	☐	☐
6. Leather tanning	☐	☐	☐
7. Iron/steel foundry	☐	☐	☐
8. Chemical, general	☐	☐	☐
9. Plating/polishing	☐	☐	☐
10. Military/ammunition	☐	☐	☐
11. Electrical conductors	☐	☐	☐
12. Transformers	☐	☐	☐
13. Utility companies	☐	☐	☐
14. Sanitary/refuse	☐	☒	☐
15. Photo finish	☐	☐	☐
16. Lab/hospital	☐	☐	☐
17. Wood treating	☐	☐	☐
18. Battery reclamation	☐	☐	☐
19. Pesticides formulation, packaging and/or distribution	☐	☐	☐
20. Herbicide formulation, packaging and/or distribution	☐	☐	☐
21. Other Agrichemical formulation, packaging and/or distribution	☐	☐	☐
22. Dry cleaning	☐	☐	☐
23. Petrochemical processing or refining	☐	☐	☐
24. Unknown	☐	☐	☐
25. Other (*specify*) MUNICIPAL SOLID WASTE	☐	☒	☐

Site Name CLIFFDALE

L. SPECIFIC HAZARDOUS SUBSTANCE OR WASTE COMPOUNDS ASSOCIATED WITH THE SITE, IF KNOWN: *(More than one may apply.)*

	Waste Compounds/ Substances	Generated On Site	Off-Site Disposal	On-Site Disposal
1.	MUNICIPAL SOLID WASTE (MSW)	☐	☐	☒
2.		☐	☐	☐
3.		☐	☐	☐
4.		☐	☐	☐
5.		☐	☐	☐
6.		☐	☐	☐

M. ACCESSIBILITY OF SITE: *(More than one may apply.)*

1. ☐ Security guard
2. ☒ Physical barrier (steep bank, creek, walls, etc.)
   Describe physical barriers Steep banks on three sides of facility
3. ☐ Site completely surrounded by fence
4. ☒ Site partially surrounded by fence
5. ☒ Locked gate
6. ☐ Unlocked gate
7. ☐ No control of access to site
8. ☒ Other (*specify*) Daily operations of a Household Solid Waste Container Site. (Transfer Station in nature)

N. REMEDIAL ACTION: *(More than one may apply.)*

1. ☐ No environmental action
2. ☐ Environmental study
3. ☐ Remedial action

N/A

O. AVAILABILITY OF ANALYTICAL MONITORING DATA:

Is analytical monitoring data for the site available? Limited history of leachate testing prior to 1980.

☒ YES ☐ NO

IF YES: check the appropriate box to indicate the purpose for which the data was collected. *(More than one may apply.)*

- ☐ CERCLA
- ☐ RCRA
- ☐ Remedial Action
- ☐ Environmental Audit
- ☒ Other (*specify*) Normal procedures by State DHES.

IF DATA WAS COLLECTED: FIRST COMPLETE SECTION P. CERTIFICATION AND SIGNATURE ON THE NEXT PAGE AND THEN COMPLETE DHS 3525, SECTION B SITE DATA ADDENDUM NOTIFICATION OF AN INACTIVE HAZARDOUS SUBSTANCE OR WASTE DISPOSAL SITE.

Site Name CLIFFDALE

P. CERTIFICATION AND SIGNATURE:

I certify that to the best of my knowledge and belief the information supplied on this form is complete and accurate.

Signature Laurence S. Carter Date 4-22-88

Name and Title (*Type or print*) L. S. CARTER, DIRECTOR CUMBERLAND COUNTY SWM

Mailing Address 698 ANN ST.
FAYETTEVILLE, N.C. 28301

NORTH CAROLINA

Cumberland County

I, Betsy Currence, a Notary Public for said County and State, do hereby certify that Laurence S. Carter personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 22nd day of April, 19 88

(Official Seal)

Betsy Currence
Notary Public

My commission expires October 1, 19 90

N.C. Department of Human Resources
Division of Health Services

For Agency Use Only
SITE # S I S 2 6 0 1 0 0 1 7 6

SECTION B

SITE DATA ADDENDUM FOR AN INACTIVE HAZARDOUS SUBSTANCE OR WASTE DISPOSAL SITE

North Carolina General Statutes Section 130A-310 provides for protection of the public from inactive hazardous substance or waste disposal sites. Notification information and site data, required by North Carolina General Statutes Section 130A-310.1(b) must be submitted to:

Superfund Unit
Division of Health Services
P.O. Box 2091
Raleigh, NC 27602-2091

Please read instructions before completing.

Please type or print in black ink.

A. SITE NAME AND PERSON REQUIRED TO NOTIFY:

1. Site Name CLIFFDALE LANDFILL
(One site per form)

2. Person Completing Form:
Name L.S. CARTER
Mailing Address 698 ANN ST.
City FAYETTEVILLE State NC Zip Code 28301
Telephone (919) 483-4897

- Present Owner ☐
- Past Owner ☐
- Present Operator ☐
- Past Operator ☐
- Other ☒
(specify) Director, County Solid Waste Management

3. Present Owner:
Name CUMBERLAND COUNTY
Mailing Address P.O. Box 1829
City Fayetteville State NC Zip Code 28302
Telephone (919) 483-8131

- Corporation ☐
- Partnership ☐
- Individual ☐
- Other ☒
(specify) County

B. SITE LOCATION:

Street or Route Address 7583 LOWELL HARRIS ROAD
City or Town FAYETTEVILLE, N.C. 28304
County CUMBERLAND

Site Name CLIFFDALE

C. ON-SITE WATER AND SEWER:

1. Wastewater Management

Does the site currently have an on-site wastewater management system? [ ] YES [X] NO

Has the site previously had an on-site wastewater management system? [ ] YES [X] NO [ ] UNKNOWN

If there is a past or present on-site wastewater treatment system, check all appropriate boxes below to describe the wastewater treatment system used at the facility. Indicate the dates of operation for each wastewater treatment system. More than one system may apply. Complete for all on-site systems, both past and present.

	Process Wastewater		Sanitary Wastewater		Dates of Operation	
	Yes	No	Yes	No	Beginning	Ending
Municipal	[ ]	[ ]	[ ]	[ ]	__/__/__	__/__/__
Pretreatment						
a. With sludge generation	[ ]	[ ]	[ ]	[ ]	__/__/__	__/__/__
b. Without sludge generation	[ ]	[ ]	[ ]	[ ]	__/__/__	__/__/__
On-site wastewater disposal						
a. Drainfield	[ ]	[ ]	[ ]	[ ]	__/__/__	__/__/__
b. Septic tank	[ ]	[ ]	[ ]	[ ]	__/__/__	__/__/__
c. Land Application	[ ]	[ ]	[ ]	[ ]	__/__/__	__/__/__
Biological treatment	[ ]	[ ]	[ ]	[ ]	__/__/__	__/__/__
Discharge to surface water	[ ]	[ ]	[ ]	[ ]	__/__/__	__/__/__

Name of surface water _____

NPDES # _____

2. Water Supply Source

Does the site now have or has it in the past had a water system? [ ] YES [X] NO

If yes, complete the following:

	Groundwater		Surface Water		Dates of Operation	
	Yes	No	Yes	No	Beginning	Ending
Municipal or County _____	[ ]	[ ]	[ ]	[ ]	__/__/__	__/__/__
Community _____	[ ]	[ ]	[ ]	[ ]	__/__/__	__/__/__
Non-Community _____	[ ]	[ ]	[ ]	[ ]	__/__/__	__/__/__

If surface water source is used, name of the body of water _____

Provide the use of the surface water:

[ ] Potable [ ] Production
[ ] Cooling [ ] Fire protection
[ ] Irrigation [ ] Other (*specify*) _____

Attach a facility or local map with intake point marked for private or on-site surface water sources. Label the map with the site name.

Site Name CLIFFDALE

D. ON-SITE WELLS:

Does the site now have or has it in the past had any on-site wells? [X] YES [ ] NO
If yes, complete the following:

1. Attach a facility or site map showing the location of all on-site wells. Label the attachment: "D. 1. On-Site Wells".
2. Total number of on-site wells: 21
3. For each on-site well, provide the following information:

   a. Label the corresponding well on the map required in D. 1.: _____
   b. Presently used? [X] YES [ ] NO
   c. If not presently in use, give year abandoned: _____
   d. Type of well: [X] Monitoring [ ] Injection [ ] Production [ ] Fire Protection [ ] Cooling [ ] Irrigation [ ] Potable [ ] Other (*specify*) Methane Gas Extraction
   e. Permitted well? [ ] YES [ ] NO N/A
      Permit Number _____
   f. Type of construction: See attachment
   g. Date installed: 1985 & 1986
   h. Depth of well: 20' to 30' ft.
   i. Size (diameter): See attachment inches
   j. Depth to static water level: 15-30' ft.
   k. Has laboratory analysis ever indicated ground water contamination? [ ] YES [X] NO

   Additional Section B, Part D. 3. forms are available.

E. CLOSEST OFF-SITE WELL

Provide the following information for the closest currently used off-site well within a one-mile radius of the site, where such information is known to you: Unknown

1. Owner _____
2. Location Address _____
3. City _____
4. Show the location of the well on a map of the area. Label the attachment: "E. 4. Off-Site Well".

F. ANALYTICAL MONITORING DATA

Complete for any monitoring which has been done at the site.

1. Groundwater — Has groundwater monitoring been conducted at the site? [ ] YES [X] NO
   If yes, complete the following:

	Date	Method	Method Number	Compounds Detected	Level
a. Organics					
(1) Purgeables					
(2) Base Neutrals/Acid					
(3) PCB					
(4) Pesticides/Herbicides					
(5) Other					
b. Inorganics					

Laboratory performing analyses: _____
Does the laboratory have EPA contract laboratory status? [ ] YES [ ] NO

Site Name CLIFFDALE

2. Surface Water — Has surface water monitoring been conducted at the site? [X] YES [ ] NO In State Records
If yes, complete the following:

	Date	Method	Method Number	Compounds Detected	Level
a. Organics					
(1) Purgeables					
(2) Base Neutrals/Acid					
(3) PCB					
(4) Pesticides/Herbicides					
(5) Other					
b. Inorganics					

Laboratory performing analyses: _____
Does the laboratory have EPA contract laboratory status? [ ] YES [ ] NO

3. Soil — Has soil testing been conducted at the site? [ ] YES [X] NO
If yes, complete the following:

	Date	Method	Method Number	Compounds Detected	Level
a. Organics					
(1) Purgeables					
(2) Base Neutrals/Acid					
(3) PCB					
(4) Pesticides/Herbicides					
(5) Other					
b. Inorganics					

Laboratory performing analyses: _____
Does the laboratory have EPA contract laboratory status? [ ] YES [ ] NO

4. Air — Has air monitoring been conducted at the site? [ ] YES [X] NO
If yes, complete the following:

	Date	Method	Method Number	Compounds Detected	Level
a. Organics					
b. Inorganics					
c. Particulates					
d. Visible Emissions					
e. Ambient Air Monitoring					
f. Other					

Laboratory performing analyses: _____
Does the laboratory have EPA contract laboratory status? [ ] YES [ ] NO

G. CLEANUP ACTIONS

Describe briefly any cleanup activities at the site and attach a map showing cleanup activities. Label the map with the site name.

Periodic Erosion, Sedimentation control activities.
Design and construction of Methane Gas monitoring and control system.

Site Name CLIFFDALE

List documents related to cleanup actions including, but not limited to, work plans, cleanup action plans, and remedial action plans.

Document Date	Document Name	Purpose of Document N/A

H. RECORDATION

Is the location/existence of the disposal site recorded in the register of deeds' office in the county or counties in which the land is located? ☒ YES ☐ NO

If yes, date of recordation: 1972

I. CERTIFICATION AND SIGNATURE:

I certify that to the best of my knowledge and belief, the information supplied on this form is complete and accurate.

Signature Laurence S. Carter Date 4-22-88

Name and Title (*Type or print*) L. S. CARTER, DIRECTOR SWM

Mailing Address 698 ANN ST.
Fayetteville, N.C. 28301

NORTH CAROLINA

Cumberland County

I, Betsy Currence, a Notary Public for said County and State, do hereby certify that Laurence S. Carter personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal, this the 22nd day of April, 19 88

(*Official Seal*)

Betsy Currence
Notary Public

My commission expires October 1, 19 90

313PRLFSF548

DocumentID NONCD0000733

SITENAME CUMBERLAND COUNTY LANDFILL - BONES CREEK

DocumentType Correspondence (C)

RptSegment 1

DocDate 11/28/2007

DocRcvd 11/28/2007

Box SF548

AccessLevel Public

Division Waste Management

Section Superfund

Program IHS (IHS)

DocCat Facility

NCDENR

North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director | Division of Waste Management | Michael F. Easley, Governor
William G. Ross Jr., Secretary

November 28, 2007

Ms. Katie M. Gallup
1452 Keswick Drive
Fayetteville, NC 28304

Re: Cumberland County Landfill – Bones Creek
NONCD0000733
Cumberland County, NC
Parcel ID No.: 9487-86-7887

Dear Ms. Gallup:

A State contractor (Marshall Miller & Associates, Inc.) has determined that the above referenced property was previously used as a portion of a larger landfill.

A report was submitted to the North Carolina Division of Waste Management by the contractor identifying the property's past use as a landfill and included general information about the property and vicinity. No immediate hazard was observed associated with the landfill area. The property will remain as part of the Division's inventory of unpermitted landfills and continue to be part of public record.

To address properties such as yours, the General Assembly of North Carolina ratified Senate Bill 1492 that creates a program whereby the State will assess and remedy the environmental hazards at these old unpermitted landfills. The funding for this work becomes effective July 1, 2008 and will be used by the Division to hire contractors to perform assessment and remediation activities at these old landfills on a priority basis.

Your cooperation when your property is scheduled for assessment and remediation activities would be very much appreciated.

We ask that our office be notified prior to any redevelopment plans so that the public or environment is not adversely affected. If you have any questions regarding the content of the report or this letter please call me at (919) 508-8463.

Sincerely,

Bruce E. Lefler Jr., Hydrogeologist
Inactive Hazardous Site Branch
NC Division of Waste Management

NCDENR

North Carolina Department of Environment and Natural Resources

Dexter R. Matthews, Director | Division of Waste Management | Michael F. Easley, Governor
William G. Ross Jr., Secretary

November 28, 2007

Ms. Gerda Hepner
7579 Deerwood Drive
Fayetteville, NC 28303

Re: Cumberland County Landfill – Bones Creek
NONCD0000733
Cumberland County, NC
Parcel ID No.: 9487-87-5002

Dear Ms. Hepner:

On July 10, 2006 the above referenced property was inspected by a State contractor (Marshall Miller & Associates, Inc.) to determine if it had previously been used as a landfill and to identify any potential hazards if a landfill was present. That inspection confirmed the presence of a landfill.

A report was submitted to the North Carolina Division of Waste Management by the contractor identifying the property's past use as a landfill and included general information about the property and vicinity. No immediate hazard was observed associated with the landfill area. The property will remain as part of the Division's inventory of unpermitted landfills and continue to be part of public record.

To address properties such as these, the General Assembly of North Carolina ratified Senate Bill 1492 that creates a program whereby the State will assess and remedy the environmental hazards at these old unpermitted landfills. The funding for this work becomes effective July 1, 2008 and will be used by the Division to hire contractors to perform assessment and remediation activities at these old landfills on a priority basis.

Your cooperation when this property is scheduled for assessment and remediation activities would be very much appreciated.

Thank you for your cooperation thus far in allowing access to this property. We ask that our office be notified prior to any redevelopment plans so that the public or environment is not adversely affected. If you have any questions regarding the content of the report or this letter please call me at (919) 508-8463.

Sincerely,

Bruce E. Lefler Jr., Hydrogeologist
Inactive Hazardous Site Branch
NC Division of Waste Management

Site Name:	CUMBERLAND CO LDFL - BONES CREEK	**In IHS Inventory?**	No
ID Number:	NONCD0000733	**Other Agency Lead**	
Site Address:	SR 1400	**NFA or NFA-Restricted Use?**	No
City:		**Unable to Locate**	○
State Plane X:		**Latitude:**	
State Plane Y:		**Longitude:**	

Directions: SR 1400 BONES CREEK

Cliffdale + Town Creek Dr

LDFL Size (Acres):		**Present Within 1000 ft of Ldfl**			
Property Size (Acres):		**Church**	No	**Residence On Ldfl?**	No
Date Open:		**School**	No	**Potable Well Within 500 ft?**	No
Date Closed:	1975	**Day Care**	No	**Adjoins Perennial SW?**	No
		Residential	No		

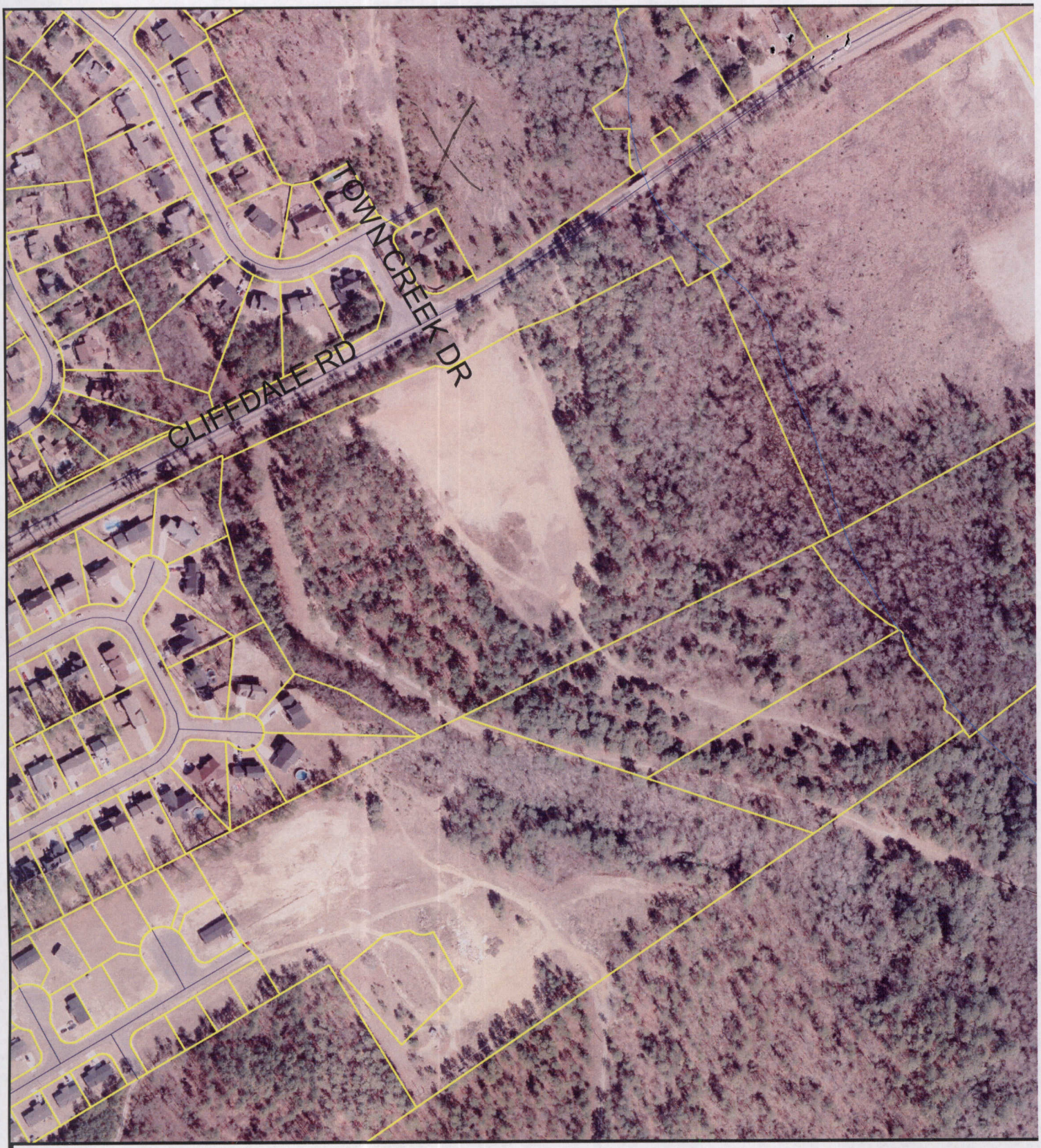
Notes: FROM TERRY DOVER'S LIST

(End Site Record)

Bone Creek Investments LLC

Pine Trees + Cedar Trees Houses all around

NCHFA SITE



SITE MAP

Streets
Water
Parcel Lines
Parcels (USE THIS ONE)

80 0 80 160 Feet

COUNTY OF CUMBERLAND NORTH CAROLINA

THE COUNTY OF CUMBERLAND AND ITS GIS DEPARTMENT DISCLAIMS ACCOUNTABILITY FOR THIS PRODUCT AND MAKES NO WARRANTY EXPRESS OR IMPLIED CONCERNING THE ACCURACY THEREOF. RESPONSIBILITY FOR INTERPRETATION AND APPLICATION OF THIS PRODUCT LIES WITH THE USER.

Site Summary Report
CUMBERLAND COUNTY LANDFILL – BONES CREEK
ID Number: NONCD0000733
Cumberland, North Carolina

Hurricane Recovery Act of 2005
State of North Carolina
State Contract 6010S
MM&A Project Number NCUL103-01

Prepared For:

North Carolina Department of Environmental and Natural Resources
Division of Waste Management - Superfund Section
Inactive Hazardous Sites Branch
401 Oberlin Road, Suite 150
Raleigh, NC 27605

Prepared By:

MARSHALL MILLER & ASSOCIATES, INC.
5825 Triangle Drive
Raleigh, NC 27617
(Ph.) 919-786-1414 (Fax) 919-786-1418

September 6, 2006

Prepared By:

Hilton Freed
Staff Scientist

Reviewed By:

Andrew D. Waggener
Program Manager

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Figure 2 - Property/Water Well Location Map
Figure 3 - Vicinity Map (USGS Aerial Photograph, 1999)
Figure 4 - Site Location Map

TABLES

Table 1 - Tabulated GPS Coordinates

APPENDICES

APPENDIX A

Cumberland County Tax Department - Deeds
Cumberland County Tax Department - 2006 Tax Sheets

APPENDIX B

Records of Communication

APPENDIX C

Site Inspection Photodocumentation

APPENDIX D

Field Reconnaissance Sheet

APPENDIX E

Site Plan for a Sanitary Landfill in Cumberland County

APPENDIX F

Aerial Photograph - Cumberland County DSWC, 1950
Aerial Photograph - Cumberland County DSWC, 1959
Aerial Photograph - Cumberland County DSWC, 1966
Aerial Photograph - Cumberland County DSWC, 1972
Aerial Photograph - Cumberland County DSWC, 1981
Aerial Photograph - NCDOT, 1991

1.0 SITE INFORMATION

ID NUMBER: NONCD0000733

SITE NAME: Cumberland County Landfill – Bones Creek

LOCATION: Southeast of the intersection of Cliffdale Road and Town Creek Drive, at the end of Winward Cove road, 113 feet behind Town Creek Apartments and a multi-unit storage facility

COUNTY: Cumberland

LANDFILL SIZE: 6.1 acres

PROPERTY (SITE) SIZE: 7.88 acres

DATE OPENED: Between 1960 and 1966

DATE CLOSED: 1975

SITE OWNER: Northern: Gerda Hepner
Southern: Katie M. Gallup

OWNER CONTACT: Gerda Hepner

OWNER ADDRESS: Northern: 7579 Deerwood Drive, Fayetteville, North Carolina 28303
Southern: 1452 Keswick Drive, Fayetteville, North Carolina 28304

OWNER TELEPHONE NUMBER: Northern: (910) 822-2825
Southern: (910) 424-3600

NAD 83 PIN: Northern: 9487-87-5002-
Southern: 9487-86-7887-

DEED REFERENCE: Northern: Deed Book 6492, Page Number 626
Southern: Deed Book 2822, Page Number 81

COORDINATES (at point of entrance to Site):

STATE PLANE COORDINATES (SPC); NAD83, Meters

X: 606087.73; Y: 145380.19

DEGREES, MINUTES, SECONDS (DMS); WGS 84

Lat.: N 35° 03' 38"; Long.: W 79° 2' 16.7"

2.0 AREAS OF NOTE

The following areas of note were observed during the site inspection:

- The area immediately at the entrance of the Site contains recently deposited surface litter consisting of glass bottles and aluminum cans.
- A church is located approximately 967 feet to the northeast of the disposal area with which there is an associated water supply well.

3.0 SITE LOCATION RESEARCH SUMMARY

Marshall Miller & Associates, Inc. (MM&A) has completed an assessment of the former Cumberland County Landfill-Bones Creek located near Fayetteville in Cumberland County, North Carolina. The assessment included historical research and a site inspection to confirm the Site location, to develop an understanding of the operational and development history and to evaluate the current Site and vicinity conditions.

For the purpose of this report, the term Site refers to the two properties on which the old landfill was located. The term disposal area is specific to the actual location where refuse was buried or disposed.

3.1 SITE SUMMARY

3.1.1 Site Ownership and Dates of Operation

Though no documentation was located to confirm the date of initial operation, aerial photography indicates an opening date between 1959 and 1966.

According to records from Cumberland County, the property comprising the northern portion of the Site is currently owned by Ms. Gerda Hepner (Deed Book 6492, Page Number 626), and the property comprising the southern portion of the Site is owned by Ms. Katie M. Gallup (Deed Book 2822, Page Number 81). Copies of these deeds are provided in **Appendix A**.

The Old Landfill Inventory Sheet, obtained from the North Carolina Department of

Environment and Natural Resources (NCDENR), Division of Solid Waste offices in Raleigh, indicates that the Site was closed for landfill activities in 1975. This is supported by aerial photography.

MM&A obtained permission to access the property from Ms. Gerda Hepner prior to performing an on-site inspection. A copy of the Request for Site Access Letter and Follow-up telephone logs are included as **Appendix B**.

3.1.2 Site Location

The Site is located 9.12 miles from the Fayetteville City Hall at 433 Hay Street with a bearing of 274 degrees from true north. The Site location and the surrounding area are depicted in the various maps included with this report (**Figures 1** through **4**).

3.1.3 General Site Description

The Site is located in a residential setting on the southeastern side of Cliffdale Road near its intersection with Town Creek Drive. The property is bordered to the east by Bones Creek, to the west by woodlands and a residential neighborhood, to the south by undeveloped land, and to the north by an apartment complex and multi-unit storage facility. The Site can be accessed approximately 113 feet south of the terminus of Winward Cove road.

The Site is trapezoidal in shape, and encompasses an area of 7.88 acres. The disposal area is irregular in shape and occupies approximately 6.1 acres of the Site. A small earthen berm surrounds the disposal area on three sides.

The Site gently undulates with minor mounding to its center and has a total relief of approximately 50 feet.

The Site was reported by county personnel to have accepted general debris, municipal waste, and household refuse. The debris noted during the Site visit supported this.

3.2 SITE CONDITIONS

The following sections discuss the site conditions based on the historical research and the site inspection. Captioned photographs are included in **Appendix C** to illustrate the condition of the Site as observed during the site visit that was performed on July 10, 2006. A copy of the Field Reconnaissance Sheet is included as **Appendix D**.

3.2.1 On-Site Structures

No historical or current on-site structures were identified at this location based on the site visit and historical resources, which included aerial photography, topographical maps, and other resources.

3.2.2 Current Site Usage

The Site is undeveloped and not currently being utilized for any specific purpose.

3.2.3 On-Site Water Supply Wells and Intakes

No on-site wells were identified nor are thought to have ever been present at the Site.

3.2.4 Surface Water Features

The Site is bounded to the east by Bones Creek and to the west by an unnamed seasonal stream, which converges with Bones Creek south of the Site.

3.2.5 Disposal Area

Based on GPS coordinates and aerial photographs, the disposal area occupies approximately 6.1 acres of the 7.8 acre Site. The disposal area is not clearly identifiable on the Site due to heavy vegetation. The disposal area is completely covered with grasses, weeds, vines and large trees and is surrounded by forested land consisting primarily of pines and a mix of deciduous trees. An unimproved dirt road terminates approximately 100 feet into the northern perimeter of the disposal area.

3.2.6 Disposal Area Conditions

Heavy plant growth has occurred on and around the disposal area, making it indistinguishable from the rest of the Site and making access difficult. Road access is good for approximately 100 feet into the disposal area, whereupon it ends as it encounters dense vegetation. The surface of the disposal area contains scattered household debris consisting of stoves, tanks, refrigerators and minor deposits of glass and plastic. A wrecked pickup truck and the remains of a scrapped corrugated tin shack were also observed. The debris in the property that comprises the southern portion of the disposal area is more scattered and consists of glass, plastic and aluminum cans.

A personal interview with Mr. Soles, R.S., Environmental Health Supervisor, with the County of Cumberland Environmental Health Department, affirmed the location and the type of refuse disposed at the facility. Mr. Soles recalled, from his personal inspection visits to the Site, that it was a refuse dump that received general debris, municipal waste, and household refuse.

3.2.7 Evidence of Human Activity

No evidence of human activity was noted during the on-site inspection.

3.2.8 Potential Landfill Gas Migration Pathways

No potential landfill gas migration pathways were observed. This Site does not contain any building foundations or underground utilities that would promote the migration of landfill gasses.

3.2.9 Physical Barriers

Vehicle access is limited to the Site by two locked gates in the multi-unit storage facility area at the end of Winward Cove road. There is evidence of barbed wire fencing on the western perimeter.

3.2.10 Other Pertinent Information

The disposal area was noted to encompass two parcels of property referred to as the Site. Mr. Soles indicated that refuse might have been dumped in the adjacent sand pit to the north of the Site, which is located on property owned by Bone Creek Investments, LLC. This property currently contains a multi-unit storage facility and an apartment complex. According to Mr. Thomas Hollinshed, the principle of Bone Creek Investments, LLC, no landfill materials had been dumped in the sand pit before constructing the multi-unit storage facility and apartment complex. Additionally, the *Site Plan for a Sanitary Landfill in Cumberland County,* filed at the NCDENR, Division of Solid Waste office in Raleigh, specifically outlines the Site location as being south of the sand pit. A copy of the *Site Plan for a Sanitary Landfill in Cumberland County* is provided in **Appendix E**.

3.3 VICINITY CONDITIONS

3.3.1 Structures Located within 50 Feet of the Disposal Area

No historical or current structures were identified within 50 feet of the disposal area, based on the site visit and historical resources, which included interviews, aerial photography, and topographic maps.

3.3.2 Water Supply Wells and Intakes

According to personal interviews and information gathered from the Cumberland County Department of Utilities, there is one water supply well within 1,000 feet of the disposal area. The well is located at a church approximately 967 feet to the northeast and it does not appear to be located hydraulically downgradient from the disposal area. The location of the water supply well is shown on **Figures 1** and **2**.

According to research on the NCDENR, Water Quality Division, Public Water Supply Website, there are no permitted Well Head Protection Areas in the vicinity of the Site.

3.3.3 Current Land Usage

Current land usage within 1,000 feet of the disposal area is as follows:

North: The land use adjacent to the north of the disposal area consists of an apartment complex and a multi-unit storage facility. The nearest apartment building is approximately 75 feet north of the disposal area. Cliffdale Road is approximately 850 feet from the Site and a residential neighborhood is beyond that.

East: The area to the east of the disposal area consists of mixed woodlands. The closest development in this direction is the church, located approximately 967 feet northeast of the Site.

West: The land immediately west of the disposal area consists of mixed woodlands for approximately 400 feet. Beyond this wooded area, the land has been cleared for an additional 500 feet until reaching a residential neighborhood, which lies approximately 900 feet west of the disposal area.

South: The land south of the disposal area consists of mixed woodlands with no development within 1,000 feet of the Site.

3.3.4 Surface Water Features

Bones Creek flows in a southerly direction bordering the Site's eastern perimeter to a pond approximately 1,826 feet to the south. Additionally, two unnamed seasonal streams from the west and east converge with Bones Creek due south of the Site. Bones Creek is classified as Class C waters in the 15A NCAC 2B Standards.

3.4 AERIAL PHOTOGRAPHY REVIEW

MM&A obtained aerial photographs from the Cumberland County Department of Soil and Water Conservation (DSWC), the North Carolina Department of Transportation (NCDOT),

and the United States Geological Survey (USGS) to provide information on the operational history of the dump and the development history of the vicinity.

The source and year for the aerial photographs obtained are as follows:

- 1950 Cumberland County DSWC, AOC-4E-7, Frame (B6)
- 1959 Cumberland County DSWC, AOC-5AA-65, Frame (B6)
- 1966 Cumberland County DSWC, AOC-2GG-179, Frame (C5)
- 1972 Cumberland County DSWC, 370512-85, Frame (C6)
- 1981 Cumberland County DSWC, Frame (A3)
- 1991 NCDOT Aerial Photo

The aerial photographs listed above are included in **Appendix F**. Following is a summary of the observations made from the review of the aerial photography:

Aerial photography from 1950 indicates that the disposal area was not visible at that time and the sand pit to the north was clearly visible. The remainder of the land within 1,000 feet was undeveloped or used for agriculture.

In 1959, the disposal area still was not visible. The sand pit operation to the north of the Site has enlarged from its extent in the 1950 aerial photograph. The surrounding area remains undeveloped, as it appeared in the 1950 photograph.

In 1966, aerial photography indicates that the disposal area was visible at that time, south of the sand pit operation. At that time, the sand pit operation had expanded across Cliffdale Road to the north. Additionally, road access to the west and south of the Site has been provided.

Road and subdivision development to the southwest of the Site is clearly indicated by 1972. Further expansion of the sand pit north of Cliffdale Road had occurred.

By 1981, revegetation of the disposal area had occurred. Subdivision development had increased to the southwest and the sand pit operation to the north has been decreased as evidenced by reforestation.

As of 1991, the road into the disposal area was visible, and the area of surface disturbance is slight and barely visible in the photograph. The land to the south indicates that some reforestation had occurred since the closing of the landfill in 1975. The majority of the land to the south is undeveloped and forested. The sand pit to the south of Cliffdale Road is visible, though smaller, and the portion of the sand pit to the north of Cliffdale Road appears to be reclaimed.

FIGURES

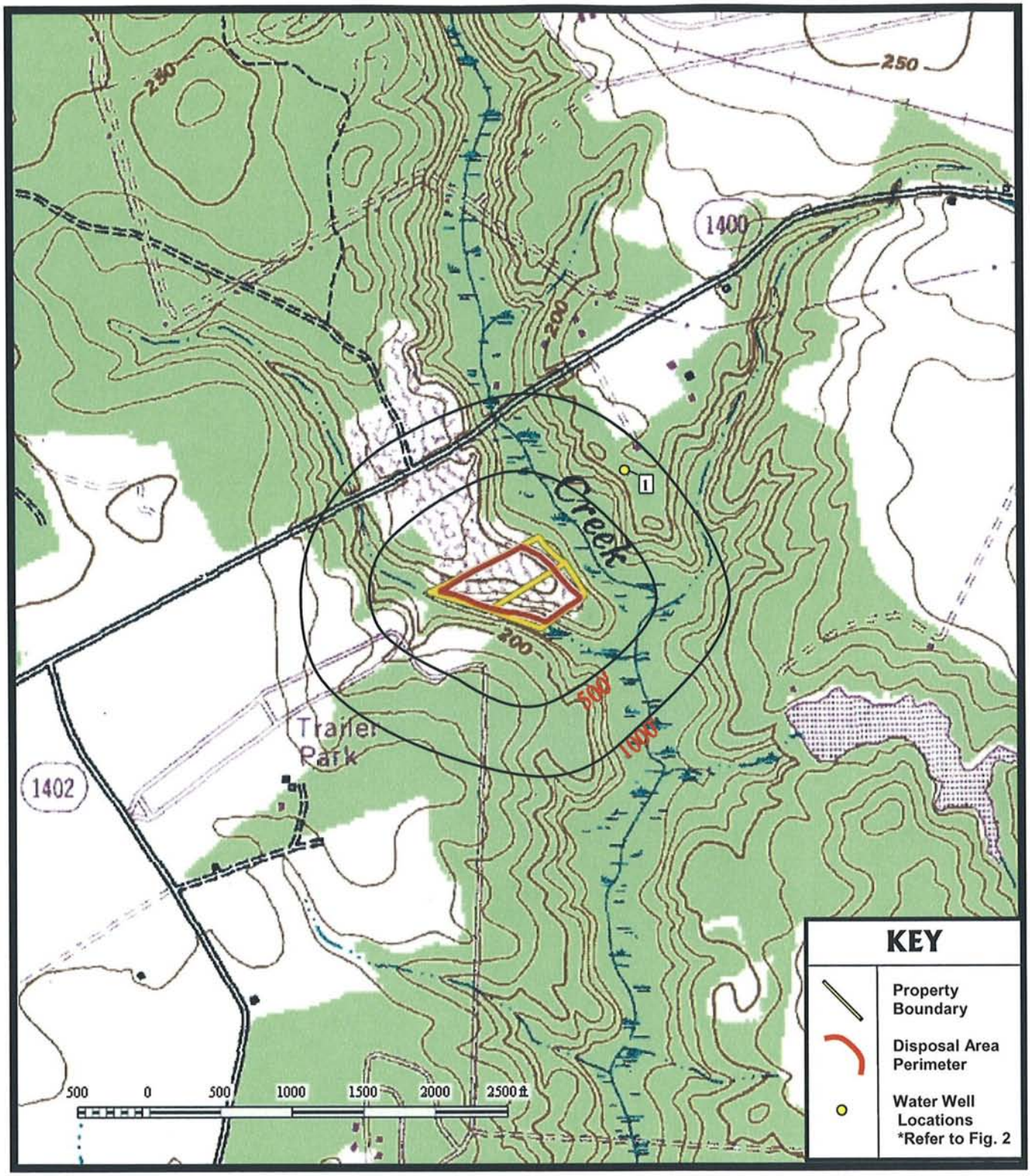


FIGURE 1

CUMBERLAND COUNTY
CLIFDALE QUAD

Prepared by:

MARSHALL MILLER & ASSOCIATES

NCUL103-01 08/2006

NCDENR/OLD UNLINED LANDFILL ASSESSMENTS
CUMBERLAND COUNTY LANDFILL -
BONES CREEK
NONCD0000733
CLIFFDALE, CUMBERLAND COUNTY, NORTH CAROLINA

SCALE 1" = 1,000'

SOURCE:
USGS 7.5' Cliffdale, NC Quadrangle 1948
PHOTOREVISED 1982

TOPOGRAPHIC MAP

NORTH CAROLINA
QUADRANGLE LOCATION

WATER WELL LEGEND

WATER WELL ID	PARCEL NO.	PROPERTY OWNER/ ADDRESS	DISTANCE (FEET)	DIRECTION
(1)	9487-87-9970	CLIFFDALE COMMUNITYCHURCH 7763 CLIFFDALE ROAD FAYETTEVILLE, NC 28314	761	NE

LEGEND

- EXISTING PROPERTY LINE
- DUMP PARCEL PROPERTY LINE
- CREEK
- DISPOSAL AREA

KEY MAP

GRAPHIC SCALE

400' 0' 400'

SCALE 1" = 400'

Marshall Miller and Associates
Geology, Environmental Sciences & Engineering, Geophysics
Bluefield, VA · Lexington, KY · Raleigh, NC
Richmond, VA · Charleston, WV · Harrisburg, PA

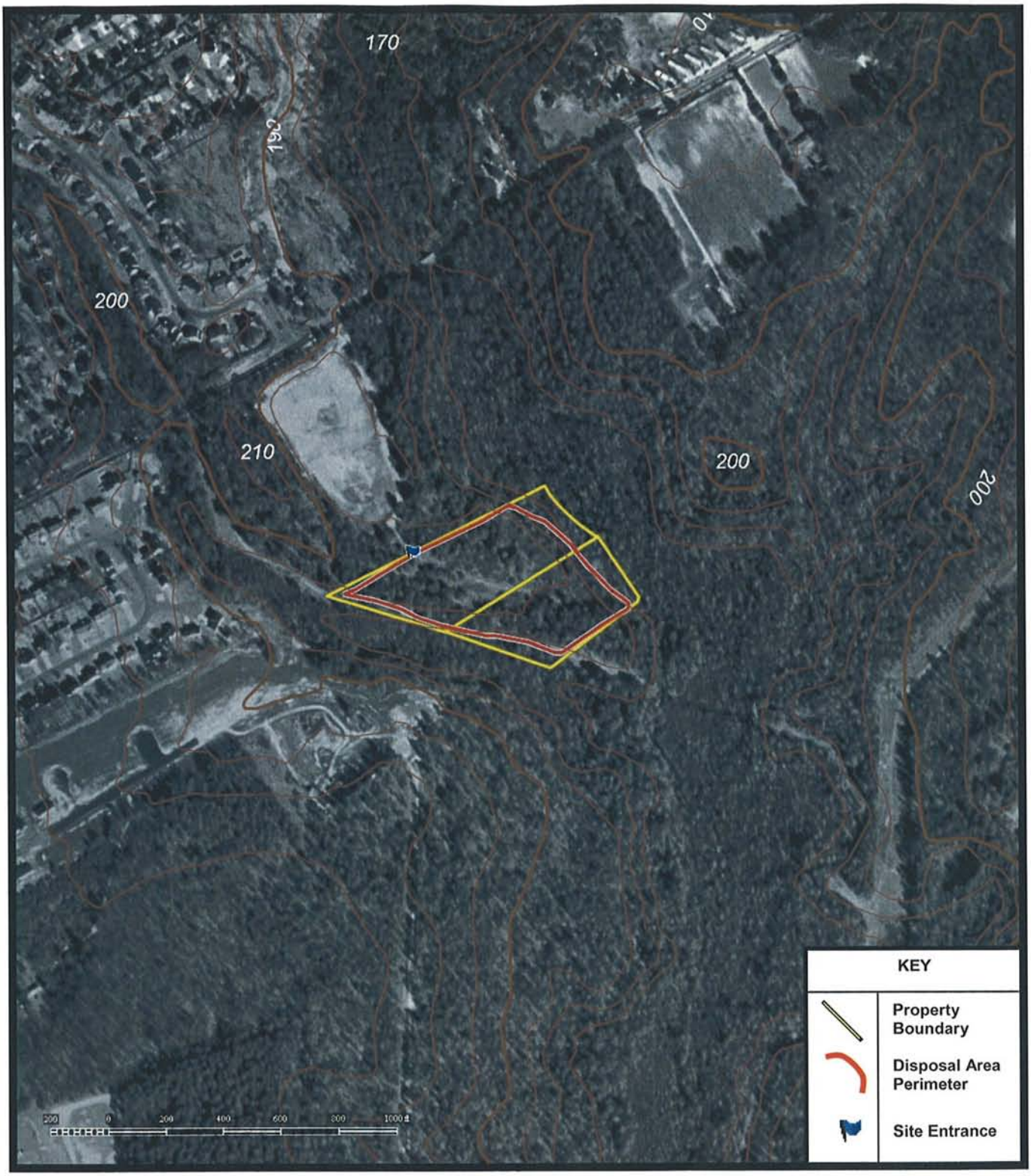
Prepared By: MARSHALL MILLER & ASSOCIATES

No.	Date	Revision

DESIGNED:	SD
DRAWN:	WLG
CHECKED:	DW
DATE:	08/01/2006
SCALE:	1" = 400'
PROJECT NO.:	NCUL103
FILE NO.:	BONES' CK.dwg

NCDENR/OLD UNLINED LANDFILLS
CUMBERLAND CO. LANDFILL–BONES CREEK
NONCD0000733
CLIFFDALE, CUMBERLAND COUNTY, N.C.
PROPERTY/WATER WELL LOCATION MAP

FIGURE 2



Contour Interval = 10 feet

FIGURE 3

NCDENR/OLD UNLINED LANDFILL ASSESSMENTS
CUMBERLAND COUNTY LANDFILL -
BONES CREEK
NONCD0000733
CLIFFDALE, CUMBERLAND COUNTY, NORTH CAROLINA

SCALE 1" = 500'

VICINITY MAP

Prepared by:

MARSHALL MILLER & ASSOCIATES

NCUL103-01 08/2006

SOURCE:
- USGS Digital Orthophoto Quarter Quadrangles – Fayetteville, NC 1999
- Topographic data from NCDOT GIS Unit

CUMBERLAND COUNTY
CLIFDALE QUAD

NORTH CAROLINA
QUADRANGLE LOCATION

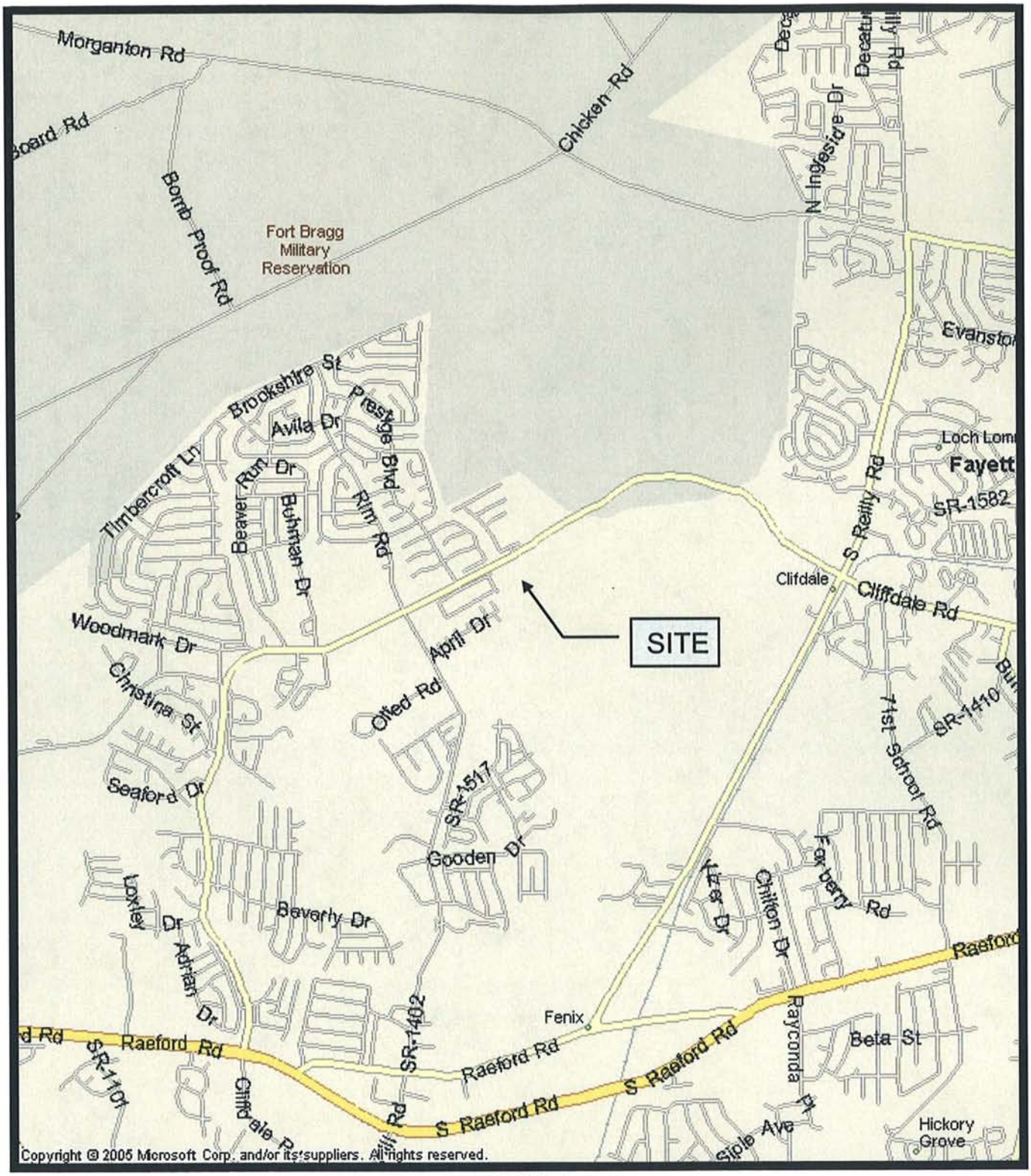


FIGURE 4

CUMBERLAND COUNTY
CLIFDALE QUAD

NCDENR/OLD UNLINED LANDFILL ASSESSMENTS
CUMBERLAND COUNTY LANDFILL -
BONES CREEK
NONCD0000733
CLIFFDALE, CUMBERLAND COUNTY, NORTH CAROLINA

APPROXIMATE SCALE 1" = 3300'

NORTH CAROLINA
QUADRANGLE LOCATION

Prepared by:

MARSHALL MILLER & ASSOCIATES

NCUL103-01 08/2006

SOURCE:
Microsoft Streets & Trips 2006

SITE LOCATION MAP

TABLES

TABLE 1
Tabulated GPS Coordinates
Cumberland County Landfill - Bones Creek
NONCD0000733
Cumberland County

Table	1
Project No.	NCUL103-01
Date	8/16/2006
Page No.	1

GPS Waypoint Description	NAD 83 State Plane Coordinates (Meters)		WGS 84	
	State Plane X	State Plane Y	Latitude	Longitude
Entrance, Tires	606087.73	145380.19	35° 03′ 38.0"	−79° 02′ 16.7"
Old Truck, Debris	606132.89	145422.66	35° 03′ 38.6"	−79° 02′ 16.3"
General Area of Debris	606142.84	145440.96	35° 03′ 39.4"	−79° 02′ 16.9"
General Area of Debris	606142.84	145440.96	35° 03′ 39.9"	−79° 02′ 16.4"
General Area of Debris	606047.32	145382.98	35° 03′ 38.1"	−79° 02′ 20.2"
Berm	606056.62	145353.25	35° 03′ 37.2"	−79° 02′ 19.9"
Old Tank	606194.73	145357.41	35° 03′ 36.9"	−79° 02′ 19.6"
Metal Debris	606200.45	145346.98	35° 03′ 37.2"	−79° 02′ 14.5"
Standing Water	606211.02	145317.58	35° 03′ 36.9"	−79° 02′ 14.2"
Small Berm	606230.09	145344.09	35° 03′ 36.0"	−79° 02′ 13.8"
Perimeter Point	606 069.20	145 417.97	35° 03′ 39.2"	−79° 02′ 19.4"
Perimeter Point	606 106.39	145 436.71	35° 03′ 39.8"	−79° 02′ 17.9"
Perimeter Point	606 140.55	145 452.51	35° 03′ 40.3"	−79° 02′ 16.6"
Perimeter Point	606 177.01	145 455.58	35° 03′ 40.4"	−79° 02′ 15.2"
Perimeter Point	606 205.16	145 425.94	35° 03′ 39.5"	−79° 02′ 14.0"
Perimeter Point	606 235.59	145 394.77	35° 03′ 38.5"	−79° 02′ 12.8"
Perimeter Point	606 261.47	145 358.45	35° 03′ 37.3"	−79° 02′ 11.8"
Perimeter Point	606 257.73	145 321.18	35° 03′ 36.1"	−79° 02′ 12.0"
Perimeter Point	606 218.26	145 304.73	35° 03′ 35.5"	−79° 02′ 13.5"
Perimeter Point	606 184.82	145 312.06	35° 03′ 35.8"	−79° 02′ 14.8"
Perimeter Point	606 148.35	145.318.70	35° 03′ 36.0"	−79° 02′ 16.3"
Perimeter Point	606 049.57	145 343.66	35° 03′ 36.8"	−79° 02′ 20.2"
Perimeter Point	606 044.91	145 404.98	35° 03′ 38.8"	−79° 02′ 20.4"
Perimeter Point	606 073.00	145 419.40	35° 03′ 39.3"	−79° 02′ 19.3"

MARSHALL MILLER & ASSOCIATES

APPENDIX A

Cumberland County Tax Department –
Deeds & Tax Sheets

Cumberland County North Carolina

REAL ESTATE TAX SHEET

EMAIL

Click for Property Info Sheet

| Tax Records | General Info | Phone Numbers | Real Estate | Personal | | County |

DATE: 08/31/2006 COUNTY OF CUMBERLAND TIME: 15:45:51

Parcel ID: 9487-87-5002- **TaxYear:** 2006 Go

Owner Name: HEPNER, GERDA Z LIFE ESTATE
Owner Address: 7579 DEERWOOD DR FAYETTEVILLE NC 28303-1928
Situs Address: 000000 ? N/A N/A
Taxing District: 1000 FAYETTEVILLE
Taxing Rate: 0.014100000
Tax Bill Number: 1911303 UNKNOWN
Old Parcel ID: 9487-86-5904-
Property Class: AGRICULTURAL & FOREST
Legal Description: 4.73 ACRES MONROE & PATE LD

	Total	Land	Building	Misc.
Appraised:	9,887.00	0.00	0.00	0.00
Assessed:	9,887.00	0.00	0.00	0.00
Exemption:	0.00			
Taxable:	9,887.00			

Tax Year: 2006	Applied	Paid	Owed
Tax:	139.41	0.00	139.41
Sass:	0.00	0.00	0.00
Fees:	0.00	0.00	0.00
Interest:	0.00	0.00	0.00
Total:	139.41	0.00	139.41

Interest/Discount data is not current - please call for up-to-date amount (910-678-7507)

ADDED BILL EXISTS - NUMBER UNKNOWN

Receipt #	Receipt Type	Payment Date	Paid Amount

Authority	Description	Orig Amount
CNTY	COUNTY WIDE	87.01
FAYET	FAYETTEVILLE	52.40

Click for Property Info Sheet

Personal Property Search for HEPNER, GERDA Z LIFE ESTATE Go

Disclaimer:
The public information contained herein is furnished as a public service by the Cumberland County Treasurer's Office. The Cumberland County Treasurer's Office makes **no warranties**, either expressed or implied, concerning the accuracy, completeness, reliability, or suitability of the information for any other particular use. Furthermore, the Cumberland County Treasurer's Office assumes **no liability** associated with the use or misuse of said information.

1096724

BOOK 2822 PAGE 81

Excise Tax .00 | Recording Time, Book and Page

Tax Lot No. ..... Parcel Identifier No. .....
Verified by ..... County on the ..... day of ....., 19.....
by .....

Mail after recording to .. Ms. Katie M. Gallup
1452 Keswick Drive, Fayetteville, NC 28304

This instrument was prepared by Lloyd K. Swaringen, Aty.

Brief description for the Index

NORTH CAROLINA GENERAL WARRANTY DEED

THIS DEED made this 15th day of May, 19 81, by and between

GRANTOR	GRANTEE
Myrtle P. Monroe, widow	Katie M. Gallup 1452 Keswick Drive Fayetteville, NC 28304

Enter in appropriate block for each party: name, address, and, if appropriate, character of entity, e.g. corporation or partnership.

The designation Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine or neuter as required by context.

WITNESSETH, that the Grantor, for a valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto the Grantee in fee simple, all that certain lot or parcel of land situated in the City of ....., Seventy-First Township, Cumberland County, North Carolina and more particularly described as follows:

BEGINNING at a point in the Southern line of the original 10.5 acre tract of which this is a part, said point also being the Southeast corner of a 7.35 acre tract conveyed to Harry D. Martin and wife, Ethel Martin by deed recorded in Book of Deeds 1021, Page 467, Cumberland County Registry, and runs thence as the Northern line of said 7.35 acres, North 69 degrees 17 minutes West 379.17 feet to a point, said point being the Northeast corner of the 7.35 acre tract, thence with the Northern line of the original 10.5 acre tract of which this is a part, North 62 degrees 50 minutes East 625.47 feet to a stake on the West bank of Bones Creek, thence down the Run of Bones Creek, South 30 degrees 45 minutes East 253.56 feet to a concrete monument on the West bank of said Creek, said monument also being a corner of the W. P. Saunders Estate, thence with the Southern line of the original tract of which this is a part, and the line of the Saunders Estate, South 58 degrees 40 minutes West 388.08 feet to the point of beginning. Containing 3.15 acres, and being a part of the second tract in a deed to Myrtle P. Monroe, dated 20 June, 1962, and recorded in Book of Deeds 932, Page 254, Cumberland County Registry.

N.C. Bar Assoc. Form No. 3 © 1976, Revised 1977.

2822
0082

BOOK 2822 PAGE 82

The property hereinabove described was acquired by Grantor by instrument recorded in .....

.....

A map showing the above described property is recorded in Plat Book ..... page .....

TO HAVE AND TO HOLD the aforesaid lot or parcel of land and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

And the Grantor covenants with the Grantee, that Grantor is seized of the premises in fee simple, has the right to convey the same in fee simple, that title is marketable and free and clear of all encumbrances, and that Grantor will warrant and defend the title against the lawful claims of all persons whomsoever except for the exceptions hereinafter stated. Title to the property hereinabove described is subject to the following exceptions:

IN WITNESS WHEREOF, the Grantor has hereunto set his hand and seal, or if corporate, has caused this instrument to be signed in its corporate name by its duly authorized officers and its seal to be hereunto affixed by authority of its Board of Directors, the day and year first above written.

..... (Corporate Name)

By: .....

..... President

ATTEST:

.....

..... Secretary (Corporate Seal)

USE BLACK INK ONLY

Myrtle P. Monroe (SEAL)
Myrtle P. Monroe

..... (SEAL)

..... (SEAL)

..... (SEAL)

SEAL-STAMP — BERTIE N. PIERPONT NOTARY PUBLIC CUMBERLAND CO.

Use Black Ink

NORTH CAROLINA, Cumberland County.

I, a Notary Public of the County and State aforesaid, certify that .....

Myrtle P. Monroe Grantor,

personally appeared before me this day and acknowledged the execution of the foregoing instrument. Witness my hand and official stamp or seal, this 15th day of May, 19 81

My commission expires: 3/21/84 Bertie N. Pierpont Notary Public

SEAL-STAMP

Use Black Ink

NORTH CAROLINA, ...County.

I, a Notary Public of the County and State aforesaid, certify that .....

personally came before me this day and acknowledged that .... he is ..... Secretary of ..... a North Carolina corporation, and that by authority duly given and as the act of the corporation, the foregoing instrument was signed in its name by its ..... President, sealed with its corporate seal and attested by ..... as its ..... Secretary. Witness my hand and official stamp or seal, this .....day of ....., 19.....

My commission expires: ..... Notary Public

NORTH CAROLINA, CUMBERLAND COUNTY

The foregoing or annexed certificate of Bertie N. Pierpont Notary Public/Notaries Public is/are certified to be correct.

This instrument was presented for registration and recorded in this Office at Book 2822 Page 82

This 27 day of May, 19 81 at 4:05 O'clock P M.

By ..... Deputy Register of Deeds

Marion Clark
Register of Deeds

NO REVENUE

76

5.00

6492
0626

BK6492PG626

RECEIVED
4-16-2004 AM 11:11:31
J. LEE WARREN JR.
REGISTER OF DEEDS
CUMBERLAND CO., N.C.

17894

0.00
Excise Tax

Recording Time, Book and Page

Mail After Recording To: John Blackwell

This Instrument Prepared by John Blackwell, Jr.

NORTH CAROLINA

DEED RESERVING LIFE ESTATE

CUMBERLAND COUNTY

THIS DEED, made this 14th day of ~~December~~ April 2004, by GERDA Z. HEPNER unmarried, herein called Grantor, of Cumberland County, North Carolina, to GREGORY L. HEPNER, herein called Grantee, of Cumberland County:

WITNESSETH:

That the Grantor, for a valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto the Grantee in fee simple, but subject to the life estate herein reserved, his heirs, successors and assigns, certain land, the same lying and being in the County of Cumberland, State of North Carolina, and more particularly described as follows:

See attached Schedule "A"

The Grantor does hereby reserve a life estate in the above described tracts of land for herself.

TO HAVE AND TO HOLD, the aforesaid land and all privileges and appurtenances thereto belonging, to the said Grantee, his heirs and assigns, to his only use and behoove forever, but subject always to the life estates herein reserved by Grantor and conveyed by Grantor.

And the said Grantor covenants that they are seized of said premises in fee, and has the right to convey the same in fee simple, that the same are free and clear from all encumbrances, and that she will warrant and defend the said title to the same against the lawful claims of all persons whomsoever.

20

Wherever used herein, the singular shall include the plural, the plural the singular, and the use of any gender shall be applicable to all genders as the context may require.

IN TESTIMONY WHEREOF, the said Grantor has hereunto set her hand and seal the day and year first above written.

X Gerda Z. Hepner (SEAL)
GERDA Z. HEPNER

NORTH CAROLINA

SAMPSON COUNTY

I, Christy L. Owens, a Notary Public of said County and State, do hereby certify that GERDA Z. HEPNER personally appeared before me this day and acknowledged the due execution of the foregoing.

Witness my hand and notarial seal, this the 14 day of ~~December 2005.~~ April 2006

CHRISTY L. OWENS NOTARY PUBLIC SAMPSON COUNTY, N.C.

Christy L. Owens
NOTARY PUBLIC

My commission expires: 4-30-2008

RECORD OF POOR QUALITY
DUE TO CONDITION OF
ORIGINAL DOCUMENT

The foregoing Certificate(s) of Christy L Owens

is/are certified to be correct. This instrument and this certificate are duly registered at the date and time and in the Book and Page shown on the first page hereof.

J. LEE WARREN, JR. REGISTER OF DEEDS FOR CUMBERLAND COUNTY,

By Pethonia Achols Deputy/Assistant - Register of Deeds

TRACT 1

Being all of Lot 17, Deerwood Subdivision, as per plat of same duly recorded in Plat Book 34, Page 30, of the Cumberland County Registry.

TRACT 2

Adjoining the Howard Culbreth land on the North, Bone Creek on the East, Margin of Pate Road on the west. BEGINNING at a concrete marker on the West side of the run of Bone Creek, Howard Culbreth's Southeast corner, and runs with the Culbreth line South 67 degrees 02 minutes West 2,384 feet (a fence on the line) to a concrete marker; thence South 56 degrees 44 minutes West 1,074 feet to the West margin of Pate Road, concrete marker, thence south 28 degrees 15 minutes East 379.5 feet with the margin of said Road to a concrete marker in the Center line of a 60 foot road right-of-way; thence as the center line of said 60 foot right-of-way, and with a line for Myrtle P. Monroe's trace, North 59 degrees 14 minutes East 1,070.6 feet to a concrete marker; thence continuing with the center line of said 60 foot road right-of-way and with Lacy Alexander Pate's line and beyond, North 62 degrees 50 minutes East 2,425 feet to the run of Bone Creek; thence with the West side of the run Northwardly to the beginning, containing 29.2 acres, less all subsequent conveyances of this tract, leaving 6.6 acres, more or less, to be conveyed by this deed.

APPENDIX B

Records of Communication

COPY

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

June 28, 2006

Ms. Gerda Hepner
7579 Deerwood Drive
Fayetteville, North Carolina 28303

Re: ***Request for Site Access***
Cumberland County Landfill – Bones Creek
Bones Creek Dump (State Site ID Number NONCD0000733)
Cumberland County, North Carolina

Dear Ms. Hepner:

On behalf of the North Carolina Department of Environment and Natural Resources (NCDENR), Marshall Miller & Associates, Inc. (MM&A) is submitting this information to you in advance of requesting access to inspect your property. The purpose of the requested inspection is explained in a copy of a letter from NCDENR, which is attached. We will contact you within approximately one week from the date of this letter to answer any questions that you may have. You may also contact the NCDENR representatives listed on the attached letter with any questions.

We look forward to talking with you.

Sincerely,
MARSHALL MILLER & ASSOCIATES, INC.

Andrew D. Waggener
Program Manager

cc: Bruce Lefler, NCDENR

Attachment

5825 Triangle Drive / Raleigh, NC 27617 / Tel: (919) 786-1414 / Fax: (919) 786-1418
Web Site – http:/ / www.mma1.com • E-mail – corp@mma1.com
Branch Offices in Charleston, WV / Harrisburg, PA / Kansas City, KS / Kingsport, TN / Lexington, KY / Raleigh, NC / Richmond, VA

(1)

NCDENR

Hurricane Recovery Act of 2005
State of North Carolina
State Contract N06009
Marshall Miller & Associates, Inc. Contract No. N06010S

Communication Log

Landfill Name: Cumberland County LDFL - Bones Creek **ID:** NONCD0000733

Contact Name: City of Fayetteville - Public Works Commission Phone: (910) 483-1401

Address: P.O. Box 1089 Fayetteville, NC 28302
Street Address — Alternate Number

Fayetteville NC 28302
City — State — Zip Code

Date	Time	Notes
6-14-06	2:00	Spoke to secretary about locating Bone Creek Investments, LLC. Due to the Privacy of Inf. Act, she could not release corporate contact info. She referred me to: www.secretary.state.nc.us Thomas O. Hollinshed 910-864-8787 605 South Reilly Road Ste 1 Fayetteville, NC 28314 (Contact Inc. ↓ 910-864-8787 fax: 919-864-4444)
6-28-06	9:00	910-497-8673 James, Alice, Thomas Linda referred me to the above # at a storage container site and apt. complex, lm for Tom.

Owner of property: ☐

MARSHALL MILLER & ASSOCIATES

(2)

Hurricane Recovery Act of 2005
State of North Carolina
State Contract N06009
Marshall Miller & Associates, Inc. Contract No. N06010S

Communication Log

Landfill Name: Cumberland County Landfill - Beaver Creek **ID:** NONCD0000733

Contact Name: Tom Hollinshed Phone: 910 864-8789

Address: 608 South Reilly Rd.

Street Address | Alternate Number

FAYETTEVILLE | NC | 28302

City | State | Zip Code

Date	Time	Notes
6-28-06	9:30	Tom returned my call: stated that his property was fully developed with a gas tanks and storage units. His property was mined for sand. The site in question is ~~across the street~~ and owned South of Thomas's property by: GERDA HEPNER Access is by Reis Rd. and it is bounded by creeks on 3 sides. This property was also mined for sand with drag lines and backfilled with trash.
6-28-06	1:30	Called Tom to discuss Monticello Canoe, property location and ownership. He informed me that the property is owned by Garda Hepner and is South of his property.

Owner of property: ☐

MARSHALL MILLER & ASSOCIATES

Hurricane Recovery Act of 2005
State of North Carolina
State Contract N06009
Marshall Miller & Associates, Inc. Contract No. N06010S

3.

Communication Log

Landfill Name: Cumberland County Landfill - Bonnie Creek **ID:** NONCD0000733

Contact Name: Gerda Hepner Phone: (910) 822-2825

Address: 7579 Deerwood Dr
Street Address

Alternate Number

Fayetteville NC 28303
City State Zip Code

Date	Time	Notes
7-7-06	9:00	Drew Waggoner received call from Gerda Hepner. She knew of the existence of the landfill on the property. The City of Fayetteville's Health Dept. inspected it and had a dry tea pit in 1985. The landfill consisted of tree stumps and debris. The apartments north of the land were built on the dump which provided material for DOT Gerda gave us permission to inspect her property.

Owner of property: ☐

MARSHALL MILLER & ASSOCIATES

NCDENR

Hurricane Recovery Act of 2005
State of North Carolina
State Contract N06009
Marshall Miller & Associates, Inc. Contract No. N06010S

4

Communication Log

Landfill Name: Cumberland County Landfill - Bone Creek **ID:** N0NC0000 0733

Contact Name: Tom Hollinshed et al Phone: (910) 864-8787

Address: Cliffdale Road
Street Address Alternate Number

Fayetteville NC 28300
City State Zip Code

Date	Time	Notes
7-18-06		called Thomas Hollinshed at Bone Creek Investments; they are on City Water: 9487-87-1412- 910-497-8673 (storage units)
7-18-06		called Cliffdale Community Church; they are using well water. 9487-87-9970- 910-860-3559
7-18-06		called Steven Gallop, they are using well water. 9487-97-6915- 910-482-4897
7-18-06		called Michael Benjamin. they are using City Water. 9487-77-6767- 910-868-2842
7-18-06		called Kenneth Payne; they are using City Water. 9487-76-4446 910-864-6122

Owner of property: ☐

MARSHALL MILLER & ASSOCIATES

(5)

NCDENR

Hurricane Recovery Act of 2005
State of North Carolina
State Contract N06009
Marshall Miller & Associates, Inc. Contract No. N06010S

Communication Log

Landfill Name: Cumberland County Landfill - Bones Creek **ID:** NONCD0000733

Contact Name: DANNY SOLES Phone: (910) 433-3685

Address: 227 FOUNTAINHEAD LANE
Street Address — Alternate Number

FAYETTEVILLE NC 28301
City — State — Zip Code

Date	Time	Notes
8-24-06	3:45	Spoke to Mr. Soles about Bones Creek; He stated that before the storage buildings were established there was a landfill there, and before the landfill there was a sand pit operation. He stated that the refuse placed in the area was mixed commercial, construction and residential debris.

Owner of property: ☐

MARSHALL MILLER & ASSOCIATES

(6)

Hurricane Recovery Act of 2005
State of North Carolina
State Contract N06009
Marshall Miller & Associates, Inc. Contract No. N06010S

Communication Log

Landfill Name: Cumberland County Landfill-Overlook **ID:** NONE3000073

Contact Name: Tom Hollingsead Phone: (910) 864-8382

Address: 605 S. Reilly Rd., Ste. 1
Street Address *Alternate Number*

Fayetteville NC 28314
City *State* *Zip Code*

Date	Time	Notes
8-28-06	9 a.m.	Spoke with MR. Hollingshead and he stated that landfill material was not used as fill for the apartment complex or storage unit furniture. He stated that the property was leased from the state and operated as a legal borrow pit. He stated that the right or eastern side of the property had a path in it which was used to fill in the west side of the property which had been mined. He said that approximately 90-80, 000 cy of fill had been moved from the unmined side of the property to fill in the mined side. He stated that some soil compaction test before he built on the property and that everything tested OK.

Owner of property: ☐

MARSHALL MILLER & ASSOCIATES

APPENDIX C

Site Inspection Photodocumentation

Marshall Miller & Associates, Inc.
NCDENR Old Unlined Landfill Photodocumentation

Site Name: Cumberland County Landfill-Bones Creek	**Site City/County: Cliffdale/Cumberland County**
Site ID No.: NONCD0000733	**Project Number: NCUL103-01**

PHOTO 1

Date: 7/11/2006

Description: Entrance to Site and Disposal Area immediately south of apartment complex and rental storage unit business. Unimproved dirt road is approximately 100 feet long.

PHOTO 2

Date: 7/11/2006

Description: Tires and surface litter consisting of glass and plastic bottles, 193 feet from entrance to Site.

Marshall Miller & Associates, Inc.
NCDENR Old Unlined Landfill Photodocumentation

Site Name: Cumberland County Landfill-Bones Creek	**Site City/County: Cliffdale/Cumberland County**
Site ID No.: NONCD0000733	**Project Number: NCUL103-01**

PHOTO 3

Date: 7/11/2006

Description:
Metal debris 190 feet from entrance of Site.

PHOTO 4

Date: 7/11/2006

Description:
Old tank, 194 feet from entrance of Site.

Marshall Miller & Associates, Inc.
NCDENR Old Unlined Landfill Photodocumentation

Site Name: Cumberland County Landfill-Bones Creek	**Site City/County: Clffdale/Cumberland County**
Site ID No.: NONCD0000733	**Project Number: NCUL103-01**

PHOTO 5

Date: 7/11/2006

Description: Plastic construction debris, 202 feet from entrance of Site.

PHOTO 6

Date: 7/11/2006

Description: Plastic construction debris, 210 feet from entrance of Site.

Marshall Miller & Associates, Inc.
NCDENR Old Unlined Landfill Photodocumentation

Site Name: Cumberland County Landfill-Bones Creek	**Site City/County: Cliffdale/Cumberland County**
Site ID No.: NONCD0000733	**Project Number: NCUL103-01**

PHOTO 7

Date: 7/11/2006

Description: Vegetation growth in central disposal area.

PHOTO 8

Date: 7/11/2006

Description: Old pickup truck and debris, 194 feet from entrance of Site.

Marshall Miller & Associates, Inc.
NCDENR Old Unlined Landfill Photodocumentation

Site Name: Cumberland County Landfill-Bones Creek	**Site City/County: Cliffdale/Cumberland County**
Site ID No.: NONCD0000733	**Project Number: NCUL103-01**

PHOTO 9

Date: 7/11/2006

Description:
Old tin shack, 210 feet from entrance of Site.

PHOTO 10

Date: 7/11/2006

Description:
Ceramic floor tiles and plastic container, 185 feet from entrance of Site.

Marshall Miller & Associates, Inc.
NCDENR Old Unlined Landfill Photodocumentation

Site Name: Cumberland County Landfill-Bones Creek	**Site City/County: Cliffdale/Cumberland County**
Site ID No.: NONCD0000733	**Project Number: NCUL103-01**

PHOTO 11

Date: 7/11/2006

Description: Construction debris, 190 feet from entrance of Site.

PHOTO 12

Date: 7/11/2006

Description: Metal debris, 210 feet from entrance of Site.

Marshall Miller & Associates, Inc.
NCDENR Old Unlined Landfill Photodocumentation

Site Name: Cumberland County Landfill-Bones Creek	**Site City/County: Cumberland County**
Site ID No.: NONCD0000733	**Project Number: NCUL103-01**

PHOTO 13

Date: 7/11/2006

Description: Standing water in tire rut, 193 feet from entrance of Site.

APPENDIX D

Field Reconnaissance Sheet

MARSHALL MILLER & ASSOCIATES
NCDENR OLD UNLINED LANDFILL AUDIT CHECK LIST

Audit Performed By: Hilton Frasco + Jake Hodges Date: 7-19-06

1.0 Site Information

ID NUMBER: NONCD0000733
SITE NAME: Cumberland County Landfill - Rones Creek
LOCATION: South of Intersection of Hillside Road + Town Creek Drive East of Rim Road directly behind Apartment Complex + Rental Storage Units.
COUNTY: Cumberland

LANDFILL SIZE: 4.4 acres
PROPERTY (SITE) SIZE: 7.88 acres
DATE OPENED: Between 1963-1966
DATE CLOSED: 1975

OWNER: Gordon Warner
OWNER CONTACT: Gordon Warner
OWNER ADDRESS: 7599 Dogwood Drive
Fayetteville, NC 28303
OWNER TELEPHONE NUMBER:
Date of Contact: 7-9-04 Permission to Go On Site: ↘ Yes ____ No
Permission Granted by: ____ Phone ____ Writing
If permission is not granted the MM&A PM must contact the DWM.

TAX PARCEL No./PIN: 9487-87-5003-
DEED REFERENCE: BK: 06492 PG: 00626

COORDINATES (at point of entrance to Site):
STATE PLANE COORDINATES (SPC); NAD83, Meters
X: 606087.73E ; Y: 145380.19N
DEGREES, MINUTES, SECONDS (DMS); WGS 84
Lat.: N 35° 03' 38" ; Long.: W 79° 2' 18.7"

2.0 Areas of Note

Vehicle access requires passing through two locked gates in the storage rental area of the apartment complex.

3.0 Site Location Research Summary

3.1 Site Summary

3.1.1 Site Ownership and Dates of Operation

(Though this information is included in section 1.0, it may be useful to make notes regarding deeds in this area)

3.1.2 Site Location

Nearest Intersection and Distance: Cliffdale Road and Town Creek Drive 819 feet north of site

Distance from Center of Town: 9.12 miles from the Fayetteville City Hall

Other Pertinent Location Info.: Directly behind apartment complex and rental storage buildings.

3.1.3 General Site Description

Site Shape: trapezoid

Location of Disposal Area Relative to Site: central to and a majority of Site.

Topography of Site: haphazard, Rough terrain

3.2 Site Conditions

3.2.1 On-Site Structures

Buildings on Site: ___ Yes ✓ No

Number of Buildings: – Type of Building: –

Building Use: – Type of Building: –

Construction: – Square Footage: –

Stories: – Approx. Dimensions: –

Approx. Age: –

Building Exterior Condition: –

Building Interior Condition: –

Odors: –

Spillage: –

House Keeping: –

Potential Asbestos: –

Environmental Concerns Associated with Building:

–

3.2.2 Current Site Usage (e.g. residential, church, school, agricultural, business, other)

NONE

3.2.3 On-Site Water Supply Wells and Intakes

NONE

(If no well houses are observed, note the presence/absence of fire hydrants on the site)

3.2.4 Surface Water Features (e.g. streams, lakes, ponds, wetlands, rivers, sinkholes)

ONE small pool of stagnant water in a low pit

3.2.5 Disposal Area (Brief Description)

Heavily Wooded and overgrown with mature trees, oaks, pines, etc. Topography is undulation and raised relative to surrounding area.

Ground cover consists of briars, vines and stands and grasses.

3.2.6 Disposal Area Conditions

Completely overgrown with difficult foot access.

Road access is good for 100' on dirt road.

Scattered household debris consisting of stove, tanks, refrigerators, 1 wrecked pickup truck and a demolished corrugated tin shack litter the landfill area.

UST's: NONE

AST's: NONE

Drum Storage: NONE

Erosion: NONE

Slope Failure: NONE

Leechate Seeps: NONE

Vegetation: EVERGREENS

Settling: NONE

Odor: Heavy fetid rotting odor of organic debris in NE corner of site.

Stained Soil: NONE

3.2.7 Evidence of Human Activity

Automobile Traffic: Not Line Recent

Industrial Activity: NONE

Burning: NONE

Dumping: old debris

Other (Describe): Surface litter consisting of glass and plastic bottles near entrance of site.

3.2.8 Potential Landfill Gas Migration Pathways

Underground Utilities: NONE

Building Foundations: NONE

Abandoned Wells: NONE

Other:

3.2.9 Physical Barriers

Earthen Berms: noted on E, W and S. Fencing: BARRED wire on W perimeter

Other: _____

3.2.10 Other Pertinent Data (Include coordinates of any environmental concern)

Disposal Area may extend South into next property.

3.3 Vicinity Conditions

3.3.1 Structures Located within 50 Feet of the Disposal Area

Buildings Within 50' of Disposal Area: ___ Yes _V_ No

Number of Buildings: – Type of Building: –

Building Use: – Type of Building: _____

Construction: – Square Footage: –

Stories: – Approx. Dimensions: –

Approx. Age: –

Building Exterior Condition: –

Building Interior Condition: –

Odors: –

Spillage: –

House Keeping: —

Potential Asbestos: —

Environmental Concerns Associated with Building:

—

3.3.2 Water Supply Wells and Intakes

NONE

3.3.3 Current Land Usage

Properties: Type/Use:

North: Apartment complex and rental storage units.

South: Undeveloped.

East: Undeveloped.

West: Undeveloped.

Environmental Concerns Related to Adjacent or Surrounding Properties:

None.

3.3.4 Surface Water Features (e.g. streams, lakes, ponds, wetlands, rivers, sinkholes)

stagnant water in tire rut towards south perimeter.

Summary of On-Site Environmental Concerns:

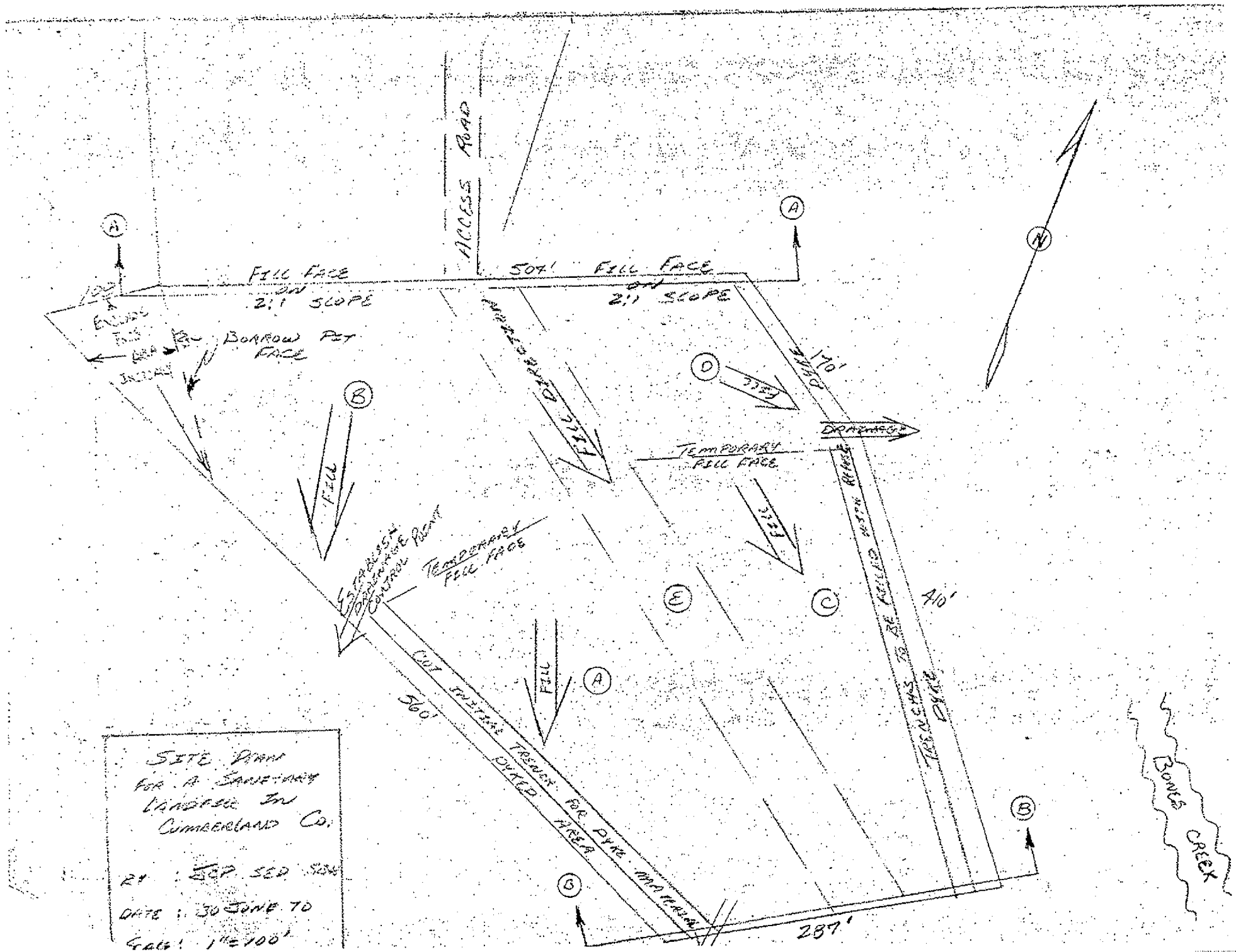
None.

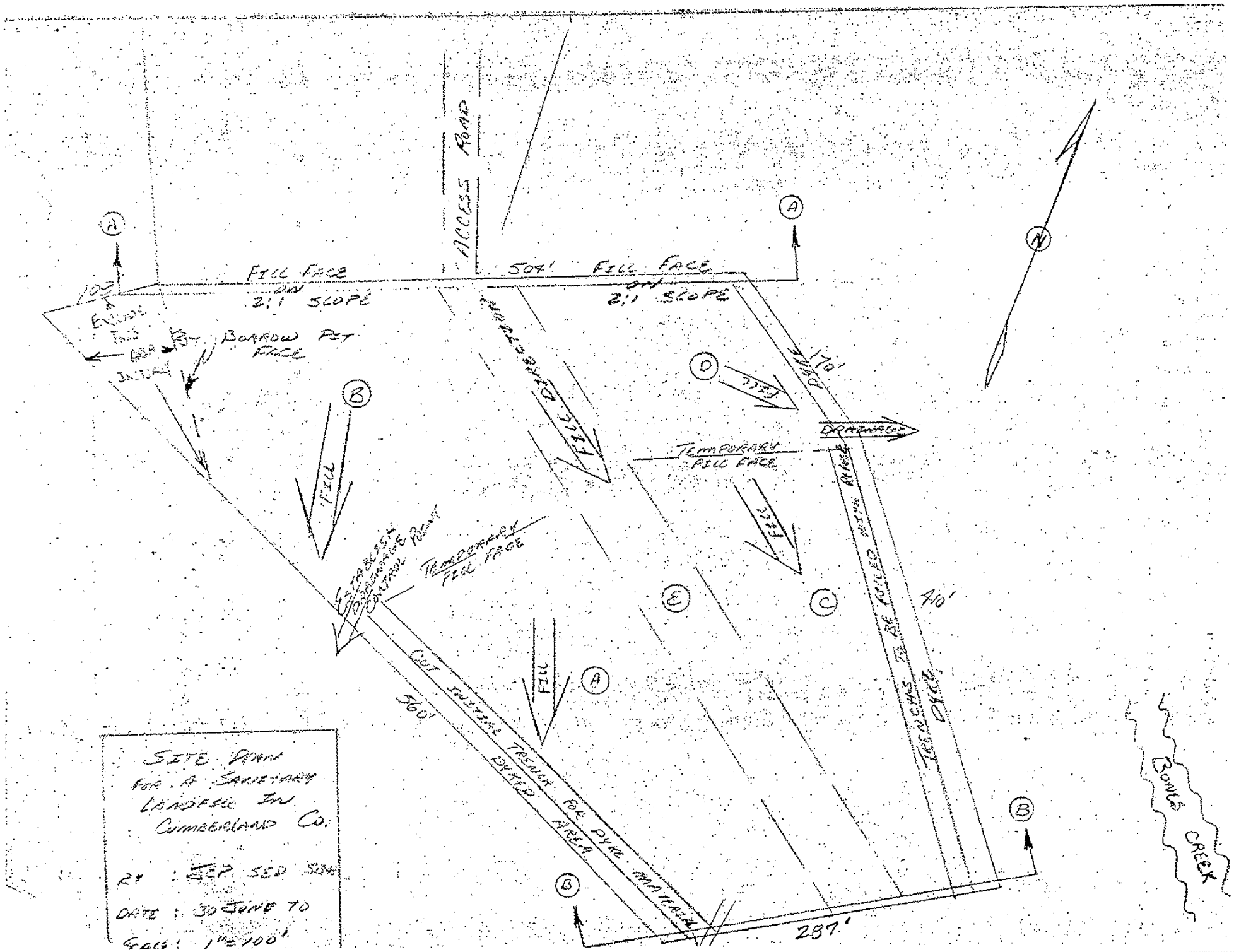
Recommended Actions To Be Taken:

NONE.

APPENDIX E

Site Plan for a Sanitary Landfill in Cumberland County


ACCESS ROAD
FILL FACE ON 2:1 SLOPE
504'
FILL FACE ON 2:1 SLOPE
BORROW PIT FACE
FILL DIRECTION
170'
DRAINAGE
TEMPORARY FILL FACE
FILL
ESTABLISH DRAINAGE CONTROL POINT
TEMPORARY FILL FACE
410'
TRENCHES TO BE FILLED WITH REFUSE
DYKE
CUT INITIAL TRENCH FOR DYKE MATERIAL
560'
DYKED AREA
287'
BONES CREEK
SITE PLAN FOR A SANITARY LANDFILL IN CUMBERLAND CO.
DATE : 30 JUNE 70
SCALE : 1" = 100'


ACCESS ROAD
FILL FACE ON 2:1 SLOPE
504'
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FILL DIRECTION
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DRAINAGE
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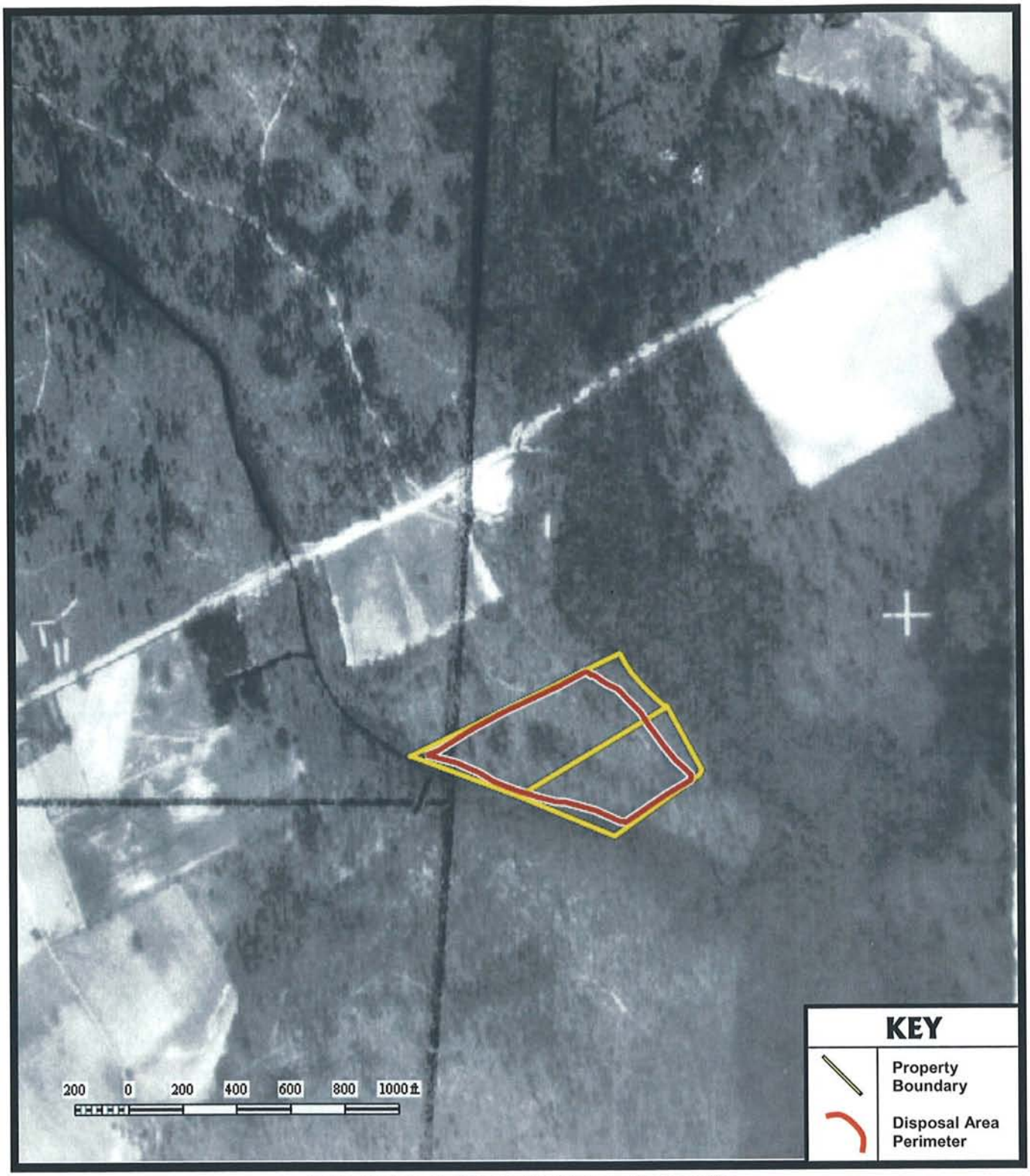
CUT INITIAL TRENCH FOR DYKE MATERIAL
DYKED AREA
TRENCHES TO BE FILLED WITH DYKE
DYKE
170'
410'
560'
287'
BONES CREEK
SITE PLAN FOR A SANITARY LANDFILL IN CUMBERLAND CO.
DATE : 30 JUNE 70
SCALE : 1"=100'

APPENDIX F

Aerial Photographs -

Cumberland County DSWC, 1950
Cumberland County DSWC, 1959
Cumberland County DSWC, 1966
Cumberland County DSWC, 1972
Cumberland County DSWC, 1981
NCDOT, 1991



AERIAL PHOTOGRAPH 1950

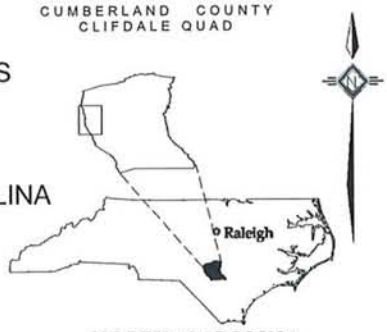
Prepared by:
MARSHALL MILLER & ASSOCIATES
NCUL103-01 08/2006

SOURCE:
Cumberland County Department of Soil and Water Conservation, Frame (B6) AOC-4E-72

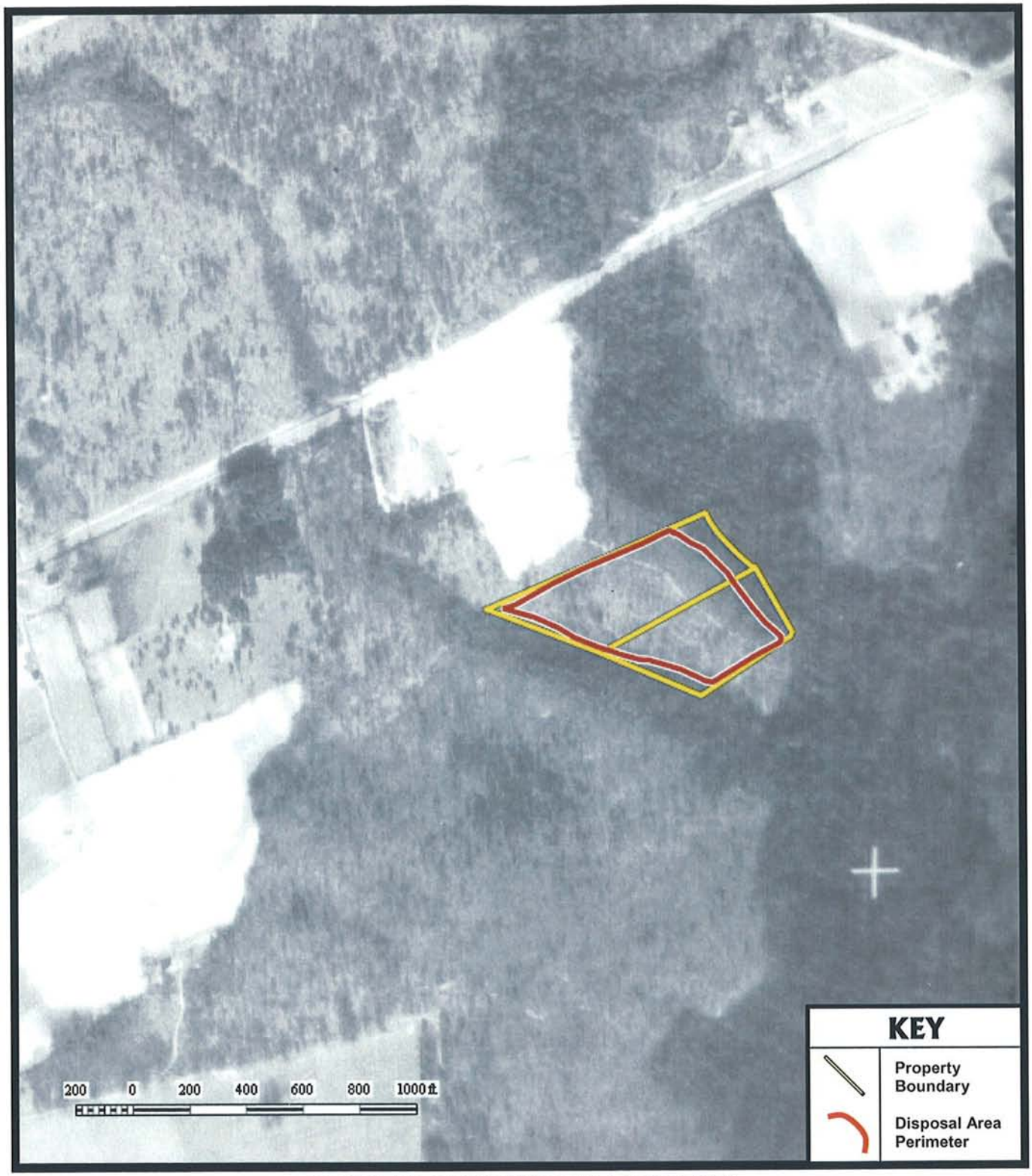
NCDENR/OLD UNLINED LANDFILL ASSESSMENTS
CUMBERLAND COUNTY LANDFILL -
BONES CREEK
NONCD0000733
CLIFFDALE, CUMBERLAND COUNTY, NORTH CAROLINA

SCALE 1" = 500'

CUMBERLAND COUNTY
CLIFDALE QUAD



NORTH CAROLINA
QUADRANGLE LOCATION



AERIAL PHOTOGRAPH 1959

Prepared by:

MARSHALL MILLER & ASSOCIATES

NCUL103-01 08/2006

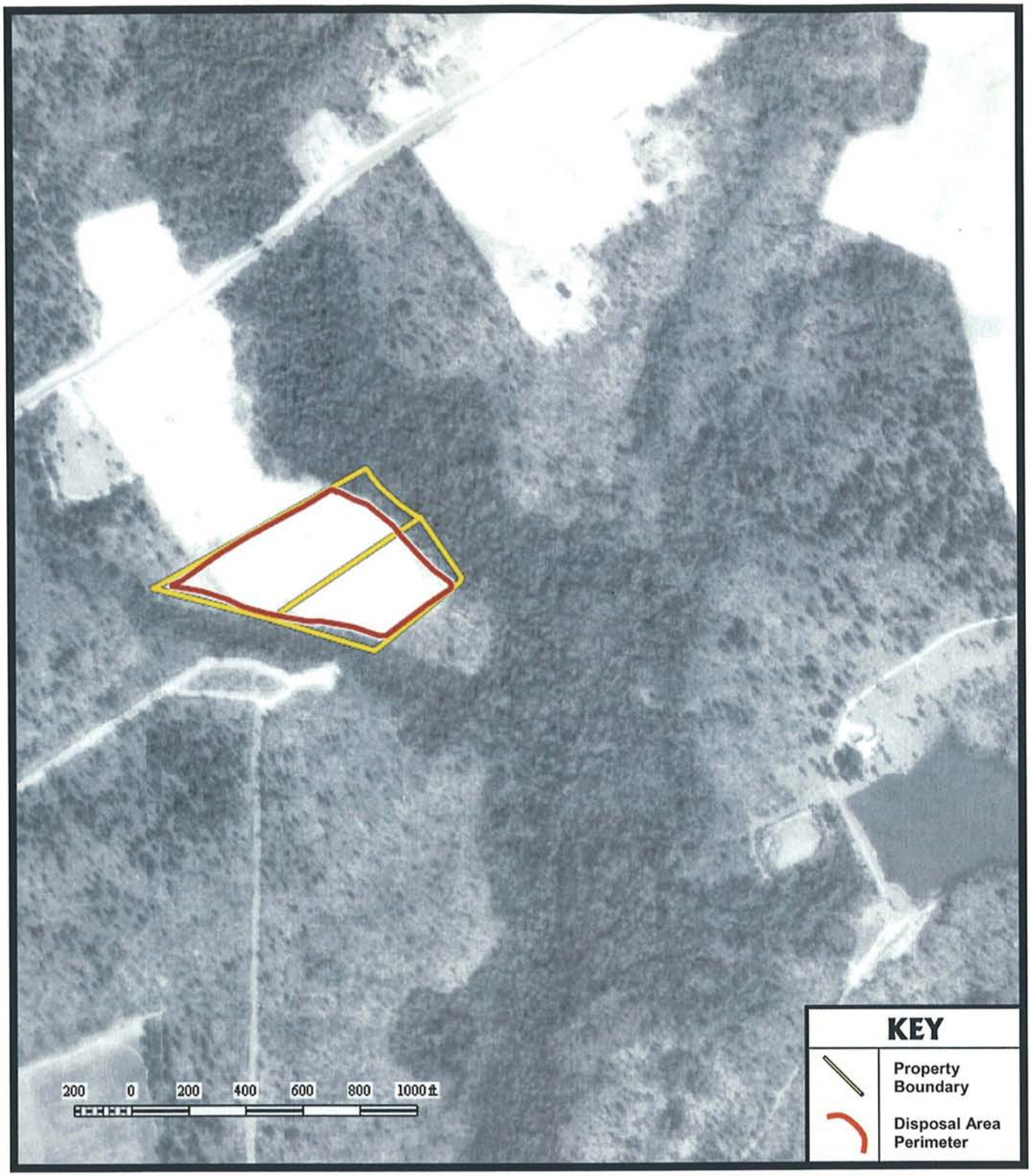
SOURCE:
Cumberland County Department of Soil and Water Conservation , Frame (B6) AOC-5AA-65

NCDENR/OLD UNLINED LANDFILL ASSESSMENTS
CUMBERLAND COUNTY LANDFILL -
BONES CREEK
NONCD0000733
CLIFFDALE, CUMBERLAND COUNTY, NORTH CAROLINA

SCALE 1" = 500'

CUMBERLAND COUNTY
CLIFDALE QUAD

NORTH CAROLINA
QUADRANGLE LOCATION



AERIAL PHOTOGRAPH 1966

Prepared by:
MARSHALL MILLER & ASSOCIATES
NCUL103-01 08/2006

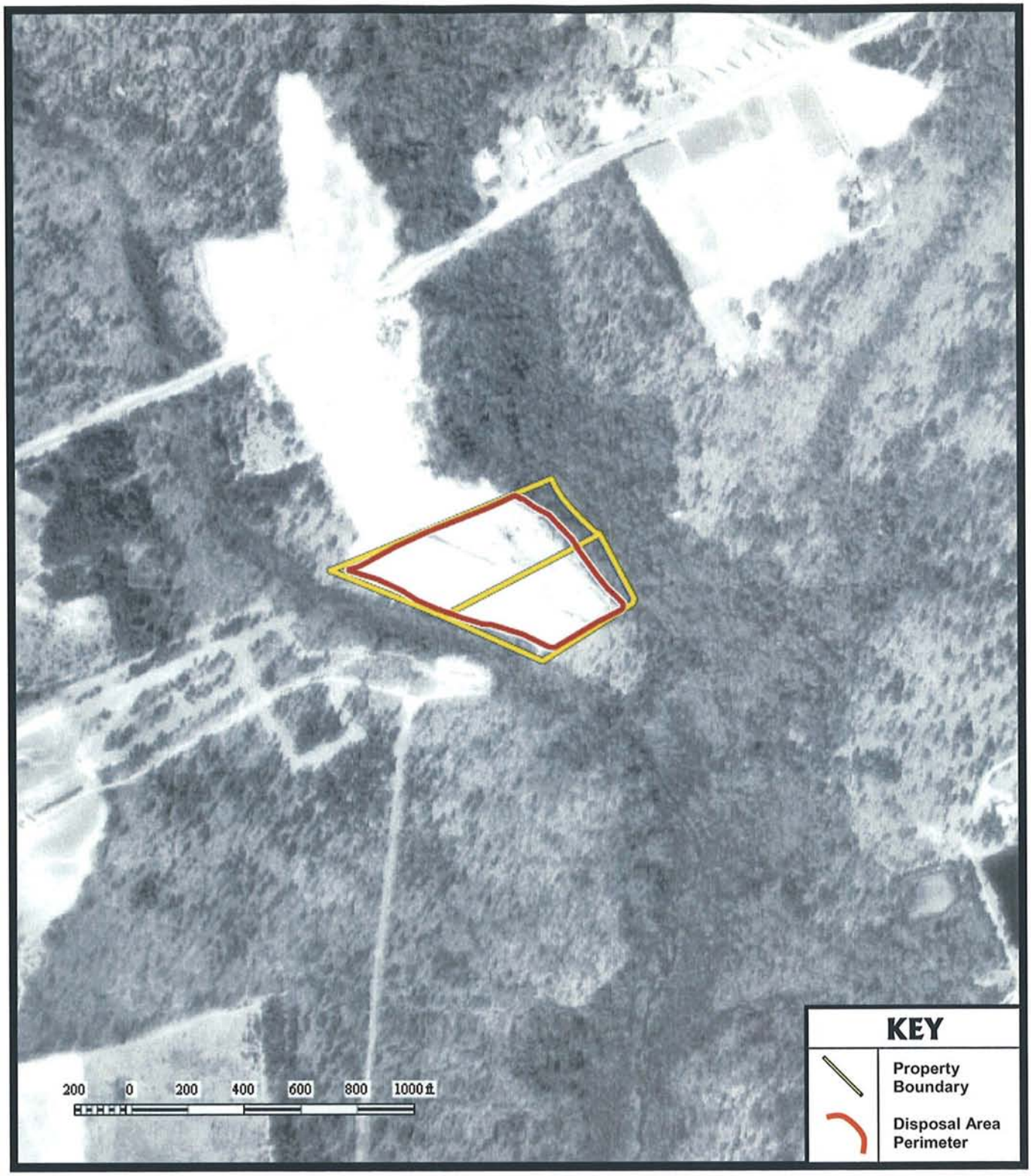
SOURCE:
Cumberland County Department of Soil and Water Conservation , Frame (C5) AOC-2GG-179

NCDENR/OLD UNLINED LANDFILL ASSESSMENTS
CUMBERLAND COUNTY LANDFILL -
BONES CREEK
NONCD0000733
CLIFFDALE, CUMBERLAND COUNTY, NORTH CAROLINA

SCALE 1" = 500'

CUMBERLAND COUNTY
CLIFDALE QUAD

NORTH CAROLINA
QUADRANGLE LOCATION



AERIAL PHOTOGRAPH 1972

Prepared by:

MARSHALL MILLER & ASSOCIATES

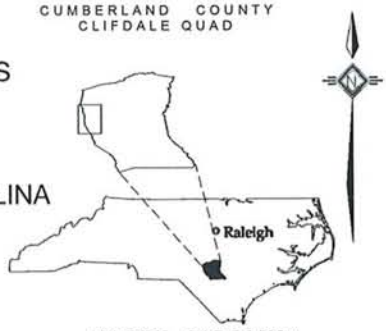
NCUL103-01 08/2006

SOURCE:
Cumberland County Department of Soil and Water Conservation , Frame (C6) 37051 172-85

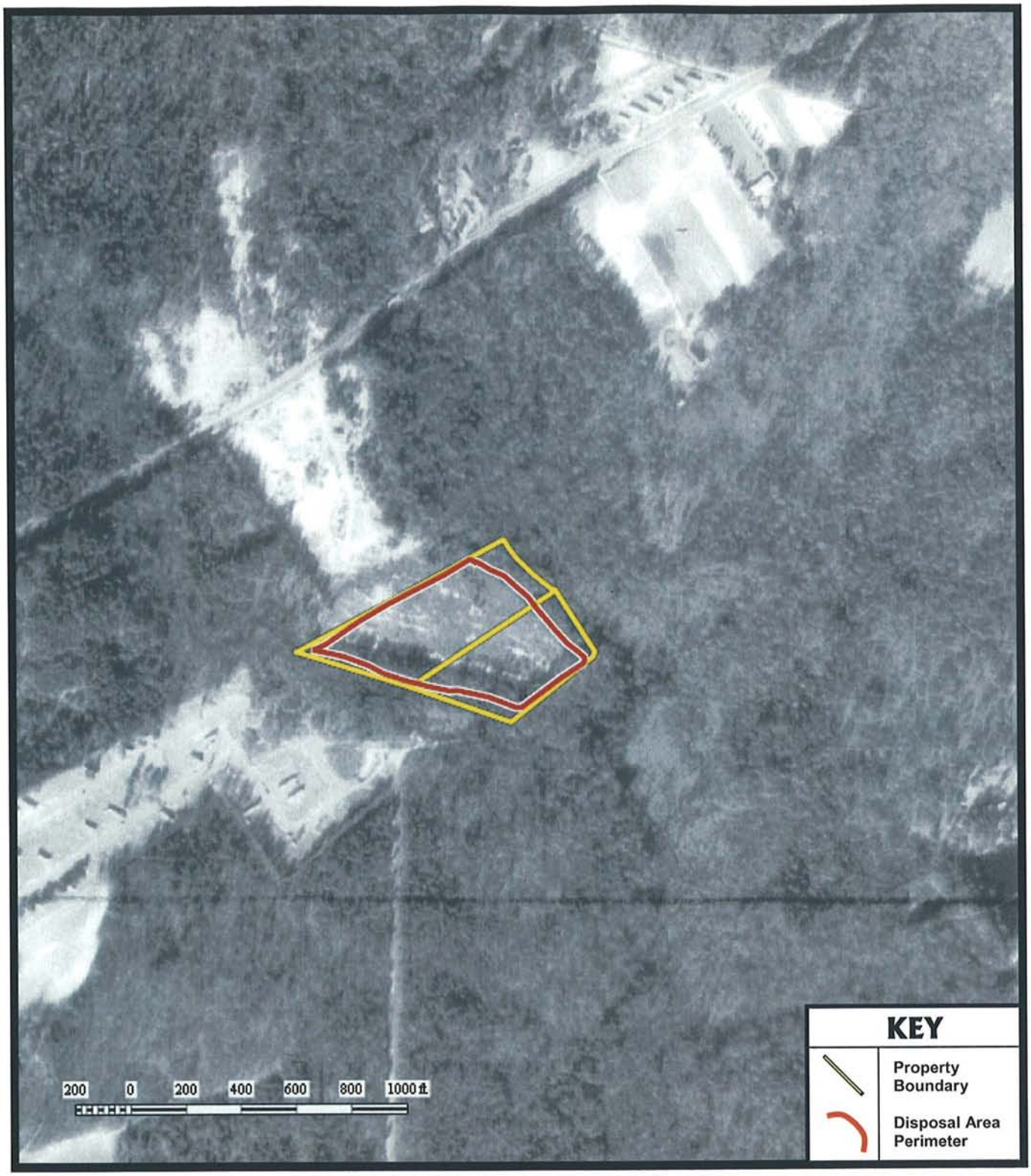
NCDENR/OLD UNLINED LANDFILL ASSESSMENTS
CUMBERLAND COUNTY LANDFILL -
BONES CREEK
NONCD0000733
CLIFFDALE, CUMBERLAND COUNTY, NORTH CAROLINA

SCALE 1" = 500'

CUMBERLAND COUNTY
CLIFDALE QUAD



NORTH CAROLINA
QUADRANGLE LOCATION



AERIAL PHOTOGRAPH 1981

Prepared by:
MARSHALL MILLER & ASSOCIATES
NCUL103-01 08/2006

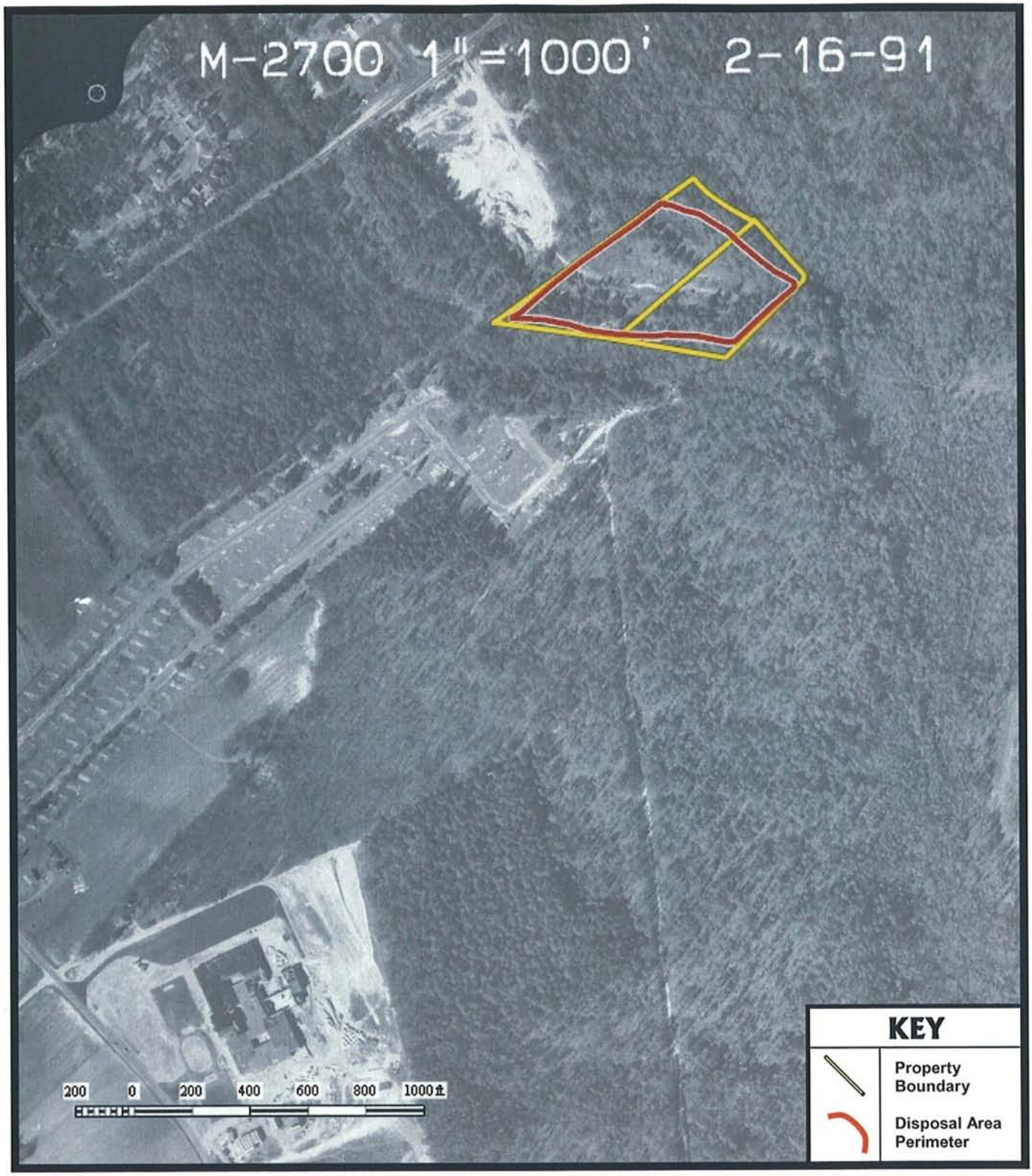
SOURCE:
Cumberland County Department of Soil and Water Conservation, Frame (A3)

NCDENR/OLD UNLINED LANDFILL ASSESSMENTS
CUMBERLAND COUNTY LANDFILL -
BONES CREEK
NONCD0000733
CLIFFDALE, CUMBERLAND COUNTY, NORTH CAROLINA

SCALE 1" = 500'

CUMBERLAND COUNTY
CLIFDALE QUAD

NORTH CAROLINA
QUADRANGLE LOCATION



AERIAL PHOTOGRAPH 1991

CUMBERLAND COUNTY
CLIFDALE QUAD

NORTH CAROLINA
QUADRANGLE LOCATION

Prepared by:

MARSHALL MILLER & ASSOCIATES

NCUL103-01 08/2006

SOURCE:
NCDOT, Mission 2700, Frame (RC-110)

NCDENR/OLD UNLINED LANDFILL ASSESSMENTS
CUMBERLAND COUNTY LANDFILL -
BONES CREEK
NONCD0000733
CLIFFDALE, CUMBERLAND COUNTY, NORTH CAROLINA

SCALE 1" = 500'

PHASE I ESA

Atlantic Shores
Environmental Services, Ltd.

November 18, 2021

Mr. Keith Walker
Cliffmore Park Apartments, LLC
PO Box 2400
Beaufort, North Carolina 28451

Reference: Phase I Environmental Site Assessment
Proposed Cliffmore Park Apartments
5133 Identity Lane
Fayetteville, North Carolina
ASE Project No. 1523

Dear Mr. Walker:

Atlantic Shores Environmental Services, Ltd. (ASE) is pleased to provide you with the results of our Phase I Environmental Site Assessment (ESA) for the referenced property. Our services were provided in general accordance with ASE proposal number 1418-P dated August 17, 2021, and generally meet the requirements of ASTM E 1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process and EPA Standards and Practices for All Appropriate Inquiries contained in 40 CFR Part 312.

If there are questions regarding this report, or a need for further information, please contact us at 910-371-5980.

Respectfully submitted,
ATLANTIC SHORES ENVIRONMENTAL SERVICES, LTD.

Cheryl J. Moody, PE, REM
Principal Scientist

Daniel J. Schiwinger
Staff Scientist

PHASE I ENVIRONMENTAL SITE ASSESSMENT
PROPOSED CLIFFMORE PARK APARTMENTS
5133 IDENTITY LANE
FAYETTEVILLE, NORTH CAROLINA

ASE PROJECT NO. 1523

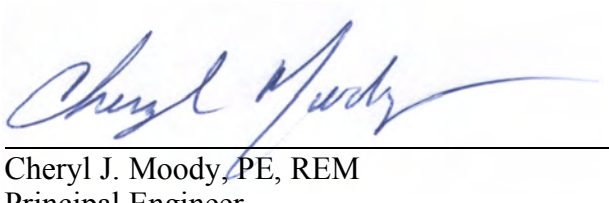
FOR

CLIFFMORE PARK APARTMENTS, LLC

NOVEMBER 18, 2021

ENVIRONMENTAL PROFESSIONAL STATEMENT

We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in § 312.10 of 40 CFR 312. We have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. We have developed and performed all the appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312.



November 18, 2021

Cheryl J. Moody, PE, REM — Date
Principal Engineer

Atlantic Shores
Environmental Services, Ltd.

PROJECT

Phase I Environmental Site Assessment
Proposed Cliffmore Park Apartments
5133 Identity Lane
Fayetteville, Cumberland County, North Carolina

CLIENT

Cliffmore Park Apartments, LLC
PO Box 2400
Beaufort, North Carolina 28451

SUBMITTED BY

Atlantic Shores Environmental Services, Ltd.
175-1 Venture Drive
Leland, North Carolina 28451

PROJECT No. 1523

DATE

November 18, 2021

PHASE I ENVIRONMENTAL SITE ASSESSMENT
PROPOSED CLIFFMORE PARK APARTMENTS
FAYETTEVILLE, CUMBERLAND COUNTY, NORTH CAROLINA
ASE PROJECT NO. 1523

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1.0 EXECUTIVE SUMMARY

The site referred to as "subject property", "site" or "the property" consists of an approximate 4.1-acre tract of land owned by East Point Homes, LLC. The site is primarily vacant vegetated land located south of Identity Lane. However, an abandoned residence is located on the southwestern side of the site. Based on aerial photographs, this structure has been present on the site for less than three years. Based on visual observations, it appears that this structure was moved to the site from another property. The age of the structure is not known. The site was used as an agricultural field as far back as 1938. It is likely that herbicides and pesticides were used on the site during its agricultural history. However, herbicides and pesticides applied in accordance with the manufacturers approved applications rates is considered a de minimus condition. Agricultural activities appeared to cease at the site sometime between 1983 and 1993 when the site became increasingly vegetated. By 2006 the site was cleared of vegetation and a water feature was present on the southern portion of the site for a short time in 2010. This corresponds to the construction of the southern adjoining Parestone Apartments and is likely a temporary storm water control for the construction.

The adjacent properties to the west and south consist of multifamily and single-family residential uses. Before the residential construction, the land was primarily used for farming or vacant land. Property north of the site was formerly agricultural or residential. Currently a gas station is located off of the northwestern corner of the site. However, groundwater flow in the areas of the site is expected to floe in a westerly direction. Therefore, releases from this gas station are not likely to impact the subject site.

The Standard Environmental Records (SER) search was prepared by Environmental Data Resources, Inc. (EDR). The site was not identified on the EDR report. However, some off-site properties were identified within their respective search distances from the site. Based on the distances from the site, topographic gradient, and/or regulatory information, the listed properties are not likely to impact the subject site.

As documented and qualified by this report, this assessment has not revealed evidence of RECs in connection with the subject site.

As documented and qualified by this report, this assessment has revealed the following business environmental risks in connection with the subject site.

The age of the on-site structure is not known. Asbestos containing building material may be present in the structure.

This Executive Summary is an integral part of the Phase I Environmental Site Assessment report. ASE recommends that the report be read in its entirety.

2.0 INTRODUCTION

2.1 Purpose and Reason for Performing Phase I ESA

The purpose of the ESA was to:

- Evaluate the probability of impact to the surface water, groundwater and/or soils within the site boundaries through a review of regulatory information and a reconnaissance of the subject site and vicinity;
- Evaluate historical land usage to identify previous conditions that could potentially impact the environmental condition of the site;
- Evaluate the potential for on-site and off-site contamination;
- Provide a professional opinion regarding the potential for environmental impact at the site, and a list of Recognized Environmental Conditions (REC); and
- Conduct all appropriate inquiry as defined by ASTM E 1527-13.

The reason for the ESA is to qualify for landowner liability protections to CERCLA liability.

2.2 Scope of Services

ASE was contracted by Cliffmore Park Apartments, LLC to perform a Phase I ESA for the property located at 5133 Identity Lane in Fayetteville, Cumberland County, North Carolina. The site consisted of approximate 4.1-acre parcel and is identified as a portion of Cumberland County Parcel ID is 9487-45-3559 in the online records. According to the County GIS information this parcel is owned by Ethel Pate. However, a warranty deed dated January 11, 2021 (Book 10994, page 79) indicates that the property is now owned by East Point Homes, LLC.

The site location and site boundary are illustrated on the attached figures included in Appendix I. The Environmental Assessment was conducted in substantial accordance with ASTM E 1527-13 and EPA Standards and Practices for All Appropriate Inquiries. The Environmental Assessment was conducted under the supervision or responsible charge of an individual that qualifies as an environmental professional, as defined in 40 CFR §312.10.

2.3 Limitations

The ESA involved a reconnaissance of the site and contiguous properties and a review of regulatory and historical information in general accordance with the ASTM standard and EPA regulation referenced herein. No non-scope considerations or additional issues such as

asbestos, radon, wetlands or mold were investigated, unless otherwise described in Section 7.0 of this report.
The conclusions and/or recommendations presented within this report are based upon a reasonable level of investigation within normal bounds and standards of professional practice for a site in this particular geographic and geologic setting. The intent of this assessment is to identify the potential for recognized environmental conditions in connection with the site; however, no environmental site assessment can completely eliminate uncertainty regarding the potential for recognized environmental conditions in connection with the site. The findings of this ESA are not intended to serve as an audit for health and safety compliance issues pertaining to improvements or activities at the site. ASE is not liable for the discovery or elimination of hazards that may potentially cause damage, accidents or injury.

All observations, conclusions and/or recommendations pertaining to environmental conditions at the subject site are necessarily limited to conditions observed, and or materials reviewed at the time this study was undertaken. It was not the purpose of this study to determine the actual presence, degree or extent of contamination, if any, at this site. This could require additional exploratory work, including sampling and laboratory analysis. No other warranty, expressed or implied, is made with regard to the conclusions and/or recommendations presented within this report. The property was heavily overgrown with thickets. Therefore, there are areas of the site that were not observed on the day of the site visit.

ASTM E-1527-13 defines a "recognized environmental condition" as: " the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment. De minimis conditions are not recognized environmental conditions."

ASTM E-1527-13 defines a "de minimis condition" as: "a condition that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies."

ASTM E-1527-13 defines "controlled recognized environmental condition" as: "a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."

ASTM E-1527-13 defines "historical recognized environmental condition" as: "a past release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the

property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls)."

ASTM E-1527-13 defines a "business environmental risk" as *"*a risk which can have a material environmental or environmentally-driven impact on the business associated with the current or planned use of a parcel of commercial real estate, not necessarily limited to those environmental issues required to be investigated in this practice"

This report is provided for the exclusive use for Cliffmore Park Apartments, LLC under the existing terms and conditions for this project under ASE proposal number 1418-P, dated August 17, 2021. This report is not intended to be used or relied upon in connection with other projects or by other unidentified third parties. The use of this report by any undesignated third party or parties will be at such party's sole risk and ASE disclaims liability for any such third party use or reliance.

3.0 SITE DESCRIPTION

3.1 Site Location and Legal Description

The site referred to as "subject property", "site" or "the property" consists of the land south of Identity Lane and consists of a portion of Cumberland County tax parcel 9487-45-3559. The site is located on the southeast corner of Enforcement Drive and Identity Lane.

ASE was not provided with a legal description of the site, however, the legal description within the deed was reviewed. The deeds are included in Appendix IV.

3.2 Physical Setting and Hydrogeology

As determined by the topographic (Figure 1), the site is generally flat and lies at an approximately elevation of 220 feet above the National Geodetic Vertical Datum (NGVD). The area topography slopes down to the west.

In general, shallow unconfined groundwater movement within the overlying soils is controlled largely by topographic gradients. Recharge occurs primarily by infiltration along higher elevations and typically discharges into streams or other surface water bodies. The elevation of the shallow water table is transient and can vary greatly with seasonal fluctuations in precipitation. Movement of groundwater under water table conditions is generally from higher to lower elevations. Therefore, groundwater in the vicinity of the site is generally expected to flow in a easterly direction. Actual site groundwater flow direction cannot be determined without site-specific groundwater information determined through the installation of groundwater monitoring wells.

The site is located in the Coastal Plain Physiographic Province. The Coastal Plain is characterized by flat land to gently rolling hills and valleys. Elevations range from sea level near the coast to approximately 600 feet in the Sand Hills of the Southern Inner Coastal Plain According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Map Number 3710948700J, effective on January 5, 2007, the subject site is located in Zone X. X Zones are areas of minimal flooding. A copy of the FIRMette map has been included in Appendix III.

3.3 Current Use and Description of the Site

The site consists of an approximate 4.1-acres of primarily vacant land that is currently zoned as Neighborhood Commercial by the City of Fayetteville. An abandoned residential structure is located on the southwestern corner of the site. Dense scrub vegetation including thickets are present over the majority of the site.

3.4 Current Uses of the Adjoining Properties

The site is located within the mixed-use portion of Fayetteville, North Carolina. Adjoining properties are a mixture of single-family residential, multi-family residential, and commercial properties. A more detailed description of the adjoining properties is included in Section 6.2 of this report.

4.0 USER PROVIDED INFORMATION

An ASTM User Questionnaire was completed Mr. Keith Walker.

4.1 Title Information

ASE was not provided with a chain-of-title for our review. If this information is provided at a later date, we will review it for evidence of environmental concerns and issue an addendum to this report if the review indicates a material difference in our findings.

4.2 Environmental Liens or Activity and Use Limitations

ASE was not provided with lien search from the client. However, ASE reviewed the current deed for the site and did not identify environmental liens or activity and use limitations. ASE also contracted Nationwide Environmental Title Research (NETR) to conduct a third party environmental lien search. According to NETR, neither liens nor activity and use limitations were identified for the site. A copy of the lien search has been attached in Appendix IV.

4.3 Specialized Knowledge

Specialized Knowledge is defined as: any specialized knowledge or experience that is material

to recognized environmental conditions in connection with the property. If the User is aware of this, it is the user's responsibility to communicate any such information to the environmental professional prior to the site reconnaissance.

The User did not provide ASE with specialized knowledge.

4.4 Commonly Known or Reasonably Ascertainable Information

Commonly known or reasonably ascertainable information is defined as: any commonly known or reasonably ascertainable information within the local community that is material to recognized environmental conditions in connection with the property. It is the User's responsibility to communicate any such information to the environmental professional prior to the site reconnaissance.

The User did not provide ASE with the any commonly known information.

4.5 Valuation Reduction for Environmental Issues

The User indicted that the purchase price is currently at market value.

4.6 Owner, Property Manager, and Occupant Information

Ms. Ethel Pate has owned the property for approximately 46 years.

The site is currently owned by East Point Homes, LLC. Mr. Keith Walker with East Point Homes , LLC is the property Manager. There are not currently occupants at the site.

4.7 Degree of Obviousness

ASE was not provided knowledge of obviousness indicators related to contamination of the property.

5.0 RECORDS REVIEW

5.1 Standard Environmental Record Sources

A Standard Environmental Records (SER) search was provided by Environmental Data Resources, Inc. (EDR). The SER search involves searching a series of databases for facilities that are located within a specified radius from the subject property. The ASTM standard specifies an approximate minimum search distance from the subject site for each database. Based on our knowledge of the subject property and the surrounding area, ASE attempts to verify and interpret this data. While this attempt at verification is made with due diligence, ASE cannot guarantee the accuracy of the record search beyond that of information provided by EDR. A copy of the information provided by EDR is included in Appendix III. Mapped

and unmapped properties identified by EDR that are not addressed below were field verified (to the extent possible) and not found to be within the approximate minimum search distance and are excluded from this ESA report. If the location of the property was not identified, it is included in the orphan sites section below. The following is a list of databases searched and the results obtained by EDR for each database.

National Priorities List (NPL)

The NPL is a subset of CERCLIS and identifies "superfund" sites that have had documented contamination incidents.

Neither the site nor properties located within one mile of the site were identified on the NPL.

Delisted NPL

The Delisted NPL identifies sites previously listed on the NPL where no further response is appropriate.

Neither the site nor properties located within one mile of the site were identified on the Delisted NPL.

Superfund Enterprise Management System (SEMS)

At the start of 2016 the U.S. EPA retired Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS), which contained data on potentially hazardous waste sites that have been reported to the U.S. EPA. CERCLIS contained sites that are either proposed to be or are on the National Priorities List and sites that are in the screening and assessment phase for possible inclusion on the NPL. In order stay in line with modern technology the U.S. EPA Created the Superfund Enterprise Management System (SEMS). Information contained within this database represents the same information that was stored within CERCLIS.

Neither the site nor properties located within one mile of the site were identified on the Superfund Enterprise Management System (SEMS).

SEMS ARCHIVE

SEMS-ARCHIVE tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP and was renamed to SEMS ARCHIVE by the EPA in 2015. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require federal Superfund action or NPL consideration.

Neither the site nor properties located within one mile of the site were identified on the SEMS archive database.

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers that have been subject to corrective action under RCRA.

Neither the site nor properties located within one mile of the site were identified on the CORRACTS database.

Resource Conservation and Recovery Information System (RCRIS)

RCRIS identifies facilities that generate, transport, treat, store or dispose of hazardous wastes as defined by the Resource Conservation and Recovery Act (RCRA). RCRA-TSD facilities treat, store or dispose of hazardous waste. Transporters are entities that move hazardous waste from the generator to a facility that can recycle, treat, store or dispose of the waste. NonGen are facilities which presently do not generate hazardous waste. They could have historically been listed as a generator. Conditionally exempt small quantity generators generate less than 100 kilograms of hazardous waste, or less than 1 kilogram of acutely hazardous waste, per month. Small quantity generators (SQGs) generate between 100 and 1,000 kilograms of hazardous waste per month. Large quantity generators (LQGs) generate more than 1,000 kilograms of hazardous waste or more than 1 kilogram of acutely hazardous waste per month.

Neither the site nor properties within one mile of the site were listed as a RCRA TSD facility.

Federal RCRA Generators List

The site was not identified on the RCRA database. Two properties within one quarter mile of the site were identified on the generators list One facility is listed as a RCRA-SQG (small quantity generator) and one facility is listed as an RCRA – VSQG (very small quantity generator). An SQG generates between 100-1,000 kg per month of waste. A VSQG generates less than 100 kg of waste per month.

Neither the site nor properties within one mile of the site were listed as a Federal RCRA Generators List.

Federal Engineering Controls (EC) List

The Federal EC List identifies engineering controls including various forms of caps, building foundations, liners, and treatment methods used to eliminate pathways for regulated substances to enter environmental media or affect human health.

Engineering controls were not identified for the site.

Federal Institutional Controls (IC) List

The Federal IC List identifies institutional controls including administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants.

Institutional controls were not identified for the site.

Emergency Response Notification System (ERNS)

The ERNS List is a national database that stores and records information on reported releases of hazardous substances, including petroleum products.

The site is not identified on the ERNS List.

State Hazardous Substance Disposal Site (HSDS)

The State HSDS records are locations of uncontrolled and unregulated hazardous waste sites. The records include sites on the NPL as well as those on the state priority list

Neither the site nor properties within one mile of the site were listed on the HSDS database.

State Hazardous Waste Sites (SHWS) Inventory

State hazardous waste site records are the states' equivalent to SEMS (formerly CERCLIS). These sites may or may not be already listed on the federal SEMS database.

Neither the site nor properties within one mile of the site were identified on the SHWS list.

Solid Waste Facility (SWF)/Landfill (LF) List

The North Carolina Solid Waste Section maintains a list of permitted solid waste facilities. These facilities may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Neither the site nor properties located within one mile of the site were identified on the landfill database.

Old Landfill Inventory (OLI)

The OLI is maintained by the North Carolina Department of Environmental Quality. The inventory does not include No Further Action sites and other agency lead sites.

Neither the site nor properties located within one mile of the site were identified on the OLI.

Aboveground Storage Tank (AST) Database

The AST Database is a list maintained by the North Carolina Department of Environmental Quality of facilities with ASTs that have a capacity greater than 21,000-gallons.

Neither the site nor properties located within one mile of the site were identified on the AST database.

Leaking Aboveground Storage Tank (LAST) List

The LAST List is a record of reported leaking aboveground storage tank incidents. The LAST List may also identify properties that have had soil and/or groundwater contamination associated with documented releases from above ground storage tanks, surface spills and other sources.

Neither the site nor properties within one mile of the site were identified on the LAST list.

Registered Underground Storage Tank (UST) List

The Registered UST List inventories underground storage tanks registered with the North Carolina Department of Environmental Quality, Division of Waste Management. This list does not identify USTs that have not been registered with the North Carolina Department of Environmental Quality, such as home heating oil tanks and other unregulated tanks. The site was not identified on the UST list

The site was not identified on the UST list. Two (2) UST properties were identified within a quarter mile of the site.

- **Alco Food Store:** 8385 Cliffdale Road – This property is located adjacent to the site to the northwest. Three tanks are registered on this property. One is a 20,000-gallon gasoline tank installed on December 31, 2010, and still in use. Another tank is a 10,000-gallon diesel double-walled fiberglass tank installed on April 4, 2011, and is still in use. The third tank is a 10,000-gallon diesel tank installed on December 31, 2010, that is still in use. Releases from this property would not be expected to impact the subject site based on a westerly groundwater flow direction in the site area.
- **The Pantry 3031 (DBA Quick Stop):** 8215 Cliffdale Road **-** This property is located approximately 930 feet east, northeast of the subject property and is currently occupied

by A & A New and Used Tire Shop. Three (3) 12,000-gallon single-walled fiberglass gasoline tanks installed on February 2, 1987, were removed on April 12, 2005. Based on information discussed in Section 5.3 of this report (DEQ File Review) releases from this property would not likely be expected to impact the subject site based on the distance relative to the site.

Leaking Underground Storage Tank (LUST) List

The LUST List is a record of reported leaking underground storage tank incidents. The LUST List may also identify properties that have had soil and/or groundwater contamination associated with documented releases from above ground storage tanks, surface spills and other sources.

The site was not listed on the LUST list. Two (2) LUSTs were identified within one-half mile of the site.

- **The Pantry 3031 (DBA Quick Stop):** 8215 Cliffdale Road **-** This property is located approximately 930 feet east, northeast of the subject property. A leak was identified on April 29, 1998, that reached soil and groundwater. Soil samples collected on the property did not exceed the residential maximum soil contaminant concentrations (MSCCs) as established in Title 15A NCAC 2L .0411. Groundwater samples collected on this property indicates that groundwater contamination meet the cleanup requirements for a low-risk site but exceeded the groundwater quality standards established by Title 15A NCAC 2L .0202. Based on information discussed in Section 5.3 of this report (DEQ File Review) releases from this property would not likely be expected to impact the subject site based on the distance relative to the site.

- **Circle K 2720456 (Aka -Pantry No. 456):** 8191 Cliffdale Road – This property is located approximately 1,220 feet east, northeast of the subject property. This property is currently occupied by a BP/Circle K gas station. A release of petroleum products occurred on this property on August 14, 1998. According to the EDR report, soil samples did not exhibit petroleum levels above applicable standards. Downgradient potable wells were impacted. The contaminated water supply wells are located approximately 850 feet southeast (Well #32) and 1,500 feet southeast (Well #23), down-gradient from the Quick Stop and The Pantry #456. Based on information discussed in Section 5.3 of this report (DEQ File Review) releases from this property would not likely be expected to impact the subject site based on the distance relative to the site.

Incident Management Database (IMD)

The IMD is a record of groundwater and soil contamination incidents.

The site was not identified on the IMD. Two (2) properties within one quarter mile were identified on the IMD.

- **The Pantry 3031 (DBA Quick Stop):** 8215 Cliffdale Road – This property is located approximately 930 feet east, northeast of the subject property. Based on information discussed in Section 5.3 of this report (DEQ File Review) releases from this property would not likely be expected to impact the subject site based on the distance relative to the site.

- **Pantry 456:** 8191 Cliffdale Road – This property is located approximately 1,220 feet east, northeast of the subject property and was listed twice on the IMD list. . A release of petroleum was reported on March 15, 1999. Based on information discussed in Section 5.3 of this report (DEQ File Review) releases from this property would not likely be expected to impact the subject site based on the distance relative to the site.

State Responsible Party Voluntary Action (VCP) Sites

The VCP Sites is a listing of sites that parties wish to remediate voluntarily. The program is administered by the North Carolina Department of Environmental Quality.

Neither the site nor properties within one mile of the site were identified on the VCP list.

State Brownfield Projects Inventory

The State Brownfield Projects Inventory identifies Brownfield projects inventoried with the North Carolina Department of Environmental Quality. The properties in the inventory are working toward a Brownfield agreement for cleanup and liability control.

Neither the site nor properties within one mile of the site were listed as a North Carolina Brownfield property.

State IC List

The State IC List identifies No Further Action facilities with land use restrictions monitoring requirements.

Neither the site nor properties within one mile of the site were identified on the State IC List.

5.2 Additional Environmental Record Sources

NPL Liens

The NPL Liens is a USEPA listing of filed notices of Superfund Liens.

Neither the site nor properties within one mile of the site were identified on the NPL Lien list.

US Brownfields

The US Brownfields identifies Brownfield's properties inventoried with the U.S. EPA. The properties in the listing are addressed by Cooperative Agreement Recipients and Targeted Brownfields Assessments.

Neither the site nor properties within one mile of the site were identified on the US Brownfields Inventory.

Drycleaners

The Drycleaners database identifies potential and known dry-cleaning sites, active and abandoned, that the Dry-cleaning Solvent Cleanup Program has knowledge of and entered this database.

Neither the site nor properties within one mile of the site were identified on the Drycleaners database.

Historic MGP, Auto Stations, and Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential manufactured gas plants (MGP), gas station/filling station/service station, and dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include manufactured gas plants, gas station/filling station/service station, dry-cleaning establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns but may not show up in current government records searches.

The site and the surrounding properties were not identified on the HRHR database.

FUD

Formerly Used Defense Sites - The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions

Neither the site nor properties within one mile of the site were identified on the FUD database.

MGP

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination

Neither the site nor properties within one mile of the site were identified on the MGP database.

Department of Defense Sites (DOD)

The DOD list consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

- Fort Bragg Military Reservation is located approximately one-half mile northeast of the site.

Orphan Summary

Orphan sites are listings that due to poor or inadequate address information are unable to be mapped. The following orphan was identified in the vicinity of the site.

- **Anderson Cleaners,** 5791 Cliffdale Road was identified approximately 2,000 feet northeast of the site. Based on documented groundwater flow on the Pantry properties, which are located between the site and the dry cleaner, releases from this dry cleaner are not expected to impact the site.

5.3 NCDEQ File Review

ASE reviewed the following reports identified in the on-line NCDEQ file review.

- **The Pantry 3031 (Aka Quick Stop)** 8215 Cliffdale Road
  - Comprehensive Site Assessment (CSA), SEI Environmental, Inc. Dated May 14, 1999. This CSA documents an easterly groundwater flow direction away from the site.
  - Notice of Regulatory Requirements (NORR) dated March 13, 2008.
  - NCDENR UST section letter of clarification for Pantry 3301 and 456, dated August 10, 2000.
  - Notice of Request for No Further Action dated November 3, 2015.
  - Active Remediation Monitoring Report, Withers & Ravenel July 27, 2015. This property was being remediated under an air sparge/soil vapor extraction (AS/SVE) remedial system. The system also incorporated the adjacent Panrty No. 456 property. This monitoring report documents an easterly groundwater flow direction away from the site.
  - Conditional Notice of No Further Action dated July 21, 2016.
  - Well Abandonment records August 2016.
  - Notice of No Further Action dated December 23, 2016.

- **Circle K 2720456 (Aka - Pantry No. 456)** 8191 Cliffdale Road
  - Initial Site Assessment (first six (6) pages), SEI Environmental, Inc. dated August 11, 1998.
  - Well construction records dated March 15, 1999.
  - No further action letter dated August 31, 2001.

Based on an easterly groundwater flow documented on these properties, these releases are not considered a recognized environmental condition.

5.4 Historical Use Information

5.4.1 Aerial Photograph Review

ASE has reviewed aerial photographs of the site and immediately surrounding properties for evidence of former usage, which may constitute a potential for environmental concern. The aerial photographs were obtained from EDR, Google Earth and Cumberland County GIS. The aerial photographs reviewed during this Phase I ESA were dated 1938, 1940, 1950, 1964, 1966, 1971, 1976, 1983, 1993, 1999, 2006, 2010, 2014, 2018, 2020, and 2021. Copies of the aerial photographs are included in Appendix IV.

Multiple five-year or more interval data gaps were encountered during the aerial photograph review. ASE does not consider these data gaps to be significant since the site structure has not

changed. The following is a description of the historic aerial photographs that ASE reviewed for this Phase I ESA:

Date	Description
1938	The subject site is only partially illustrated on this areal photograph. Based on what is visible, it appears that the site is an agricultural field. Property south of the site is either wooded or agricultural. Property north of the site is not illustrated.
1940	The site appears to be farmland separated by a road centrally through the site that originates along Cliffdale Road. Surrounding property appears to be wooded or agricultural. A small cluster of buildings are located north of the in the current location of the gas station and the Dairy Queen.
1950	The site and area appear the similar to that observed in 1940.
1964	The site and area appear similar to that observed in 1950.
1966	The site and area appear similar to that observed in 1964. However, the western portion of the sites agricultural field is now overgrown and does not appear to be farmed.
1971	The site and area appear similar to that observed in 1966.
1976	The site and area appear similar to that observed in 1971. However, what appears to be a residential development is under construction further west of the site.
1983	The site appears similar to that observed in 1976.
1993	The site appears similar to that observed in 1983. The residential area west of the site has expanded. The two Pantry gas station northwest of the site are now present, and the eastern portion of the site does not appear to be actively farmed.
1999	The site and surrounding area appear similar to that observed in 1993. However, the western portion of the site is now heavily vegetated.
2006	The site has been cleared of vegetation and a residential development has been built east of the site.
2010	A rectangular water feature is present along the southern property boundary of the site. The residential apartment development south of the site is under construction and the car wash located northeast of the site is now present. A water feature is located south of the site associated with the apartment buildings.
2014	The site and area appear similar to that observed in 2010 with the exception of the following: • The water feature on the southern portion of the site is no longer present.

	• the presence of the gas station and Dairy Queen building northwest of the site.
2018	The site and surrounding area appear similar to that observed in 2014.
2020	A small structure is located on the southwestern portion of the site and the apartment buildings west of the site have been constructed.
2021	The site and surrounding area appear similar to that observed in 2020.

ASE did not identify RECs in connection with the aerial photograph search.

5.4.2 Sanborn Fire Insurance Map Review

The Sanborn map collection consists of a uniform series of large-scale maps, dating from 1889 to the 1970's and depicting the commercial, industrial, and residential sections of approximately twelve thousand cities and towns in the United States, Canada, and Mexico. The maps were designed to assist fire insurance agents in determining the degree of hazard associated with a particular property and therefore show the size, shape, and construction of dwellings, commercial buildings, and factories as well as fire walls, locations of windows and doors, sprinkler systems, and types of roofs. The maps also indicate widths and names of streets, property boundaries, building use, and house and block numbers. They show the locations of water mains, giving their dimensions, and of fire alarm boxes and hydrants as well as the locations of underground gasoline tanks and above ground petroleum storage tanks.
Most of the maps' limitations derive from the limited purpose for which they were produced: underwriters have no interest in open space, so no land use information is given for land without buildings; activities which pose no special fire risk are frequently left unmentioned, so that a building may be used in both a commercial and an industrial capacity but be designated for only one or the other; residential subdivisions are rarely mapped because of their homogeneity, with the result that major portions of most urban areas have no coverage.

ASE contacted EDR to provide copies of readily available Sanborn maps for the site. According to the Certified Sanborn Map Report, dated August 29, 2021, provided by EDR, Sanborn map coverage for the site was unmapped. The Certified Sanborn Map Report is included in Appendix IV.

The lack of Sanborn coverage is a data gap. However, ASE does not classify the lack of Sanborn maps as a significant data gap.

5.4.3 Property Tax Files

The property tax files were obtained from the Cumberland County GIS and Tax Assessor website. The site is identified as the following tax parcel:

The site is a portion of Tax Pin number 9487-45-3559. The site was purchased by East Point Homes, LLC on January 11, 2021. As of the date of this report, the Cumberland County online tax records have not been updated to reflect the current ownership. The ownership of record, according to the county tax online data is Ethel Pate etal.

5.4.4 Recorded Land Title Records

The following deeds were obtained from the New Hanover County Register of Deeds website.

- Book 2296, Pages 129-134 dated December 29, 1971.
- Book 10994, Pages 79 and 80, dated January 11, 2021.
- Plat Book 117 Page 197, dated August 9, 2006.

5.4.5 USGS Topographic Maps

ASE reviewed historical USGS topographical maps of the site and immediately surrounding properties for evidence of former usage, which may constitute a potential for environmental concern. The maps were obtained from EDR and included the Wilmington North Carolina Quadrangle dated 1948, 1950, 1951, 1971, 1982, and 2013. Copies of the maps are included in Appendix IV.

Multiple five-year or more interval data gaps were encountered during the map review. The following is a description of the maps that ASE reviewed for this Phase I ESA:

- **1948** – This topographic map illustrates the site at approximately 250 feet NGVD. A road traverses the center of the site in a north/south orientation originating from Cliffdale Road. Several small buildings are located north and south of the site.

- **1950** – The site and surrounding area appear similar to the 1948 topographic map.

- **1951** – The site and surrounding area is similar to that observed in 1950.

- **1971** –The site and surrounding area is similar to that observed in 1951.

- **1982** – The site and surrounding area is similar to that observed in 1971. However, a road has been constructed west of the site (Branchwood Circle).

- **2013** – The site and surrounding area is similar to that observed in 1982. However, numerous road has been constructed in the vicinity of the site.

5.4.6 City Directory Review

City directories for the site area were obtained from EDR. City directories were searched for Cliffdale Road, Enforcement Land, and Identify Lane. EDR identified City Directory coverage for Cliffdale Road only for the following years: 1992, 1995, 2000, 2005, 2010, 2014 and 2017. The following listings were identified in the City Directory search:

Cliffdale Road

Address	Occupant	Dates
8122 Cliffdale Road (approximately 2,000 feet northeast of the site)	**Anderson Cleaners**	2010 – 2017 2010
8126 Cliffdale Road (approximately 1,980 feet northeast of the site)	**Anderson Cleaners**	2000 – 2005
8134 Cliffdale Road (approximately 1,760 feet northeast of the site)	**Y&S Cleaners**	2005 - 2014
8175 Cliffdale Road (approximately 1,710 feet northeast of the site)	**C&J Sewing and Cleaners**	2000 -2010
8191 Cliffdale Road (Pantry No. 456)	Kangaroo Express Grill Depot Pantry No. 456	2010-2014 2010 2000 - 2005
8200 Cliffdale Road	C Mart Cliffdale Mart & Tobacco Hair I am Heath & Wellness Munchies Grill & Deli Famous Gyro Old Larry's Irish Pub Vision comics & Cards Yong Beauty Supply Bernies Modest Apparel Tiger Video & Tanning Edge it Up	2017 2010-2017 2017 2005 - 2017 2010-2017 2010 - 2017 2005-2017 2014 2005 2005
8215 Cliffdale Road (Pantry No. 3031)	A&A Auto and Tire Budget Truck Rental US Mini Mart VCP of Fayetteville Pantry No. 2031	2017 2017 2010 - 2017 2014 2000
8270 Cliffdale Road	Residential Unknown	1995 – 2000 2005 – 2014

8292 Cliffdale Road	Unknown Residential	2010 2005
8300 Cliffdale Road	Tiger Tanning	2005
8315 Cliffdale Road	Unknown	2010
8363 Cliffdale Road	Residential	1995 - 2014
8383 Cliffdale Road	Cliffdale Community Church House Man Alarm Systems House Man Realty & Constr.	2000 1995 1995
8384 Cliffdale Road	Residential Unknown Residential	2014 – 2017 2005 – 2010 1995
8385 Cliffdale Road (Shell Station northwest of the site)	Albemarle Oil Company	2014 - 2017
8464 Cliffdale Road	Residential	2005- 2017
8489 Cliffdale Road	Residential Kreative Kolours by Howard	2005- 2014 1995
8507 Cliffdale Road	Residential	2014
8533 Cliffdale Road	Residential	2005 - 2014
8555 Cliffdale Road	Residential Fayetteville Full Gospel Victory Church	1995 – 2017 2005

ASE did not identify nearby occupants of concern from the City Directory search. The lack of City Directory coverage is considered a data gap. However, ASE does not classify the lack of Sanborn maps as a significant data gap.

5.4.7 Prior Site Reports

ASE was not provided with prior site reports from the User, nor were site reports identified during our data research.

5.4.8 Local Sources and FOIA Requests

According to the Fayetteville Public Records Department, the Fayetteville Fire Department does not have records for the site.

As of the date of this report, ASE has not received a response from the Cumberland County Department of Environmental Health regarding the subject site.

According to the City of Fayetteville Planning Department Zoning Map, the site is zoned Neighborhood Commercial.

ASE contacted Lumbee River Electric, PWC, and Duke Energy, and none of them said they serviced the site. This could be because the site is still under development and no electric companies have been notified.

6.0 SITE AND AREA RECONNAISSANCE

6.1 On-Site Features

Cheryl Moody of ASE conducted the field reconnaissance of the site on November 16, 2021. Ms. Moody was unaccompanied on the day of the site visit and the property boundaries were not marked. The weather on the day of the reconnaissance were sunny with a temperature of approximately 65º F. Observations were made from a walking reconnaissance around the perimeter boundaries of the site and through the site, were accessible. The majority of the site was heavily overgrown with thick brush and thickets, including thorned bushes. The site appears to be undeveloped with the exception of an abandoned house located on the southwestern portion of the site. This house was observed on the 2020 and 2021 historical aerial photographs but was not present on the 2018 aerial. The house is situated on a crawl space. Indications of a heating source for the building were not observed. ASE did not have access to the interior of the structure. However, ASE did observe the inside of the eastern portion of the structure though a hole in the wall.

Photographs of the site have been included in Appendix V.

Aboveground Storage Tanks

Aboveground storage tanks were not observed on the site.

Underground Storage Tanks

Indications of underground storage tanks were not observed at the site.

Strong, pungent or noxious odors

Strong, pungent or noxious odors were not observed at the site on the day of the site reconnaissance.

Surface waters

Surface waters were not observed at the site on the day of the site reconnaissance.

Standing pools of liquid likely containing petroleum or hazardous substances

Standing pools of liquid were not observed on site during the renaissance.

Drums or containers of petroleum or hazardous substances greater than five gallons

Drums or containers of petroleum or hazardous substances greater than five gallons were not observed during the site reconnaissance.

Hazardous substance or petroleum product containers

Hazardous substance or petroleum product containers were not observed during the site reconnaissance. **Unidentified opened or damaged containers of hazardous substances or petroleum products**

Unidentified opened or damaged containers were not observed on the site on the day of the site reconnaissance.

Known or suspect PCB-containing equipment (excluding light ballasts)

Know or suspect PCB-containing equipment was not observed on the site on the day of the site reconnaissance.

Stains or corrosion to floors, walls or ceilings

Stains or corrosion to floors, walls or ceilings were not observed on the site on the day of the site reconnaissance. However, ASE did not enter the abandoned home.

Floor drains and sump pump

Floor drains and sump pumps were not observed on the site on the day of the site reconnaissance.

Pits, ponds or lagoons

Pits, ponds or lagoons were not observed onsite on the day of the site reconnaissance.

Stained soil or pavement

Stained soil or pavement was not observed on the day of the site visit.

Stressed vegetation

Stressed vegetation was not observed on the site on the day of the site reconnaissance.

Solid waste mounds or non-natural fill materials

Solid waste mounds or non-natural fill materials were not observed onsite on the day of the site reconnaissance. However, garbage was observed along the road on the northern portion of the site.

Wastewater discharges into drains, ditches or streams

Wastewater discharges into drains, ditches, or streams were not observed on the site.

Groundwater wells including potable, monitoring, dry, irrigation, injection and/or abandoned

Groundwater wells were not observed on the site.

Septic systems or cesspools

Septic systems or cesspools were not observed on the site.

6.2 Adjoining and Nearby Properties

Contiguous and nearby properties were observed during a walking and vehicular reconnaissance of each site parcel. Property north of the site is occupied by Dairy Queen, a gas station, an abandoned structure that appears to have been residential and Oasis Car Wash. Property west of the site is occupied by Cape's Landing Apartments. Property south of the site is occupied by a Parestone Apartments. Property east of the site is currently undeveloped. Current uses of the adjoining properties do not represent a REC.

7.0 ADDITIONAL SERVICES

ASTM guidelines identify non-scope issues, which are beyond the scope of this practice. Some of these non-scope issues include asbestos-containing building materials, radon, lead-based paint, lead in drinking water, wetlands and mold. These non-scope issues were not addressed in this report with the exception of the following.

8.0 INTERVIEWS

According to the Fayetteville Public Records Department, the Fayetteville Fire Department does not have records for the site.

As of the date of this report, ASE has not received a response from the New Hanover County Department of Environmental Health regarding the subject site.

ASE has received the User Questionnaire filled out by Mr. Keith Walker.

9.0 FINDINGS AND OPINION

The site referred to as "subject property", "site" or "the property" consists of an approximate 4.1-acre tract of land owned by East Point Homes, LLC. The site is primarily vacant vegetated land located south of Identity Lane. However, an abandoned residence is located on the southwestern side of the site. Based on aerial photographs, this structure has been present on the site for less than three years. Based on visual observations, it appears that this structure was moved to the site from another property. The age of the structure is not known. The site was used as an agricultural field as far back as 1938. It is likely that herbicides and pesticides were used on the site during its agricultural history. However, herbicides and pesticides applied in accordance with the manufacturers approved applications rates is considered a de minimus condition. Agricultural activities appeared to cease at the site sometime between 1983 and 1993 when the site became increasingly vegetated. By 2006 the site was cleared of vegetation and a water feature was present on the southern portion of the site for a short time in 2010. This corresponds to the construction of the southern adjoining Parestone Apartments and is likely a temporary storm water control for the construction.

The adjacent properties to the west and south consist of multifamily and single-family residential uses. Before the residential construction, the land was primarily used for farming or vacant land. Property north of the site was formerly agricultural or residential. Currently a gas station is located off of the northwestern corner of the site. However, groundwater flow in the areas of the site is expected to floe in a westerly direction. Therefore, releases from this gas station are not likely to impact the subject site.

The Standard Environmental Records (SER) search was prepared by Environmental Data Resources, Inc. (EDR). The site was not identified on the EDR report. However, some off-site properties were identified within their respective search distances from the site. Based on the distances from the site, topographic gradient, and/or regulatory information, the listed properties are not likely to impact the subject site.

10.0 CONCLUSION

We have performed a Phase I Environmental Assessment in conformance with the scope and limitations of ASTM Practice E1527-13 of the property located at 5133 Identity Lane located in Fayetteville, North Carolina. Any exception to, or deletions from, this practice are described in Section 2.3 of this report.

As documented and qualified by this report, this assessment has not revealed evidence of RECs in connection with the subject site.

As documented and qualified by this report, this assessment has revealed the following business environmental risks in connection with the subject site.

- The age of the on-site structure is not known. Asbestos containing building material may be present in the structure.

11.0 REFERENCES

ASTM Standard E1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process.

Aerial Photographs dated 2018 and 2020. Google Earth Maps.

Aerial Photograph dated 2021. Cumberland County GIS.

Certified Sanborn Map Report, prepared by Environmental Data Resources, Inc. dated September 29, 2021.

The EDR Aerial Photo Decade Package (years 1938, 1940, 1950, 1964, 1966, 1971, 1976, 1983, 1993, 1999, 2006, 2010, 2014) prepared by Environmental Data Resources, Inc., dated September 29, 2021.

The EDR City Directory Image Report (years 1992, 1995, 2000, 2005, 2010, 2014, 2017) prepared by Environmental Data Resources, Inc., dated October 1, 2021

EDR Historical Topo Map Report (Fayetteville, North Carolina Quadrangle dated 1948, 1950, 1951, 1971, 1982, and 2013 prepared by Environmental Data Resources, Inc. dated September 29, 2021.

The EDR Radius Map Report with Geocheck, prepared by Environmental Data Resources, Inc. dated September 29, 2021

Email Interview: Fayetteville Clerks Office/Fayetteville Fire Department

Cumberland County Assessor's Office
Tax Administration (cumberlandcountync.gov)

Cumberland County Registry of Deeds.
Cumberland County Register of Deeds (ccrod.org)

City of Fayetteville Public Works Center.
Fayetteville Public Works Commission : FAYPWC.COM

Lumbee River Electric.
Lumbee River EMC | Your Trusted Energy Adviser

Aqua Water Services of Fayetteville.
Aqua America North Carolina: NC Water Bill Pay & Phone

City of Fayetteville.
Fayetteville, NC | Home (fayettevillenc.gov)

NCDEQ Records Review: 8191 Cliffdale Road - Circle K, 8215 Cliffdale Road - The Pantry 3031, 8191 Cliffdale Road - Pantry 456.

APPENDIX I

FIGURES

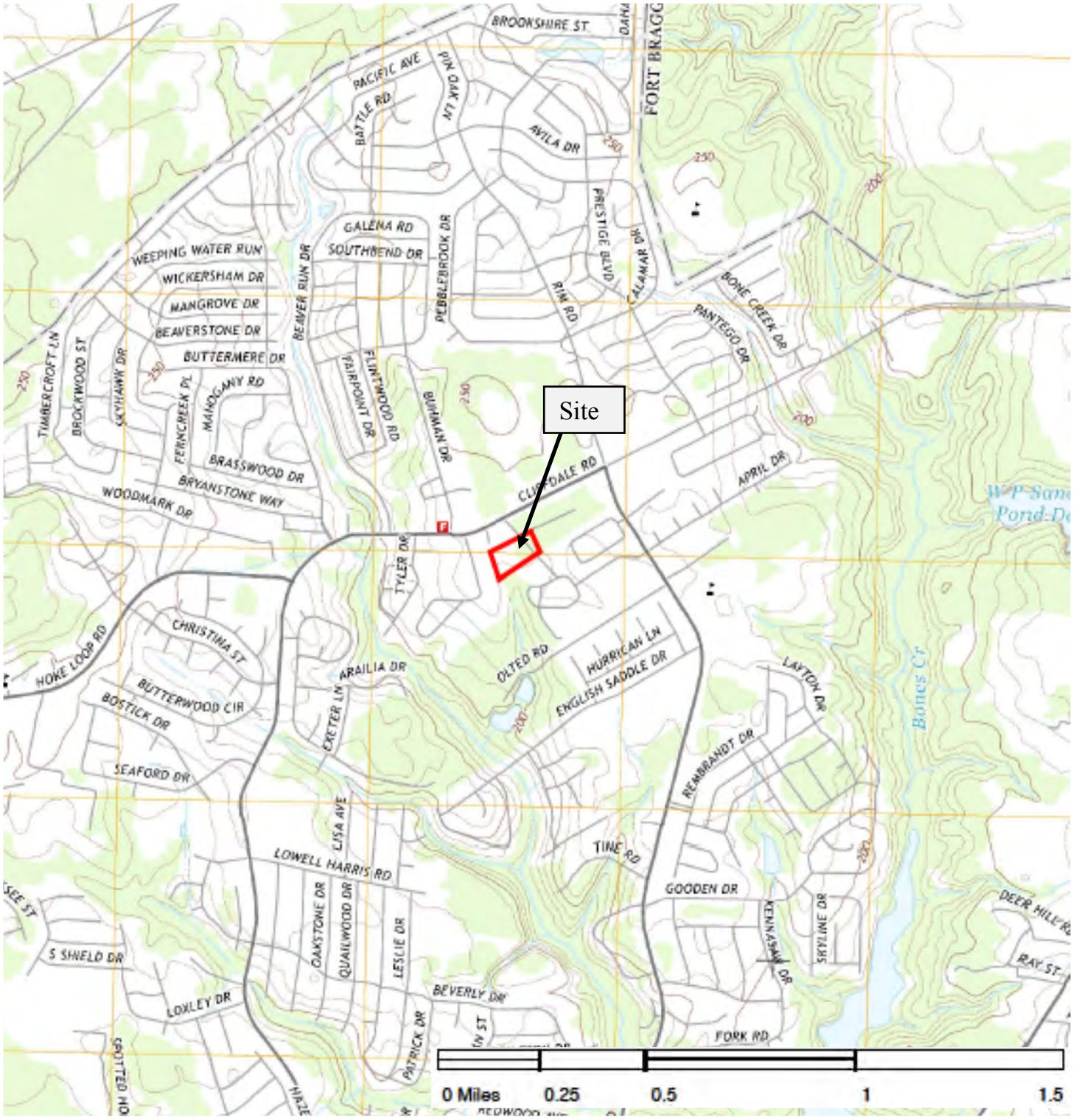


FIGURE 1: TOPOGRAPHIC MAP

Source: USGS Clifdale, North Carolina Quadrangle, 2013.

N

Phase I Environmental Site Assessment
Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
November 2021

0 50 100

FIGURE 2: AERIAL MAP

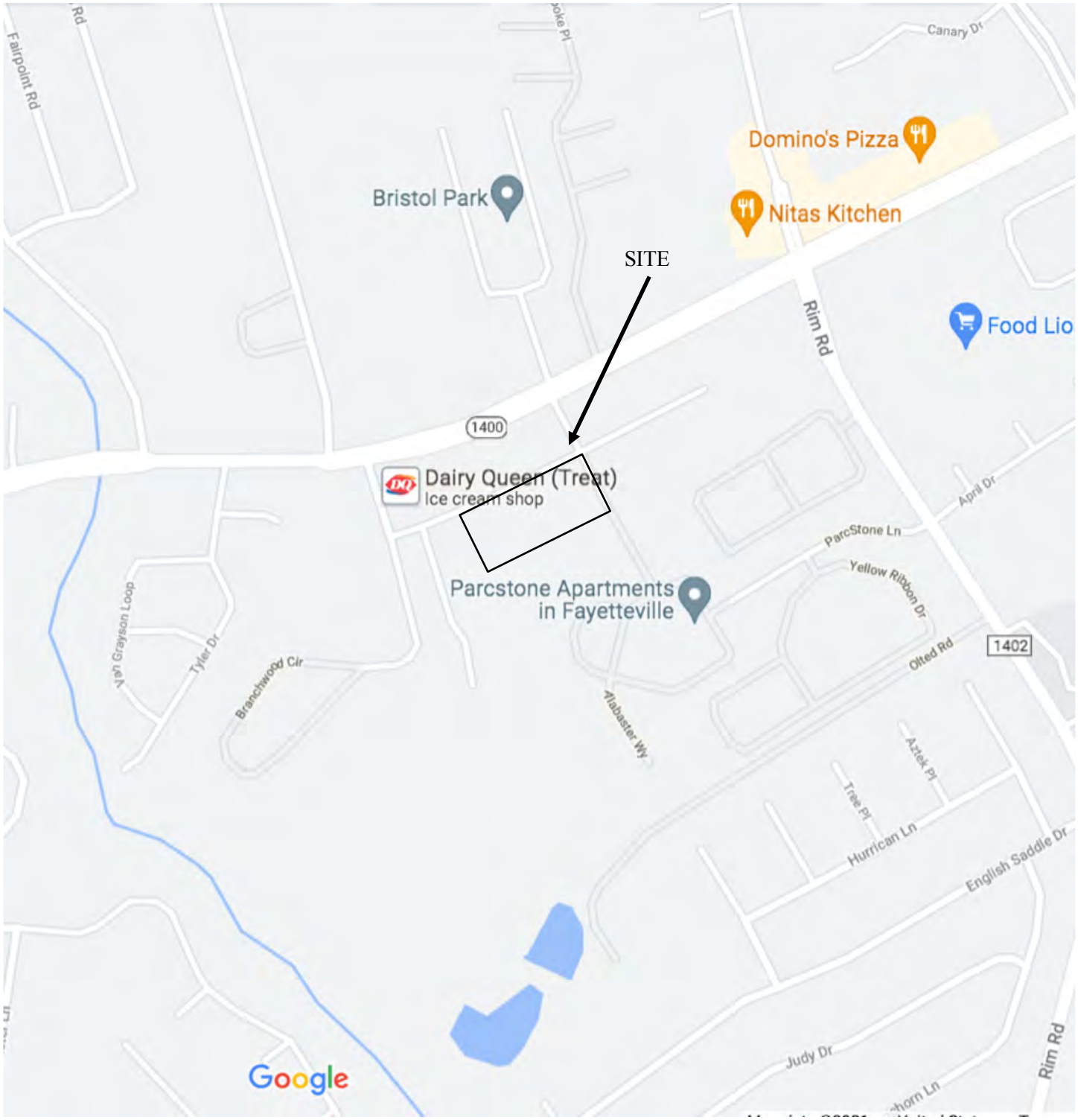
Source: Cumberland County GIS 2021 aerial

N

Phase I Environmental Site Assessment
Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
November 2021



Not to Scale

FIGURE 3: STREET MAP

Source: Google Maps

N

Phase I Environmental Site Assessment
Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
November 2021

APPENDIX II

USER PROVIDED INFORMATION

ASTM E 1527-013 USER QUESTIONNAIRE

In order to qualify for one of the *Landowner Liability Protections (LLPs)*[1] offered by the Small Business Liability Relief and Brownfield Revitalization Act of 2001 (the " *Brownfield Amendments*"), the *user* (user of report) must provide the following information (if available) to the *environmental professional*. Failure to provide this information could result in determination that "*all appropriate inquiry*" is not complete.

1. Environmental cleanup liens that are filed or recorded against the site (40 CFR 312.25).

Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?

NO

2. Activity and land use limitation that are in place on the site or that have been filed or recorded in a registry (40 CFR 312.26).

Are you aware of any AULs such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?

NO

3. Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR312.28).

As the *user* of this ESA do you have any specialized knowledge or experience relating to the *property* or nearby properties? For example, are you involved in the same line of businesses the current or former *occupants* of the *property* or an adjoining *property* so that you would have specialized knowledge of the chemicals and process used by this type of business?

NO

4. Relationship of the purchase price to the fair market value of the property if it were not contaminates (40 CFR 312.29).

Does the purchase price being paid for this *property* reasonably reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present on the *property*?

Purchase price reasonably reflects the fair market value of the property.

5. Commonly known or reasonably ascertainable information about the property (40 CFR 312.30).

Are you aware of commonly or reasonably ascertainable information about the *property* that would help the *environmental professional* to identify conditions indicative of releases or threatened releases? For example, as a user,

a. Do you know the past uses of the *property*?

NO

[1] *Landowner Liability Protection*, or *LLPs*, is the term used to describe three types of potential defenses to Superfund liability in EPA's *Interim, Guidance Regarding Criteria Landowners Must Meet in Order to Qualify for Bona Fide Prospective Purchaser, Contiguous Property Owner, or Innocent Landowner Limitations on CERCLA Liability* ("*Common Elements*" Guide) issued March 6, 2003.

b. Do you know of specific chemicals that are present or once present at the *property*?

NO

c. Do you know of spills or other chemical releases that have taken place on the *property*?

NO

d. Do you know of any environmental cleanups that have taken place on the *property*?

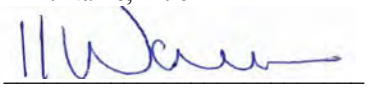
NO

6. The degree of obviousness of the presence or likely presence of contamination at the property, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

As the *user* of this *ESA*, based on your knowledge and experience related to the *property* are there any *obvious* indicators that point to the presence or likely presence of contamination at the *property*?

NO

Prepared by: Keith D. Walker, President
Print Name, Title

Prepared by: 
Signature

Date: September 16, 2021

APPENDIX III

REGULATORY REVIEW DOCUMENTS

Cliffmore Park
5133 Identity Lane
Fayetteville, NC 28314

Inquiry Number: 6682545.2s
September 29, 2021

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-13), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

5133 IDENTITY LANE
FAYETTEVILLE, NC 28314

COORDINATES

Latitude (North):	35.0561990 - 35° 3' 22.31''
Longitude (West):	79.0529140 - 79° 3' 10.49''
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	677569.1
UTM Y (Meters):	3880811.0
Elevation:	291 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5945509 CLIFDALE, NC
Version Date:	2013

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140519, 20140517
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
5133 IDENTITY LANE
FAYETTEVILLE, NC 28314

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
Reg	FORT BRAGG MILITARY		DOD	Same	2767, 0.524, NNE
1	ALCO FOOD STORE #33	8385 CLIFFDALE ROAD	UST, Financial Assurance	Lower	298, 0.056, WNW
A2	THE PANTRY 3031 (DBA	8215 CLIFFDALE ROAD	IMD	Lower	1122, 0.213, NE
A3	PANTRY 3031 DBA QUIC	8215 CLIFFDALE	LUST, LUST TRUST, UST, INST CONTROL, Financial...	Lower	1122, 0.213, NE
A4	PANTRY 456	8191 CLIFFDALE RD.	IMD	Lower	1384, 0.262, NE
A5	CIRCLE K 2720456	8191 CLIFFDALE RD	LUST, UST, Financial Assurance	Lower	1384, 0.262, NE
A6	PANTRY 456	8191 CLIFFDALE ROAD	IMD	Lower	1384, 0.262, NE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL ---------- National Priority List Deletions

Federal CERCLIS list

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Federal RCRA CORRACTS facilities list

CORRACTS ---------- Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Federal RCRA generators list

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System

US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROLS ..... Institutional Controls Sites List

Federal ERNS list

ERNS ..... Emergency Response Notification System

State- and tribal - equivalent NPL

NC HSDS ..... Hazardous Substance Disposal Site

State- and tribal - equivalent CERCLIS

SHWS ..... Inactive Hazardous Sites Inventory

State and tribal landfill and/or solid waste disposal site lists

SWF/LF ..... List of Solid Waste Facilities
DEBRIS ..... Solid Waste Active Disaster Debris Sites Listing
OLI ..... Old Landfill Inventory
LCID ..... Land-Clearing and Inert Debris (LCID) Landfill Notifications

State and tribal leaking storage tank lists

LAST ..... Leaking Aboveground Storage Tanks
INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

FEMA UST ..... Underground Storage Tank Listing
AST ..... AST Database
INDIAN UST ..... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

INDIAN VCP ..... Voluntary Cleanup Priority Listing
VCP ..... Responsible Party Voluntary Action Sites

State and tribal Brownfields sites

BROWNFIELDS ..... Brownfields Projects Inventory

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY ..... Recycling Center Listing
HIST LF ..... Solid Waste Facility Listing
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations

ODI ---------- Open Dump Inventory
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register
US CDL ---------- National Clandestine Laboratory Register

Local Land Records

LIENS 2 ---------- CERCLA Lien Information

Records of Emergency Release Reports

HMIRS ---------- Hazardous Materials Information Reporting System
SPILLS ---------- Spills Incident Listing
SPILLS 90 ---------- SPILLS 90 data from FirstSearch
SPILLS 80 ---------- SPILLS 80 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR ---------- RCRA - Non Generators / No Longer Regulated
FUDS ---------- Formerly Used Defense Sites
SCRD DRYCLEANERS ---------- State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR ---------- Financial Assurance Information
EPA WATCH LIST ---------- EPA WATCH LIST
2020 COR ACTION ---------- 2020 Corrective Action Program List
TSCA ---------- Toxic Substances Control Act
TRIS ---------- Toxic Chemical Release Inventory System
SSTS ---------- Section 7 Tracking Systems
ROD ---------- Records Of Decision
RMP ---------- Risk Management Plans
RAATS ---------- RCRA Administrative Action Tracking System
PRP ---------- Potentially Responsible Parties
PADS ---------- PCB Activity Database System
ICIS ---------- Integrated Compliance Information System
FTTS ---------- FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS ---------- Material Licensing Tracking System
COAL ASH DOE ---------- Steam-Electric Plant Operation Data
COAL ASH EPA ---------- Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER ---------- PCB Transformer Registration Database
RADINFO ---------- Radiation Information Database
HIST FTTS ---------- FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS ---------- Incident and Accident Data
CONSENT ---------- Superfund (CERCLA) Consent Decrees
INDIAN RESERV ---------- Indian Reservations
FUSRAP ---------- Formerly Utilized Sites Remedial Action Program
UMTRA ---------- Uranium Mill Tailings Sites
LEAD SMELTERS ---------- Lead Smelter Sites
US AIRS ---------- Aerometric Information Retrieval System Facility Subsystem
US MINES ---------- Mines Master Index File
ABANDONED MINES ---------- Abandoned Mines
FINDS ---------- Facility Index System/Facility Registry System
UXO ---------- Unexploded Ordnance Sites

ECHO ---------- Enforcement & Compliance History Information
DOCKET HWC ---------- Hazardous Waste Compliance Docket Listing
FUELS PROGRAM ---------- EPA Fuels Program Registered Listing
AIRS ---------- Air Quality Permit Listing
ASBESTOS ---------- ASBESTOS
COAL ASH ---------- Coal Ash Disposal Sites
DRYCLEANERS ---------- Drycleaning Sites
Financial Assurance ---------- Financial Assurance Information Listing
NPDES ---------- NPDES Facility Location Listing
UIC ---------- Underground Injection Wells Listing
AOP ---------- Animal Operation Permits Listing
PCSRP ---------- Petroleum-Contaminated Soil Remediation Permits
CCB ---------- Coal Ash Structural Fills (CCB) Listing
SEPT HAULERS ---------- Permitted Septage Haulers Listing
MINES MRDS ---------- Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP ---------- EDR Proprietary Manufactured Gas Plants
EDR Hist Auto ---------- EDR Exclusive Historical Auto Stations
EDR Hist Cleaner ---------- EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS ---------- Recovered Government Archive State Hazardous Waste Facilities List
RGA LF ---------- Recovered Government Archive Solid Waste Facilities List
RGA LUST ---------- Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incidents Management Database contains an inventory

of reported leaking underground storage tank incidents. The data come from the Department of Environment, & Natural Resources' Incidents by Address.

A review of the LUST list, as provided by EDR, and dated 04/30/2021 has revealed that there are 2 LUST sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PANTRY 3031 DBA QUIC	***8215 CLIFFDALE***	***NE 1/8 - 1/4 (0.213 mi.)***	***A3***	***11***
Incident Phase: Closed Out Product Type: PETROLEUM Incident Number: 22150 Current Status: File Located in Archives				
CIRCLE K 2720456	***8191 CLIFFDALE RD***	***NE 1/4 - 1/2 (0.262 mi.)***	***A5***	***17***
Incident Phase: Closed Out Product Type: PETROLEUM Incident Number: 19702 Current Status: File Located in Archives				

LUST TRUST: This database contains information about claims against the State Trust Funds for reimbursements for expenses incurred while remediating Leaking USTs.

A review of the LUST TRUST list, as provided by EDR, and dated 07/02/2021 has revealed that there is 1 LUST TRUST site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PANTRY 3031 DBA QUIC	***8215 CLIFFDALE***	***NE 1/8 - 1/4 (0.213 mi.)***	***A3***	***11***
Facility Id: 0-028888 Site ID: 22150				

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environment & Natural Resources' Petroleum Underground Storage Tank Database.

A review of the UST list, as provided by EDR, and dated 04/30/2021 has revealed that there are 2 UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
ALCO FOOD STORE #33	***8385 CLIFFDALE ROAD***	***WNW 0 - 1/8 (0.056 mi.)***	***1***	***8***
Tank Status: Current Facility Id: 00-0-0000037127				
PANTRY 3031 DBA QUIC	***8215 CLIFFDALE***	***NE 1/8 - 1/4 (0.213 mi.)***	***A3***	***11***
Tank Status: Removed Facility Id: 00-0-0000028888				

EXECUTIVE SUMMARY

State and tribal institutional control / engineering control registries

INST CONTROL: No Further Action Sites With Land Use Restrictions Monitoring.

A review of the INST CONTROL list, as provided by EDR, and dated 09/04/2020 has revealed that there is 1 INST CONTROL site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PANTRY 3031 DBA QUIC	***8215 CLIFFDALE***	***NE 1/8 - 1/4 (0.213 mi.)***	***A3***	***11***

ADDITIONAL ENVIRONMENTAL RECORDS

Records of Emergency Release Reports

IMD: Incident Management Database.

A review of the IMD list, as provided by EDR, and dated 07/30/2021 has revealed that there are 3 IMD sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
THE PANTRY 3031 (DBA Facility Id: 22150	8215 CLIFFDALE ROAD	NE 1/8 - 1/4 (0.213 mi.)	A2	10
PANTRY 456 Facility Id: 19702	8191 CLIFFDALE RD.	NE 1/4 - 1/2 (0.262 mi.)	A4	15
PANTRY 456 Facility Id: 29181	8191 CLIFFDALE ROAD	NE 1/4 - 1/2 (0.262 mi.)	A6	22

Other Ascertainable Records

DOD: Consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

A review of the DOD list, as provided by EDR, and dated 12/31/2005 has revealed that there is 1 DOD site within approximately 1 mile of the target property.

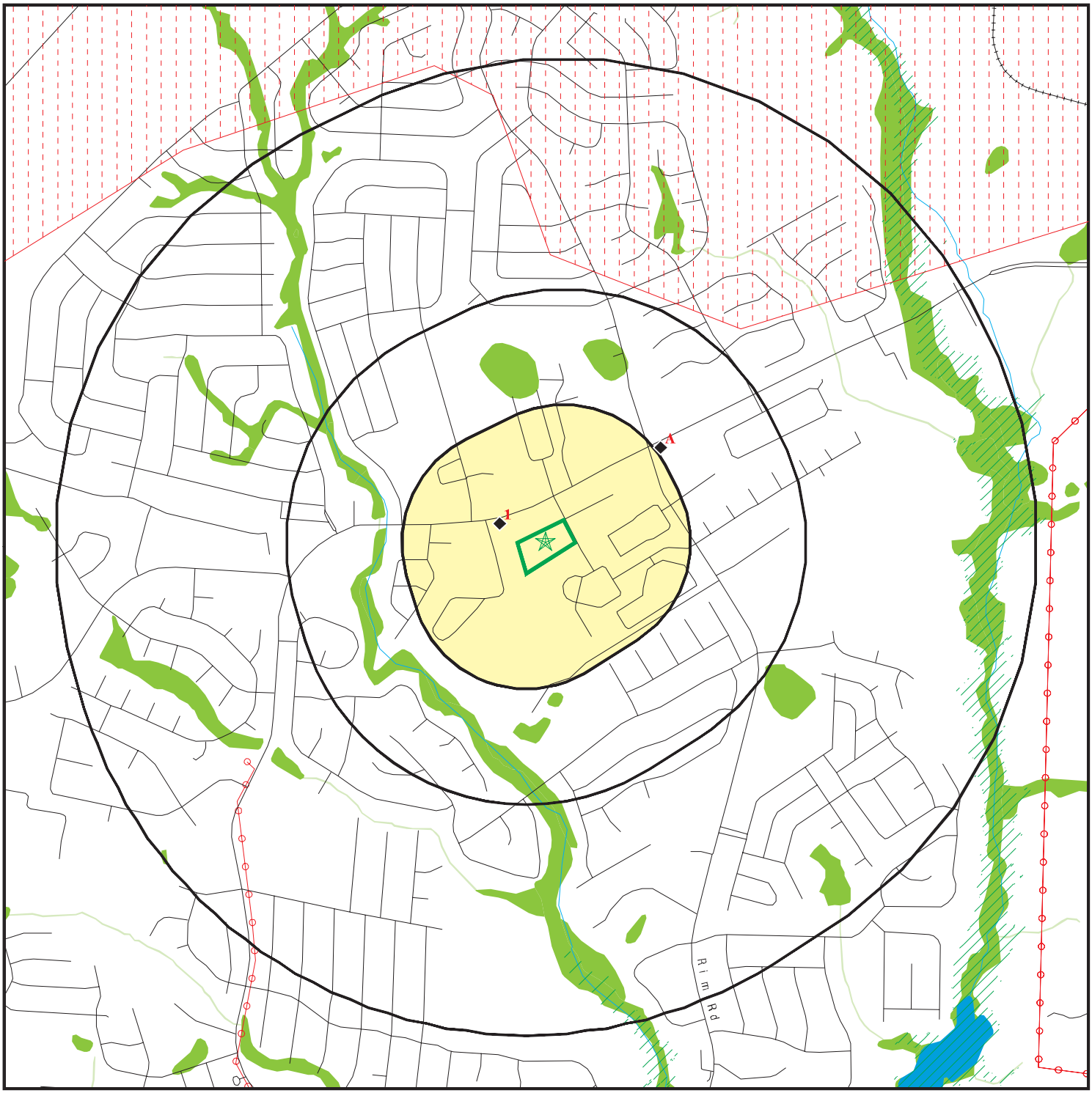
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FORT BRAGG MILITARY		NNE 1/2 - 1 (0.524 mi.)	0	8

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 2 records.

Site Name	Database(s)
CLIFFDALE CLEANERS	DRYCLEANERS
ANDERSON CLEANERS	DRYCLEANERS

OVERVIEW MAP - 6682545.2S



0 1/4 1/2 1 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Hazardous Substance Disposal Sites

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Cliffmore Park	CLIENT:	Atlantic Shores Environmental
ADDRESS:	5133 Identity Lane Fayetteville NC 28314	CONTACT:	Cheryl Moody
		INQUIRY #:	6682545.2s
LAT/LONG:	35.056199 / 79.052914	DATE:	September 29, 2021 11:32 am

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DETAIL MAP - 6682545.2S

0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- National Wetland Inventory
- State Wetlands
- Hazardous Substance Disposal Sites

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME:	Cliffmore Park	CLIENT:	Atlantic Shores Environmental
ADDRESS:	5133 Identity Lane Fayetteville NC 28314	CONTACT:	Cheryl Moody
		INQUIRY #:	6682545.2s
LAT/LONG:	35.056199 / 79.052914	DATE:	September 29, 2021 11:34 am

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MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Federal Delisted NPL site list								
Delisted NPL	1.000		0	0	0	0	NR	0
Federal CERCLIS list								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Federal CERCLIS NFRAP site list								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS	1.000		0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
NC HSDS	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
SHWS	1.000		0	0	0	0	NR	0
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF	0.500		0	0	0	NR	NR	0
DEBRIS	0.500		0	0	0	NR	NR	0
OLI	0.500		0	0	0	NR	NR	0
LCID	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
State and tribal leaking storage tank lists								
LAST	0.500		0	0	0	NR	NR	0
LUST	0.500		0	1	1	NR	NR	2
INDIAN LUST	0.500		0	0	0	NR	NR	0
LUST TRUST	0.500		0	1	0	NR	NR	1
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		1	1	NR	NR	NR	2
AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
INST CONTROL	0.500		0	1	0	NR	NR	1
State and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
VCP	0.500		0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
SWRCY	0.500		0	0	0	NR	NR	0
HIST LF	0.500		0	0	0	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
SPILLS	TP		NR	NR	NR	NR	NR	0
IMD	0.500		0	1	2	NR	NR	3

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SPILLS 90	TP		NR	NR	NR	NR	NR	0
SPILLS 80	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	1	NR	1
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
AIRS	TP		NR	NR	NR	NR	NR	0
ASBESTOS	TP		NR	NR	NR	NR	NR	0
COAL ASH	0.500		0	0	0	NR	NR	0
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
NPDES	TP		NR	NR	NR	NR	NR	0
UIC	TP		NR	NR	NR	NR	NR	0
AOP	TP		NR	NR	NR	NR	NR	0
PCSRP	0.500		0	0	0	NR	NR	0
CCB	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
SEPT HAULERS	TP		NR	NR	NR	NR	NR	0
MINES MRDS	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
RGA HWS	TP		NR	NR	NR	NR	NR	0
RGA LF	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		0	1	5	3	1	0	10

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

DOD **FORT BRAGG MILITARY RESERVATION** **DOD** **CUSA139814**
Region **N/A**
NNE **FORT BRAGG MILITARY RESER (County), NC**
1/2-1
2767 ft.

DOD:

Feature 1:	Army DOD
Feature 2:	Not reported
Feature 3:	Not reported
URL:	Not reported
Name 1:	Fort Bragg Military Reservation
Name 2:	Not reported
Name 3:	Not reported
State:	NC
DOD Site:	Yes
Tile name:	NCHOKE

---

1 **ALCO FOOD STORE #33** **UST** **U004158414**
WNW **8385 CLIFFDALE ROAD** **Financial Assurance** **N/A**
< 1/8 **FAYETTEVILLE, NC 28314**
0.056 mi.
298 ft.

Relative:
Lower

Actual:
274 ft.

UST:

Name:	ALCO FOOD STORE #33
Address:	8385 CLIFFDALE ROAD
City,State,Zip:	FAYETTEVILLE, NC 28314
Facility Id:	00-0-0000037127
Contact:	ALBEMARLE OIL COMPANY
Contact Address1:	PO BOX 1059
Contact Address2:	Not reported
Contact City/State/Zip:	ALBEMARLE, NC 28001-1059
FIPS County Desc:	Cumberland
Latitude:	35.05670
Longitude:	-79.05441
Tank Id:	1
Tank Status:	Current
Installed Date:	12/31/2010
Perm Close Date:	Not reported
Product Name:	Gasoline, Gas Mix
Tank Capacity:	20000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	No
Regulated:	No
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Not reported
Decode for TCONS_KEY:	Unknown
Decode for PCONS_KEY:	Unknown
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

ALCO FOOD STORE #33 (Continued) **U004158414**

Tank Id:	2A
Tank Status:	Current
Installed Date:	04/04/2011
Perm Close Date:	Not reported
Product Name:	Diesel
Tank Capacity:	10000
Root Tank Id:	234560
Main Tank:	Yes
Compartment Tank:	Yes
Manifold Tank:	0
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Ball Float Valve
Spill Protection Name:	Catchment Basin
Leak Detection Name:	ELLD
Decode for TCONS_KEY:	Double Wall FRP
Decode for PCONS_KEY:	Double Wall FRP
Decode for PSYS_KEY:	Pressurized System

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	2B
Tank Status:	Current
Installed Date:	12/31/2010
Perm Close Date:	Not reported
Product Name:	Diesel
Tank Capacity:	10000
Root Tank Id:	234560
Main Tank:	No
Compartment Tank:	Yes
Manifold Tank:	Not reported
Commercial:	No
Regulated:	No
Other CP Tank:	Not reported
Overfill Protection Name:	Unknown
Spill Protection Name:	Unknown
Leak Detection Name:	Not reported
Decode for TCONS_KEY:	Unknown
Decode for PCONS_KEY:	Unknown
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

NC Financial Assurance 1:

Name:	ALCO FOOD STORE #33
Address:	8385 CLIFFDALE ROAD
City,State,Zip:	FAYETTEVILLE, NC 28314
Facility ID:	00-0-0000037127
Region:	1
Financial Responsibility Desc:	Self-Insurance
Financial Responsibility Name:	Albemarle Oil Company, Inc.
Started Date:	05/01/2012
Ended Date:	04/30/2013

A2 **THE PANTRY 3031 (DBA QUICK STO** **IMD** **S105424381**
NE **8215 CLIFFDALE ROAD** **N/A**
1/8-1/4 **FAYETTEVILLE, NC**
0.213 mi.
1122 ft. **Site 1 of 5 in cluster A**

Relative: **Lower**

Actual: **264 ft.**

IMD:

Facility ID:	22150
Name:	THE PANTRY 3031 (DBA QUICK STO
Address:	8215 CLIFFDALE ROAD
City,State,Zip:	FAYETTEVILLE, NC
Date Occurred:	4/29/1998
Submit Date:	8/24/2000
Incident Desc:	FALL OF 1997 A LAGRANGE WATER SUPPLY WELL WAS TAKEN OFF LINE DUE TO CONTAMINATION.
Operator:	RENEE THOMAS
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	4
Responsible Party Contact Name:	Not reported
Operation:	6
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Private
Operation Type:	Commercial
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	H
Whether Tank is Regulated:	Not reported
Priority Update:	8/24/2000
Notice of Regulatory Requirement:	Not reported
Wells Affected:	Y
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	Not reported
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	3
Samples Include:	1
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	T44
Intermediate Condition Present:	Not reported
Latitude:	35.0606
Longitude:	-79.0456
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported

THE PANTRY 3031 (DBA QUICK STO (Continued) **S105424381**

Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Status:

Facility ID:	22150
Last Modified:	2016-12-23 00:00:00
Incident Phase:	CO
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

A3 **PANTRY 3031 DBA QUICK STOP** **LUST** **U001204424**
NE **8215 CLIFFDALE** **LUST TRUST** **N/A**
1/8-1/4 **FAYETTEVILLE, NC 28303** **UST**
0.213 mi. **INST CONTROL**
1122 ft. **Site 2 of 5 in cluster A** **Financial Assurance**

Relative: **Lower**
Actual: **264 ft.**

LUST:

Name:	THE PANTRY 3031 (DBA QUICK STOP)
Address:	8215 CLIFFDALE ROAD
City,State,Zip:	FAYETTEVILLE, NC 283145851
Facility ID:	00-0-000
UST Number:	FA-1176
Incident Number:	22150
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	08/11/1998
Date Occur:	04/29/1998
Cleanup:	04/29/1998
Closure Request:	Not reported
Close Out:	12/23/2016
Level Of Soil Cleanup Achieved:	Soil to Groundwater
Tank Regulated Status:	REGULATED
# Of Supply Wells:	1

PANTRY 3031 DBA QUICK STOP (Continued) **U001204424**

Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	H
Risk Class Based On Review:	L
Corrective Action Plan Type:	air sparging and soil vapor extraction
NOV Issue Date:	Not reported
NORR Issue Date:	Not reported
Site Priority:	Not reported
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Residential
MTBE:	No
MTBE1:	Yes
Flag:	No
Flag1:	No
LUR Filed:	08/29/2016
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Cleanups to alternate standards
PETOPT:	3
RPL:	False
CD Num:	0
Reel Num:	0
RPOW:	False
RPOP:	False
Error Flag:	0
Error Code:	N
Valid:	False
Lat/Long Decimal:	35.0587 -79.0493
Testlat:	Not reported
Regional Officer Project Mgr:	JWB
Region:	FAY
Company:	CIRCLE K STORES, INC.
Contact Person:	BRENT PUZAK
Telephone:	9197746700
RP Address:	1100 SITUS COURT, STE 100
RP City,St,Zip:	RALEIGH, NC 27606
RP County:	LEE
Comments:	A CAP Addendum was needed due to the widening of the DOT ROW at the intersection of Rim Road and Cliffdale Road. The CAPA was received 2/6/2002. The delay of the implementation of the CAP was due to the adjacent property owners concerns. WATER IS AVAILIBLE FOR THE AREA WELLS NOT HOOKED UP NO INTERCONS Incident number 21263 was deleted and incorporated in to 22150 after it was determined that the Pantry 3031 was the source of the release. Complaint received via AP Section of a water spout from the system. Notified Ty Colwell of the situation on 4/26/2011 @ 3:30 PM.
5 Min Quad:	Not reported
Last Modified:	12/23/2016
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported

PANTRY 3031 DBA QUICK STOP (Continued) **U001204424**

Closure Request Date: Not reported
Close-out Report: Not reported

Click here to access the North Carolina DEQ records for this facility:

LUST TRUST:
Name: PANTRY #3031
Address: 8215 CLIFFDALE ROAD
City,State,Zip: FAYETTEVILLE, NC
Facility ID: 0-028888
Site ID: 22150
Site Note: Not reported
Site Eligible?: True
Commercial Find: 100% Commercial
Priority Rank: Not reported
Deductable Amount: 20000
3rd Party Deductable Amt: 0
Sum 3rd Party Amt Applied: 0

UST:
Name: PANTRY 3031 DBA QUICK STOP
Address: 8215 CLIFFDALE
City,State,Zip: FAYETTEVILLE, NC 28303
Facility Id: 00-0-0000028888
Contact: THE PANTRY, INC.
Contact Address1: PO BOX 1410/1801 DOUGLAS DRIVE
Contact Address2: Not reported
Contact City/State/Zip: SANFORD, NC 27330-1410
FIPS County Desc: Cumberland
Latitude: 35.05869
Longitude: -79.04909

Tank Id: 1
Tank Status: Removed
Installed Date: 02/02/1987
Perm Close Date: 04/12/2005
Product Name: Gasoline, Gas Mix
Tank Capacity: 12000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: Not reported
Commercial: Yes
Regulated: Yes
Other CP Tank: Not reported
Overfill Protection Name: Auto Shutoff Device
Spill Protection Name: Catchment Basin
Leak Detection Name: Unknown
Decode for TCONS_KEY: Single Wall Steel/FRP
Decode for PCONS_KEY: Single Wall FRP
Decode for PSYS_KEY: Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id: 2

PANTRY 3031 DBA QUICK STOP (Continued) **U001204424**

Tank Status:	Removed
Installed Date:	02/02/1987
Perm Close Date:	04/12/2005
Product Name:	Gasoline, Gas Mix
Tank Capacity:	12000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Auto Shutoff Device
Spill Protection Name:	Catchment Basin
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel/FRP
Decode for PCONS_KEY:	Single Wall FRP
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	3
Tank Status:	Removed
Installed Date:	02/02/1987
Perm Close Date:	04/12/2005
Product Name:	Gasoline, Gas Mix
Tank Capacity:	12000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Auto Shutoff Device
Spill Protection Name:	Catchment Basin
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall Steel/FRP
Decode for PCONS_KEY:	Single Wall FRP
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

INST CONTROL:

Name:	THE PANTRY 3031 (DBA QUICK STOP)
Address:	8215 CLIFFDALE ROAD
City,State,Zip:	FAYETTEVILLE, NC
Project Number:	FA-1176
Object ID:	3127
DWM Contact:	Fayetteville Regional Office (910) 433-3300
DWM Program:	Underground Storage Tank Section
Project Status:	No Further Action
COC:	Multi COC
Contamination Source:	UST System
Received Date:	8/28/2016
Restricted Media:	Multi-Media

PANTRY 3031 DBA QUICK STOP (Continued) **U001204424**

Allowed Use:	Media Restrictions Only
Certification:	None
Plant Reception Date:	Not reported
Instrument Status:	Effective
Deed BK:	Not reported
Deed PG:	Not reported
Plat BK:	Not reported
Plat PG:	Not reported
Instrument:	Notice and Restriction
Deed:	Not reported
Deed Date:	Recorded 8-28-2016
Plat:	Not reported
Plat Date:	Not reported
X Coord:	1985246.9394
Y Coord:	476295.68769

NC Financial Assurance 1:

Name:	PANTRY 3031 DBA QUICK STOP
Address:	8215 CLIFFDALE
City,State,Zip:	FAYETTEVILLE, NC 28303
Facility ID:	00-0-0000028888
Region:	1
Financial Responsibility Desc:	Letter of Credit
Financial Responsibility Name:	Wells Fargo Bank, N.A.
Started Date:	03/10/2013
Ended Date:	03/10/2014

A4 **PANTRY 456** **IMD** **S103717710**
NE **8191 CLIFFDALE RD.** **N/A**
1/4-1/2 **FAYETTEVILLE, NC**
0.262 mi.
1384 ft. **Site 3 of 5 in cluster A**

Relative: **Lower**
Actual: **260 ft.**

IMD:

Facility ID:	19702
Name:	PANTRY 456
Address:	8191 CLIFFDALE RD.
City,State,Zip:	FAYETTEVILLE, NC
Date Occurred:	8/14/1998
Submit Date:	3/15/1999
Incident Desc:	UPON REMOVAL OF USTS, LEAK WAS CONFIRMED.
Operator:	RENEE THOMAS
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	4
Responsible Party Contact Name:	Not reported
Operation:	6
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Private
Operation Type:	Commercial
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3

PANTRY 456 (Continued) **S103717710**

Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	H
Whether Tank is Regulated:	Not reported
Priority Update:	3/15/1999
Notice of Regulatory Requirement:	Not reported
Wells Affected:	N
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	Not reported
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	3
Samples Include:	1
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported
Intermediate Condition Present:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Status:

Facility ID:	19702
Last Modified:	2001-09-12 00:00:00
Incident Phase:	CO
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported

PANTRY 456 (Continued) **S103717710**

Closure Request Date: Not reported
Close-out Report: 2001-08-31 00:00:00

A5 **CIRCLE K 2720456** **LUST U001194009**
NE **8191 CLIFFDALE RD** **UST N/A**
1/4-1/2 **FAYETTEVILLE, NC 28314** **Financial Assurance**
0.262 mi.
1384 ft. **Site 4 of 5 in cluster A**

Relative: **Lower**
Actual: **260 ft.**

LUST:

Name:	PANTRY 456
Address:	8191 CLIFFDALE ROAD
City,State,Zip:	FAYETTEVILLE, NC 28301
Facility ID:	00-0-000
UST Number:	FA-1045
Incident Number:	19702
Contamination Type:	Groundwater/Both
Source Type:	Leak-underground
Product Type:	PETROLEUM
Date Reported:	08/14/1998
Date Occur:	08/14/1998
Cleanup:	08/14/1998
Closure Request:	Not reported
Close Out:	08/31/2001
Level Of Soil Cleanup Achieved:	Not reported
Tank Regulated Status:	REGULATED
# Of Supply Wells:	1
Commercial/NonCommercial UST Site:	COMMERCIAL
Risk Classification:	H
Risk Class Based On Review:	L
Corrective Action Plan Type:	Not reported
NOV Issue Date:	Not reported
NORR Issue Date:	06/04/2001
Site Priority:	Not reported
Phase Of LSA Req:	Not reported
Site Risk Reason:	Not reported
Land Use:	Residential
MTBE:	Not reported
MTBE1:	Unknown
Flag:	No
Flag1:	No
LUR Filed:	Not reported
Release Detection:	0
Current Status:	File Located in Archives
RBCA GW:	Not reported
PETOPT:	3
RPL:	False
CD Num:	242
Reel Num:	0
RPOW:	False
RPOP:	False
Error Flag:	0
Error Code:	N
Valid:	False
Lat/Long Decimal:	35.0587 -79.0485
Testlat:	Not reported
Regional Officer Project Mgr:	JWB

CIRCLE K 2720456 (Continued) **U001194009**

Region:	FAY
Company:	CIRCLE K STORES, INC.
Contact Person:	BRENT PUZAK
Telephone:	Not reported
RP Address:	1100 SITUS COURT, STE 100
RP City,St,Zip:	RALEIGH, NC 27606
RP County:	Not reported
Comments:	04/05/2001 Thomas called he is coming for a meeting about 9am Friday the 6th. I looked in the file and he had requested finicial help but never return it to this office. Marsh Smith 695-0800 I receive a copy of the letter sent to RCO for finicial NFA issued by RRO.
5 Min Quad:	Not reported
Last Modified:	9/12/2001
Incident Phase:	**Closed Out**
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Signed:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	8/31/2001

Click here to access the North Carolina DEQ records for this facility:

UST:

Name:	CIRCLE K 2720456
Address:	8191 CLIFFDALE RD
City,State,Zip:	FAYETTEVILLE, NC 28314
Facility Id:	00-0-0000012310
Contact:	CIRCLE K STORES INC.
Contact Address1:	2550 W. TYVOLA ROAD, SUITE 200
Contact Address2:	Not reported
Contact City/State/Zip:	CHARLOTTE, NC 28217-4579
FIPS County Desc:	Cumberland
Latitude:	35.05878
Longitude:	-79.04846
Tank Id:	1
Tank Status:	Removed
Installed Date:	05/06/1985
Perm Close Date:	11/01/2004
Product Name:	Gasoline, Gas Mix
Tank Capacity:	10000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Ball Float Valve
Spill Protection Name:	Catchment Basin
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall FRP

CIRCLE K 2720456 (Continued) **U001194009**

Decode for PCONS_KEY: Single Wall FRP
Decode for PSYS_KEY: Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id: 2
Tank Status: Removed
Installed Date: 05/06/1985
Perm Close Date: 11/01/2004
Product Name: Gasoline, Gas Mix
Tank Capacity: 10000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: Not reported
Commercial: Yes
Regulated: Yes
Other CP Tank: Not reported
Overfill Protection Name: Ball Float Valve
Spill Protection Name: Catchment Basin
Leak Detection Name: Unknown
Decode for TCONS_KEY: Single Wall FRP
Decode for PCONS_KEY: Single Wall FRP
Decode for PSYS_KEY: Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id: 3
Tank Status: Removed
Installed Date: 05/06/1985
Perm Close Date: 11/01/2004
Product Name: Gasoline, Gas Mix
Tank Capacity: 10000
Root Tank Id: Not reported
Main Tank: No
Compartment Tank: No
Manifold Tank: Not reported
Commercial: Yes
Regulated: Yes
Other CP Tank: Not reported
Overfill Protection Name: Ball Float Valve
Spill Protection Name: Catchment Basin
Leak Detection Name: Unknown
Decode for TCONS_KEY: Single Wall FRP
Decode for PCONS_KEY: Single Wall FRP
Decode for PSYS_KEY: Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id: 4
Tank Status: Removed
Installed Date: 05/06/1985
Perm Close Date: 11/01/2004
Product Name: Gasoline, Gas Mix

CIRCLE K 2720456 (Continued) **U001194009**

Tank Capacity:	10000
Root Tank Id:	Not reported
Main Tank:	No
Compartment Tank:	No
Manifold Tank:	Not reported
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Ball Float Valve
Spill Protection Name:	Catchment Basin
Leak Detection Name:	Unknown
Decode for TCONS_KEY:	Single Wall FRP
Decode for PCONS_KEY:	Single Wall FRP
Decode for PSYS_KEY:	Unknown

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	A1A
Tank Status:	Current
Installed Date:	11/15/2004
Perm Close Date:	Not reported
Product Name:	Gasoline, Gas Mix
Tank Capacity:	12000
Root Tank Id:	272092
Main Tank:	Yes
Compartment Tank:	Yes
Manifold Tank:	0
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Ball Float Valve
Spill Protection Name:	Catchment Basin
Leak Detection Name:	MLLD
Decode for TCONS_KEY:	Double Wall Steel/FRP
Decode for PCONS_KEY:	SW Flexible Piping
Decode for PSYS_KEY:	Pressurized System

Click here to access the North Carolina DEQ records for this facility:

Tank Id:	A1B
Tank Status:	Current
Installed Date:	11/15/2004
Perm Close Date:	Not reported
Product Name:	Diesel
Tank Capacity:	8000
Root Tank Id:	272092
Main Tank:	No
Compartment Tank:	Yes
Manifold Tank:	0
Commercial:	Yes
Regulated:	Yes
Other CP Tank:	Not reported
Overfill Protection Name:	Ball Float Valve
Spill Protection Name:	Catchment Basin
Leak Detection Name:	MLLD

CIRCLE K 2720456 (Continued) **U001194009**

Decode for TCONS_KEY: Double Wall Steel
Decode for PCONS_KEY: Other
Decode for PSYS_KEY: Pressurized System

Click here to access the North Carolina DEQ records for this facility:

Tank Id: A2A
Tank Status: Current
Installed Date: 11/15/2004
Perm Close Date: Not reported
Product Name: Gasoline, Gas Mix
Tank Capacity: 15000
Root Tank Id: 272092
Main Tank: Yes
Compartment Tank: Yes
Manifold Tank: 0
Commercial: Yes
Regulated: Yes
Other CP Tank: Not reported
Overfill Protection Name: Ball Float Valve
Spill Protection Name: Catchment Basin
Leak Detection Name: MLLD
Decode for TCONS_KEY: Double Wall Steel
Decode for PCONS_KEY: SW Flexible Piping
Decode for PSYS_KEY: Pressurized System

Click here to access the North Carolina DEQ records for this facility:

Tank Id: A2B
Tank Status: Current
Installed Date: 11/15/2004
Perm Close Date: Not reported
Product Name: Kerosene, Kero Mix
Tank Capacity: 5000
Root Tank Id: 272092
Main Tank: No
Compartment Tank: Yes
Manifold Tank: 0
Commercial: Yes
Regulated: Yes
Other CP Tank: Not reported
Overfill Protection Name: Ball Float Valve
Spill Protection Name: Catchment Basin
Leak Detection Name: MLLD
Decode for TCONS_KEY: Double Wall Steel
Decode for PCONS_KEY: SW Flexible Piping
Decode for PSYS_KEY: Pressurized System

Click here to access the North Carolina DEQ records for this facility:

NC Financial Assurance 1:
Name: CIRCLE K 2720456
Address: 8191 CLIFFDALE RD
City,State,Zip: FAYETTEVILLE, NC 28314
Facility ID: 00-0-0000012310

CIRCLE K 2720456 (Continued) **U001194009**

Region: 1
Financial Responsibility Desc: Letter of Credit
Financial Responsibility Name: Wells Fargo Bank, N.A.
Started Date: 03/10/2013
Ended Date: 03/10/2014

A6 **PANTRY 456** **IMD** **S106799468**
NE **8191 CLIFFDALE ROAD** **N/A**
1/4-1/2 **FAYETTEVILLE, NC**
0.262 mi.
1384 ft. **Site 5 of 5 in cluster A**

Relative: IMD:
Lower

Actual:
260 ft.

Facility ID:	29181
Name:	PANTRY 456
Address:	8191 CLIFFDALE ROAD
City,State,Zip:	FAYETTEVILLE, NC
Date Occurred:	11/1/2004
Submit Date:	11/5/2004
Incident Desc:	Leak under dispenser
Operator:	Renee Thomas
UST ID:	Not reported
Incident ID:	Not reported
Initials of UST Regional Contact:	Not reported
Regional Office:	Not reported
Responsible Party/Company Name:	Not reported
Ownership:	4
Responsible Party Contact Name:	Not reported
Operation:	6
Responsible Party Mailing Address:	Not reported
Responsible Party City,State,Zip:	Not reported
Ownership:	Private
Operation Type:	Commercial
Responsible Party County:	Not reported
Source of Contamination:	GASOLINE/DIESEL/KEROSENE
Source:	3
Type:	3
Location:	1
Petroleum Type:	Not reported
Date Incident Reported:	Not reported
Whether Tank is Commercial or Non Commercial:	Not reported
Site Priority:	Not reported
Whether Tank is Regulated:	Not reported
Priority Update:	Not reported
Notice of Regulatory Requirement:	Not reported
Wells Affected:	n
Notice of Violation:	Not reported
Phase 1 or Phase 2:	Not reported
Num Affected:	Not reported
Site Priority:	Not reported
Type:	GASOLINE/DIESEL
Location:	Facility
Current Risk Condition:	Not reported
Sampled By:	y
Samples Include:	Not reported
Initial reported risk of incident (never changes):	Not reported
7.5 Min Quad:	Not reported
5 Min Quad:	Not reported

PANTRY 456 (Continued) **S106799468**

Intermediate Condition Present:	Not reported
Latitude:	Not reported
Longitude:	Not reported
Use of Land, Industrial:	Not reported
Corrective Action Plan Selected - up to 5:	Not reported
RBCA:	Not reported
Date Close Review Requested From RP or Owner:	Not reported
Date Case Closed:	Not reported
Extent of Contamination:	Not reported
Number of Supply Wells Located on Property:	Not reported
MTBE in Well Y/N/U Yes, No or Unknown:	Not reported
Facility Phone Number:	Not reported
MTBE in Groundwater Y/N/U Yes, No or Unknown:	Not reported
Date Land Use Restriction Filed:	Not reported
Date Cleanup Initiated:	Not reported
Record Status:	Not reported
RBCA GW Codes:	Not reported
RBCA GW:	Not reported
Pollutant Type Present:	Not reported
Reference Number for Media Disk for Archived Record:	Not reported
RP Owner?:	Not reported
RP Operator?:	Not reported
RP Landowner?:	Not reported

Status:

Facility ID:	29181
Last Modified:	Not reported
Incident Phase:	RE
NOV Issued:	Not reported
NORR Issued:	Not reported
45 Day Report:	Not reported
Public Meeting Held:	Not reported
Corrective Action Planned:	Not reported
SOC Sighned:	Not reported
Reclassification Report:	Not reported
RS Designation:	Not reported
Closure Request Date:	Not reported
Close-out Report:	Not reported

Count: 2 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
CUMBERLAND COUNTY	S126476743	CLIFFDALE CLEANERS	5791 CLIFFDALE ROAD		DRYCLEANERS
CUMBERLAND COUNTY	S126476737	ANDERSON CLEANERS	8122-A CLIFFDALE RD.		DRYCLEANERS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: EPA
Telephone: N/A
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Quarterly

Federal CERCLIS list

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 05/25/2021
Date Data Arrived at EDR: 06/24/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 06/23/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site list

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 05/10/2021
Date Data Arrived at EDR: 05/13/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 82

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 08/05/2021
Next Scheduled EDR Contact: 11/22/2021
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 05/17/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/23/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 05/17/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 08/23/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 06/14/2021
Date Data Arrived at EDR: 06/17/2021
Date Made Active in Reports: 08/17/2021
Number of Days to Update: 61

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 09/21/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

State- and tribal - equivalent NPL

HSDS: Hazardous Substance Disposal Site

Locations of uncontrolled and unregulated hazardous waste sites. The file includes sites on the National Priority List as well as those on the state priority list.

Date of Government Version: 08/09/2011
Date Data Arrived at EDR: 11/08/2011
Date Made Active in Reports: 12/05/2011
Number of Days to Update: 27

Source: North Carolina Center for Geographic Information and Analysis
Telephone: 919-754-6580
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: No Update Planned

State- and tribal - equivalent CERCLIS

SHWS: Inactive Hazardous Sites Inventory

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 05/12/2021
Date Data Arrived at EDR: 06/10/2021
Date Made Active in Reports: 09/02/2021
Number of Days to Update: 84

Source: Department of Environment, Health and Natural Resources
Telephone: 919-508-8400
Last EDR Contact: 09/09/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: List of Solid Waste Facilities

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90

Source: Department of Environment and Natural Resources
Telephone: 919-733-0692
Last EDR Contact: 09/24/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Varies

OLI: Old Landfill Inventory

Old landfill inventory location information. (Does not include no further action sites and other agency lead sites).

Date of Government Version: 09/11/2020
Date Data Arrived at EDR: 10/09/2020
Date Made Active in Reports: 12/30/2020
Number of Days to Update: 82

Source: Department of Environment & Natural Resources
Telephone: 919-733-4996
Last EDR Contact: 07/09/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

DEBRIS: Solid Waste Active Disaster Debris Sites Listing

NCDEQ Division of Waste Management Solid Waste Section Temporary Disaster Debris Staging Site (TDDSS) Locations which are available to be activated in a disaster or emergency.. Disaster Debris Sites can only be used for temporary disaster debris storage if the site's responsible party activates the site for use by notifying the NCDEQ DWM Solid Waste Section staff during an emergency

Date of Government Version: 01/06/2021
Date Data Arrived at EDR: 03/16/2021
Date Made Active in Reports: 06/02/2021
Number of Days to Update: 78

Source: Department of Environmental Quality
Telephone: 919-707-8247
Last EDR Contact: 09/14/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: Varies

LCID: Land-Clearing and Inert Debris (LCID) Landfill Notifications

A list all of the Land-Clearing and Inert Debris (LCID) Landfill Notification facilities (under 2 acres in size) in North Carolina.

Date of Government Version: 05/11/2021
Date Data Arrived at EDR: 07/02/2021
Date Made Active in Reports: 09/28/2021
Number of Days to Update: 88

Source: Department of Environmental Quality
Telephone: 919-707-8248
Last EDR Contact: 07/02/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

State and tribal leaking storage tank lists

LUST: Regional UST Database

This database contains information obtained from the Regional Offices. It provides a more detailed explanation of current and historic activity for individual sites, as well as what was previously found in the Incident Management Database. Sites in this database with Incident Numbers are considered LUSTs.

Date of Government Version: 04/30/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 07/21/2021
Number of Days to Update: 79

Source: Department of Environment and Natural Resources
Telephone: 919-707-8200
Last EDR Contact: 08/03/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

LAST: Leaking Aboveground Storage Tanks

A listing of leaking aboveground storage tank site locations.

Date of Government Version: 04/30/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 07/20/2021
Number of Days to Update: 78

Source: Department of Environment & Natural Resources
Telephone: 877-623-6748
Last EDR Contact: 08/03/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land

Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/06/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 05/28/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 05/27/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 05/27/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 06/01/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/28/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 05/17/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

LUST TRUST: State Trust Fund Database
This database contains information about claims against the State Trust Funds for reimbursements for expenses incurred while remediating Leaking USTs.

Date of Government Version: 07/02/2021
Date Data Arrived at EDR: 07/02/2021
Date Made Active in Reports: 09/27/2021
Number of Days to Update: 87
Source: Department of Environment and Natural Resources
Telephone: 919-733-1315
Last EDR Contact: 07/02/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 01/29/2021
Date Data Arrived at EDR: 02/17/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 33

Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

UST: Petroleum Underground Storage Tank Database
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 04/30/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 07/20/2021
Number of Days to Update: 78

Source: Department of Environment and Natural Resources
Telephone: 919-733-1308
Last EDR Contact: 08/03/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

AST: AST Database
Facilities with aboveground storage tanks that have a capacity greater than 21,000 gallons.

Date of Government Version: 05/18/2021
Date Data Arrived at EDR: 06/09/2021
Date Made Active in Reports: 08/30/2021
Number of Days to Update: 82

Source: Department of Environment and Natural Resources
Telephone: 919-715-6183
Last EDR Contact: 09/09/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: Semi-Annually

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/06/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/27/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 05/17/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 06/01/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 05/27/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 05/27/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/28/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 06/11/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 05/28/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/20/2021
Number of Days to Update: 90

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 06/17/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

INST CONTROL: No Further Action Sites With Land Use Restrictions Monitoring

A land use restricted site is a property where there are limits or requirements on future use of the property due to varying levels of cleanup possible, practical, or necessary at the site.

Date of Government Version: 09/04/2020
Date Data Arrived at EDR: 09/09/2020
Date Made Active in Reports: 12/03/2020
Number of Days to Update: 85

Source: Department of Environmental Quality
Telephone: 919-508-8400
Last EDR Contact: 09/10/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Quarterly

State and tribal voluntary cleanup sites

VCP: Responsible Party Voluntary Action Sites
Responsible Party Voluntary Action site locations.

Date of Government Version: 05/12/2021
Date Data Arrived at EDR: 06/07/2021
Date Made Active in Reports: 08/30/2021
Number of Days to Update: 84
Source: Department of Environment and Natural Resources
Telephone: 919-508-8400
Last EDR Contact: 09/09/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Quarterly

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27
Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142
Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields Projects Inventory
A brownfield site is an abandoned, idled, or underused property where the threat of environmental contamination has hindered its redevelopment. All of the sites in the inventory are working toward a brownfield agreement for cleanup and liabitliy control.

Date of Government Version: 06/01/2021
Date Data Arrived at EDR: 06/24/2021
Date Made Active in Reports: 09/17/2021
Number of Days to Update: 85
Source: Department of Environment and Natural Resources
Telephone: 919-733-4996
Last EDR Contact: 09/28/2021
Next Scheduled EDR Contact: 01/10/2022
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 06/10/2021
Date Data Arrived at EDR: 06/10/2021
Date Made Active in Reports: 08/17/2021
Number of Days to Update: 68
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/14/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: Recycling Center Listing
A listing of recycling center locations.

Date of Government Version: 01/28/2021
Date Data Arrived at EDR: 01/29/2021
Date Made Active in Reports: 04/23/2021
Number of Days to Update: 84

Source: Department of Environment & Natural Resources
Telephone: 919-707-8137
Last EDR Contact: 07/21/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Varies

HIST LF: Solid Waste Facility Listing
A listing of solid waste facilities.

Date of Government Version: 11/06/2006
Date Data Arrived at EDR: 02/13/2007
Date Made Active in Reports: 03/02/2007
Number of Days to Update: 17

Source: Department of Environment & Natural Resources
Telephone: 919-733-0692
Last EDR Contact: 01/19/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 07/20/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 07/20/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 05/18/2021
Date Data Arrived at EDR: 05/18/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 77

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/17/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 05/18/2021
Date Data Arrived at EDR: 05/18/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 77

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 08/17/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Quarterly

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/12/2021
Date Data Arrived at EDR: 09/13/2021
Date Made Active in Reports: 09/28/2021
Number of Days to Update: 15

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 09/13/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

SPILLS: Spills Incident Listing

A listing spills, hazardous material releases, sanitary sewer overflows, wastewater treatment plant bypasses and upsets, citizen complaints, and any other environmental emergency calls reported to the agency.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 06/08/2021
Date Made Active in Reports: 08/30/2021
Number of Days to Update: 83

Source: Department of Environment & Natural Resources
Telephone: 919-807-6308
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Quarterly

IMD: Incident Management Database

Groundwater and/or soil contamination incidents

Date of Government Version: 07/30/2021
Date Data Arrived at EDR: 08/03/2021
Date Made Active in Reports: 08/06/2021
Number of Days to Update: 3

Source: Department of Environment and Natural Resources
Telephone: 877-623-6748
Last EDR Contact: 08/03/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: No Update Planned

SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 09/27/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/06/2013
Number of Days to Update: 62

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SPILLS 80: SPILLS80 data from FirstSearch

Spills 80 includes those spill and release records available from FirstSearch databases prior to 1990. Typically, they may include chemical, oil and/or hazardous substance spills recorded before 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 80.

Date of Government Version: 06/14/2001
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/06/2013
Number of Days to Update: 62

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 03/22/2021
Date Data Arrived at EDR: 03/23/2021
Date Made Active in Reports: 05/19/2021
Number of Days to Update: 57

Source: Environmental Protection Agency
Telephone: (404) 562-8651
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 05/04/2021
Date Data Arrived at EDR: 05/18/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 85

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 08/17/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 07/13/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Semi-Annually

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 07/09/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 08/06/2021
Next Scheduled EDR Contact: 11/22/2021
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/13/2021
Date Data Arrived at EDR: 09/15/2021
Date Made Active in Reports: 09/28/2021
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 07/26/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 08/06/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 09/17/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 08/17/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 04/19/2021
Date Data Arrived at EDR: 04/20/2021
Date Made Active in Reports: 07/16/2021
Number of Days to Update: 87

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 07/19/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 05/07/2021
Date Data Arrived at EDR: 05/13/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 07/14/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 12/30/2020
Date Data Arrived at EDR: 01/14/2021
Date Made Active in Reports: 03/05/2021
Number of Days to Update: 50

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 11/19/2020
Date Data Arrived at EDR: 01/08/2021
Date Made Active in Reports: 03/22/2021
Number of Days to Update: 73

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 07/09/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 06/29/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 03/08/2021
Date Data Arrived at EDR: 03/11/2021
Date Made Active in Reports: 05/11/2021
Number of Days to Update: 61
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 07/14/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 12/01/2020
Date Made Active in Reports: 02/09/2021
Number of Days to Update: 70
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 09/03/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 08/31/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/06/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 09/27/2021
Next Scheduled EDR Contact: 01/10/2022
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 07/23/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2021
Date Data Arrived at EDR: 07/14/2021
Date Made Active in Reports: 07/16/2021
Number of Days to Update: 2

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 07/02/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 06/22/2020
Date Made Active in Reports: 11/20/2020
Number of Days to Update: 151

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 07/02/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 08/08/2017
Date Data Arrived at EDR: 09/11/2018
Date Made Active in Reports: 09/14/2018
Number of Days to Update: 3

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 07/23/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 08/12/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 07/29/2021
Date Data Arrived at EDR: 08/04/2021
Date Made Active in Reports: 08/31/2021
Number of Days to Update: 27

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 10/11/2021
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/03/2021
Date Data Arrived at EDR: 05/25/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 78

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 08/24/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 06/30/2021
Date Data Arrived at EDR: 07/01/2021
Date Made Active in Reports: 09/28/2021
Number of Days to Update: 89

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 09/09/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/26/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 08/26/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 06/15/2021
Date Data Arrived at EDR: 06/16/2021
Date Made Active in Reports: 08/17/2021
Number of Days to Update: 62
Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 09/14/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 05/05/2021
Date Data Arrived at EDR: 05/18/2021
Date Made Active in Reports: 08/17/2021
Number of Days to Update: 91
Source: EPA
Telephone: (404) 562-9900
Last EDR Contact: 08/31/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82
Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 08/26/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 06/26/2021
Date Data Arrived at EDR: 07/01/2021
Date Made Active in Reports: 09/28/2021
Number of Days to Update: 89
Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 07/01/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 07/02/2020
Date Made Active in Reports: 09/17/2020
Number of Days to Update: 77
Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 07/07/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 05/14/2021
Date Data Arrived at EDR: 05/14/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 81
Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 08/13/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Quarterly

AIRS: Air Quality Permit Listing

A listing of facilities with air quality permits.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 06/07/2021
Date Made Active in Reports: 08/27/2021
Number of Days to Update: 81

Source: Department of Environmental Quality
Telephone: 919-707-8726
Last EDR Contact: 09/08/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Varies

ASBESTOS: ASBESTOS
Asbestos notification sites

Date of Government Version: 04/30/2021
Date Data Arrived at EDR: 05/17/2021
Date Made Active in Reports: 08/03/2021
Number of Days to Update: 78

Source: Department of Health & Human Services
Telephone: 919-707-5973
Last EDR Contact: 07/14/2021
Next Scheduled EDR Contact: 11/01/2021
Data Release Frequency: Varies

COAL ASH: Coal Ash Disposal Sites
A listing of coal combustion products distribution permits issued by the Division for the treatment, storage, transportation, use and disposal of coal combustion products.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 06/22/2021
Date Made Active in Reports: 09/22/2021
Number of Days to Update: 92

Source: Department of Environment & Natural Resources
Telephone: 919-807-6359
Last EDR Contact: 09/24/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Varies

DRYCLEANERS: Drycleaning Sites
Potential and known drycleaning sites, active and abandoned, that the Drycleaning Solvent Cleanup Program has knowledge of and entered into this database.

Date of Government Version: 03/31/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/26/2021
Number of Days to Update: 84

Source: Department of Environment & Natural Resources
Telephone: 919-508-8400
Last EDR Contact: 09/14/2021
Next Scheduled EDR Contact: 12/27/2021
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing
A listing of financial assurance information for underground storage tank facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 04/30/2021
Date Data Arrived at EDR: 05/03/2021
Date Made Active in Reports: 07/20/2021
Number of Days to Update: 78

Source: Department of Environment & Natural Resources
Telephone: 919-733-1322
Last EDR Contact: 08/03/2021
Next Scheduled EDR Contact: 11/15/2021
Data Release Frequency: Quarterly

Financial Assurance 2: Financial Assurance Information Listing
Information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 10/02/2012
Date Data Arrived at EDR: 10/03/2012
Date Made Active in Reports: 10/26/2012
Number of Days to Update: 23

Source: Department of Environmental & Natural Resources
Telephone: 919-508-8496
Last EDR Contact: 09/15/2021
Next Scheduled EDR Contact: 01/03/2022
Data Release Frequency: Varies

Financial Assurance 3: Financial Assurance Information
Hazardous waste financial assurance information.

Date of Government Version: 06/02/2021
Date Data Arrived at EDR: 06/03/2021
Date Made Active in Reports: 08/25/2021
Number of Days to Update: 83
Source: Department of Environment & Natural Resources
Telephone: 919-707-8222
Last EDR Contact: 08/31/2021
Next Scheduled EDR Contact: 12/19/2021
Data Release Frequency: Varies

NPDES: NPDES Facility Location Listing
General information regarding NPDES(National Pollutant Discharge Elimination System) permits.

Date of Government Version: 04/02/2021
Date Data Arrived at EDR: 04/27/2021
Date Made Active in Reports: 07/15/2021
Number of Days to Update: 79
Source: Department of Environment & Natural Resources
Telephone: 919-733-7015
Last EDR Contact: 07/26/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Varies

UIC: Underground Injection Wells Listing
A listing of uncerground injection wells locations.

Date of Government Version: 10/26/2020
Date Data Arrived at EDR: 11/30/2020
Date Made Active in Reports: 12/07/2020
Number of Days to Update: 7
Source: Department of Environment & Natural Resources
Telephone: 919-807-6412
Last EDR Contact: 09/03/2021
Next Scheduled EDR Contact: 12/13/2021
Data Release Frequency: Quarterly

AOP: Animal Operation Permits Listing
This listing includes animal operations that are required to be permitted by the state.

Date of Government Version: 04/01/2020
Date Data Arrived at EDR: 05/26/2020
Date Made Active in Reports: 05/27/2020
Number of Days to Update: 1
Source: Department of Environmental Quality
Telephone: 919-707-9129
Last EDR Contact: 09/10/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Varies

SEPT HAULERS: Permitted Septage Haulers Listing
This list of all active and permitted Septage Land Application Site (SLAS) and Septage Detention and Treatment Facility (SDTF) sites in North Carolina. The purpose of this map is to provide the public and government entities a visual overview of the businesses that manage septage and septage facilities throughout the state.

Date of Government Version: 03/25/2021
Date Data Arrived at EDR: 04/06/2021
Date Made Active in Reports: 06/24/2021
Number of Days to Update: 79
Source: Department of Environmental Quality
Telephone: 919-707-8248
Last EDR Contact: 07/02/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

CCB: Coal Ash Structural Fills (CCB) Listing
These are not permitted Coal Ash landfills A list all of the now closed Coal Ash Structural Fills (CCB) in North Carolina, in point data form. The purpose is to provide the public and other government entities a visual overview of coal ash structural fills throughout the state and increase public awareness of their current locations.

Date of Government Version: 05/10/2021
Date Data Arrived at EDR: 07/02/2021
Date Made Active in Reports: 09/27/2021
Number of Days to Update: 87
Source: Department of Environmental Quality
Telephone: 919-707-8248
Last EDR Contact: 07/02/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System
Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3
Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 08/26/2021
Next Scheduled EDR Contact: 12/06/2021
Data Release Frequency: Varies

PCSRP: Petroleum-Contaminated Soil Remediation Permits

To treat petroleum-contaminated soil in order to protect North Carolinaa??s environment and the health of the citizens of North Carolina.

Date of Government Version: 05/25/2021
Date Data Arrived at EDR: 07/02/2021
Date Made Active in Reports: 09/27/2021
Number of Days to Update: 87

Source: Department of Environmental Quality
Telephone: 919-707-8248
Last EDR Contact: 07/02/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 06/30/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Varies

PCS INACTIVE: Listing of Inactive PCS Permits

An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 06/30/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Semi-Annually

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 06/30/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Semi-Annually

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environment, Health and Natural Resources in North Carolina.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environment, Health and Natural Resources
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LF: Recovered Government Archive Solid Waste Facilities List

The EDR Recovered Government Archive Landfill database provides a list of landfills derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environment, Health and Natural Resources in North Carolina.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/13/2014
Number of Days to Update: 196

Source: Department of Environment, Health and Natural Resources
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environment, Health and Natural Resources in North Carolina.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/20/2013
Number of Days to Update: 172

Source: Department of Environment, Health and Natural Resources
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 03/24/2021
Date Data Arrived at EDR: 05/11/2021
Date Made Active in Reports: 07/28/2021
Number of Days to Update: 78

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 08/10/2021
Next Scheduled EDR Contact: 11/22/2021
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 07/09/2021
Next Scheduled EDR Contact: 10/18/2021
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data

Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 04/29/2020
Date Made Active in Reports: 07/10/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 07/29/2021
Next Scheduled EDR Contact: 11/08/2021
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 07/07/2021
Next Scheduled EDR Contact: 10/25/2021
Data Release Frequency: Annually

RI MANIFEST: Manifest information

Hazardous waste manifest information

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 02/11/2021
Date Made Active in Reports: 02/24/2021
Number of Days to Update: 13

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 08/11/2021
Next Scheduled EDR Contact: 11/29/2021
Data Release Frequency: Annually

WI MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/01/2021
Next Scheduled EDR Contact: 12/20/2021
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
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Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Child Care Facility List
Source: Department of Health & Human Services
Telephone: 919-662-4499

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: US Fish & Wildlife Service
Telephone: 703-358-2171

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

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GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

CLIFFMORE PARK
5133 IDENTITY LANE
FAYETTEVILLE, NC 28314

TARGET PROPERTY COORDINATES

Latitude (North):	35.056199 - 35° 3' 22.32''
Longitude (West):	79.052914 - 79° 3' 10.49''
Universal Tranverse Mercator:	Zone 17
UTM X (Meters):	677569.1
UTM Y (Meters):	3880811.0
Elevation:	291 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5945509 CLIFDALE, NC
Version Date:	2013

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

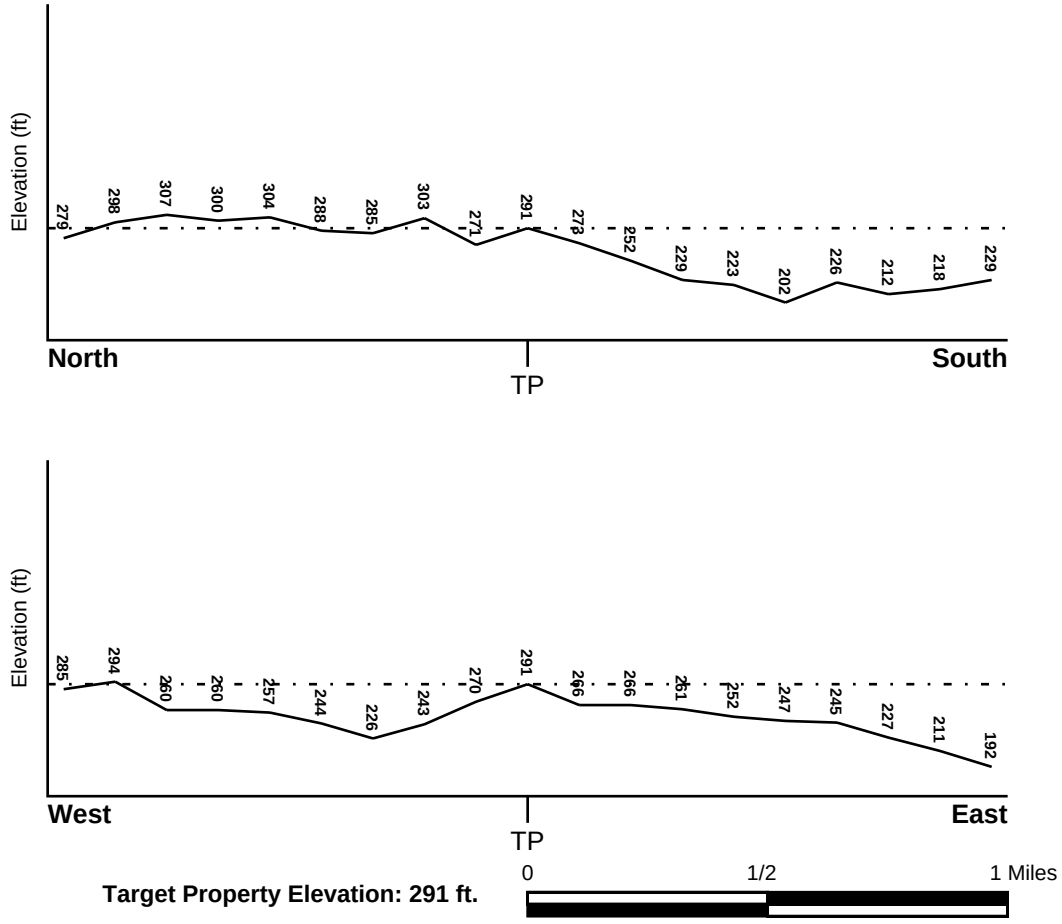
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
3710948700J	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
3710948800J	FEMA FIRM Flood data
3710947700K	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
CLIFDALE	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

Era:	Mesozoic
System:	Cretaceous
Series:	Woodbine and Tuscaloosa Groups
Code:	uK1 *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	AUTRYVILLE
Soil Surface Texture:	sand
Hydrologic Group:	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.
Soil Drainage Class:	Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.

Hydric Status: Soil does not meet the requirements for a hydric soil.

Corrosion Potential - Uncoated Steel: LOW

Depth to Bedrock Min: > 60 inches

Depth to Bedrock Max: > 60 inches

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
	Boundary			Classification			
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil	Permeability Rate (in/hr)	Soil Reaction (pH)
1	0 inches	26 inches	sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 20.00 Min: 6.00	Max: 6.50 Min: 4.50
2	26 inches	41 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 6.00 Min: 2.00	Max: 5.50 Min: 4.50
3	41 inches	58 inches	sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Clean Sands, Poorly graded sand. COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 20.00 Min: 6.00	Max: 5.50 Min: 4.50
4	58 inches	85 inches	sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 2.00 Min: 0.60	Max: 5.50 Min: 4.50

OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: loamy sand
loamy fine sand
loam
sandy loam

Surficial Soil Types: loamy sand
loamy fine sand
loam
sandy loam

Shallow Soil Types: loamy sand
sand
sandy clay loam
fine sandy loam

Deeper Soil Types: sandy clay loam

stratified
sand
sandy clay

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A3	NC0326332	1/4 - 1/2 Mile NE

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	NC3000000005120	1/8 - 1/4 Mile SW
2	NC3000000005131	1/8 - 1/4 Mile WSW
A4	NC3000000005119	1/4 - 1/2 Mile NNE
5	NC3000000005130	1/4 - 1/2 Mile East
6	NC3000000005122	1/2 - 1 Mile NNW
7	NC3000000005108	1/2 - 1 Mile NE
8	NC3000000005126	1/2 - 1 Mile NE
9	NC3000000005141	1/2 - 1 Mile SSE
10	NC3000000005118	1/2 - 1 Mile West
11	NC3000000005138	1/2 - 1 Mile ENE
12	NC3000000005133	1/2 - 1 Mile SSE
13	NC3000000005139	1/2 - 1 Mile NNW
14	NC3000000005125	1/2 - 1 Mile West

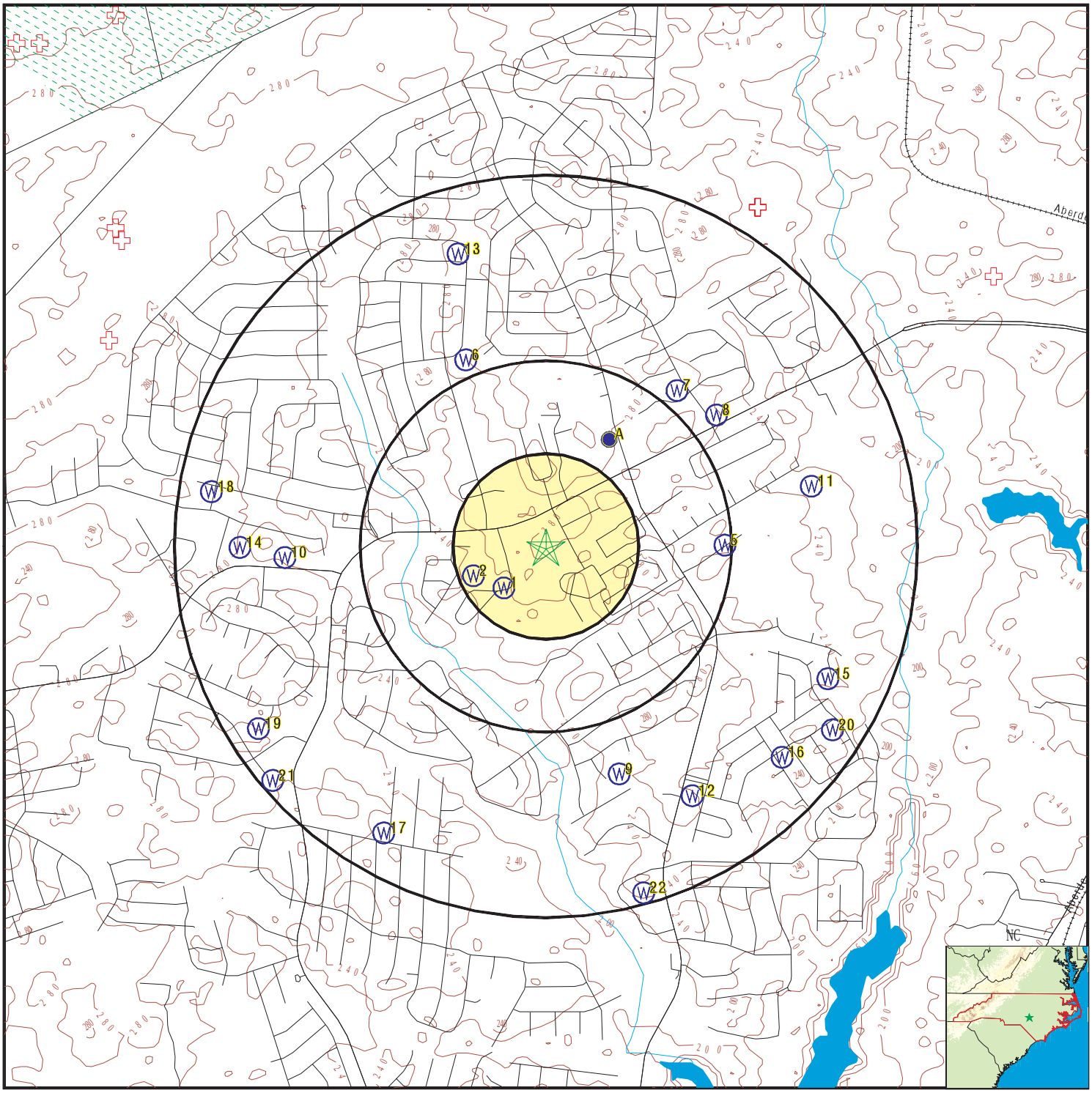
GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
15	NC3000000005135	1/2 - 1 Mile ESE
16	NC3000000005134	1/2 - 1 Mile SE
17	NC3000000005115	1/2 - 1 Mile SSW
18	NC3000000005109	1/2 - 1 Mile West
19	NC3000000005129	1/2 - 1 Mile WSW
20	NC3000000005136	1/2 - 1 Mile ESE
21	NC3000000005114	1/2 - 1 Mile SW
22	NC3000000005137	1/2 - 1 Mile SSE

OTHER STATE DATABASE INFORMATION

PHYSICAL SETTING SOURCE MAP - 6682545.2s



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons
- Groundwater Flow Direction
- GI Indeterminate Groundwater Flow at Location
- GV Groundwater Flow Varies at Location
- Wildlife Areas
- Natural Areas
- Rare & Endangered Species

SITE NAME:	Cliffmore Park	CLIENT:	Atlantic Shores Environmental
ADDRESS:	5133 Identity Lane Fayetteville NC 28314	CONTACT:	Cheryl Moody
		INQUIRY #:	6682545.2s
LAT/LONG:	35.056199 / 79.052914	DATE:	September 29, 2021 11:34 am

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

	Database	EDR ID Number
1 **SW** **1/8 - 1/4 Mile** **Lower**	**NC WELLS**	**NC3000000005120**

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #14
Facility Type:	Well	Well Depth:	100
Owner:	AQUA NORTH CAROLINA INC.		

	Database	EDR ID Number
2 **WSW** **1/8 - 1/4 Mile** **Lower**	**NC WELLS**	**NC3000000005131**

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #24
Facility Type:	Well	Well Depth:	75
Owner:	AQUA NORTH CAROLINA INC.		

	Database	EDR ID Number
A3 **NE** **1/4 - 1/2 Mile** **Lower**	**FRDS PWS**	**NC0326332**

Epa region:	04	State:	NC
Pwsid:	NC0326332	Pwsname:	CLIFFDALE WEST
Cityserved:	Not Reported	Stateserved:	NC
Zipserved:	Not Reported	Fipscounty:	37051
Status:	Active	Retpopsrvd:	15288
Pwssvcconn:	5880	Psource longname:	Groundwater
Pwstype:	CWS	Owner:	Private
Contact:	WILLIAMS, DON	Contactorgname:	WILLIAMS, DON
Contactphone:	910-270-1412	Contactaddress1:	105 HAMPSTEAD VILLAGE
Contactaddress2:	BUILDING 24 - I	Contactcity:	HAMPSTEAD
Contactstate:	NC	Contactzip:	28443
Pwsactivitycode:	A		

Pwsid:	NC0326332	Facid:	10555
Facname:	TREATMENT_PLT_WELL #1A	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	manganese removal
Trtprocess:	sequestration	Factypecode:	TP

Pwsid:	NC0326332	Facid:	10555
Facname:	TREATMENT_PLT_WELL #1A	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP

Pwsid:	NC0326332	Facid:	10555
Facname:	TREATMENT_PLT_WELL #1A	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP

Pwsid:	NC0326332	Facid:	3960

Facname:	TREATMENT_PLT_WELL #3	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	3960
Facname:	TREATMENT_PLT_WELL #3	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4265
Facname:	TREATMENT_PLT_WELL #4	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4265
Facname:	TREATMENT_PLT_WELL #4	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4266
Facname:	TREATMENT_PLT_WELL #5	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4266
Facname:	TREATMENT_PLT_WELL #5	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4267
Facname:	TREATMENT_PLT_WELL #6	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4267
Facname:	TREATMENT_PLT_WELL #6	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4268
Facname:	TREATMENT_PLT_WELL #7	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4268
Facname:	TREATMENT_PLT_WELL #7	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4269
Facname:	TREATMENT_PLT_WELL #8	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4269
Facname:	TREATMENT_PLT_WELL #8	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4270
Facname:	TREATMENT_PLT_WELL #9	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	corrosion control

Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4270
Facname:	TREATMENT_PLT_WELL #9	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4271
Facname:	TREATMENT_PLT_WELL #10	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4271
Facname:	TREATMENT_PLT_WELL #10	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4272
Facname:	TREATMENT_PLT_WELL #11	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4272
Facname:	TREATMENT_PLT_WELL #11	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4273
Facname:	TREATMENT_PLT_WELL #12	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4273
Facname:	TREATMENT_PLT_WELL #12	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4274
Facname:	TREATMENT_PLT_WELL #13	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4274
Facname:	TREATMENT_PLT_WELL #13	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4275
Facname:	TREATMENT_PLT_WELL #14	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	radionuclides removal
Trtprocess:	ion exchange	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4275
Facname:	TREATMENT_PLT_WELL #14	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4275
Facname:	TREATMENT_PLT_WELL #14	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP

Pwsid:	NC0326332	Facid:	4276
Facname:	TREATMENT_PLT_WELL #15	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4276
Facname:	TREATMENT_PLT_WELL #15	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4277
Facname:	TREATMENT_PLT_WELL #16	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	radionuclides removal
Trtprocess:	ion exchange	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4277
Facname:	TREATMENT_PLT_WELL #16	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4277
Facname:	TREATMENT_PLT_WELL #16	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4278
Facname:	TREATMENT_PLT_WELL #17	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4278
Facname:	TREATMENT_PLT_WELL #17	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4279
Facname:	TREATMENT_PLT_WELL #18	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4279
Facname:	TREATMENT_PLT_WELL #18	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4280
Facname:	TREATMENT_PLT_WELL #19	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4280
Facname:	TREATMENT_PLT_WELL #19	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4281
Facname:	TREATMENT_PLT_WELL #20	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4281
Facname:	TREATMENT_PLT_WELL #20	Factype:	Treatment_plant

Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4282
Facname:	TREATMENT_PLT_WELL #21	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4282
Facname:	TREATMENT_PLT_WELL #21	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4283
Facname:	TREATMENT_PLT_WELL #22	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	corrosion control
Trtprocess:	inhibitor, polyphosphate	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4283
Facname:	TREATMENT_PLT_WELL #22	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4283
Facname:	TREATMENT_PLT_WELL #22	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4284
Facname:	TREATMENT_PLT_WELL #23	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	inhibitor, polyphosphate	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4284
Facname:	TREATMENT_PLT_WELL #23	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4284
Facname:	TREATMENT_PLT_WELL #23	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4285
Facname:	TREATMENT_PLT_WELL #24	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	corrosion control
Trtprocess:	inhibitor, polyphosphate	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4285
Facname:	TREATMENT_PLT_WELL #24	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4285
Facname:	TREATMENT_PLT_WELL #24	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4286
Facname:	TREATMENT_PLT_WELL #25	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	inhibitor, polyphosphate	Factypecode:	TP

Pwsid:	NC0326332	Facid:	4286
Facname:	TREATMENT_PLT_WELL #25	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4286
Facname:	TREATMENT_PLT_WELL #25	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4287
Facname:	TREATMENT_PLT_WELL #26	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4287
Facname:	TREATMENT_PLT_WELL #26	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4694
Facname:	TREATMENT_PLT_WELL #27	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4694
Facname:	TREATMENT_PLT_WELL #27	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4694
Facname:	TREATMENT_PLT_WELL #27	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	manganese removal
Trtprocess:	sequestration	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4695
Facname:	TREATMENT_PLT_WELL #28	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	corrosion control
Trtprocess:	inhibitor, polyphosphate	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4695
Facname:	TREATMENT_PLT_WELL #28	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4695
Facname:	TREATMENT_PLT_WELL #28	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4696
Facname:	TREATMENT_PLT_WELL #29	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	inhibitor, polyphosphate	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4696
Facname:	TREATMENT_PLT_WELL #29	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4696
Facname:	TREATMENT_PLT_WELL #29	Factype:	Treatment_plant

Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4697
Facname:	TREATMENT_PLT_WELL #30A	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	corrosion control
Trtprocess:	inhibitor, polyphosphate	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4697
Facname:	TREATMENT_PLT_WELL #30A	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4697
Facname:	TREATMENT_PLT_WELL #30A	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4698
Facname:	TREATMENT_PLT_WELL #34	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4698
Facname:	TREATMENT_PLT_WELL #34	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4699
Facname:	TREATMENT_PLT_WELL #33	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4699
Facname:	TREATMENT_PLT_WELL #33	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4700
Facname:	TREATMENT_PLT_WELL #35	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4700
Facname:	TREATMENT_PLT_WELL #35	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4701
Facname:	TREATMENT_PLT_WELL #36	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4702
Facname:	TREATMENT_PLT_WELL #37	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4702
Facname:	TREATMENT_PLT_WELL #37	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP

Pwsid:	NC0326332	Facid:	4703
Facname:	TREATMENT_PLT_WELL #38	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4703
Facname:	TREATMENT_PLT_WELL #38	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4705
Facname:	TREATMENT_PLT_WELL #39	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	4705
Facname:	TREATMENT_PLT_WELL #39	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	iron removal
Trtprocess:	sequestration	Factypecode:	TP
Pwsid:	NC0326332	Facid:	68855
Facname:	TREATMENT_PLT_WELL #71	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	68855
Facname:	TREATMENT_PLT_WELL #71	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	68866
Facname:	TREATMENT_PLT_WELLS# 72-73		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	hypochlorination, post
Factypecode:	TP		
Pwsid:	NC0326332	Facid:	68866
Facname:	TREATMENT_PLT_WELLS# 72-73		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	corrosion control	Trtprocess:	ph adjustment
Factypecode:	TP		
Pwsid:	NC0326332	Facid:	70098
Facname:	TREATMENT_PLT_WELL #40	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	iron removal
Trtprocess:	sequestration	Factypecode:	TP
Pwsid:	NC0326332	Facid:	70098
Facname:	TREATMENT_PLT_WELL #40	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
Pwsid:	NC0326332	Facid:	9843
Facname:	TREATMENT_PLT_WELL #2	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment	Factypecode:	TP
Pwsid:	NC0326332	Facid:	9843
Facname:	TREATMENT_PLT_WELL #2	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP

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Pwsid:	NC0326332	Facid:	9843
Facname:	TREATMENT_PLT_WELL #2	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	manganese removal
Trtprocess:	sequestration	Factypecode:	TP
PWS ID:	NC0326332	PWS name:	CLIFFDALE WEST
Address:	Not Reported	Care of:	Not Reported
City:	FAYETTEVILLE	State:	NC
Zip:	28309	Owner:	CLIFFDALE WEST
Source code:	Ground water	Population:	12420
PWS ID:	NC0326332	PWS type:	System Owner/Responsible Party
PWS name:	BILLY MCPHAUL OR MGR	PWS address:	Not Reported
PWS city:	FAYETTEVILLE	PWS state:	NC
PWS zip:	28309	PWS ID:	NC0326332
PWS type:	System Owner/Responsible Party		
PWS name:	LAGRANGE WATER WORKS INC.	PWS address:	Not Reported
PWS city:	FAYETTEVILLE	PWS state:	NC
PWS zip:	28309	PWS name:	CLIFFDALE WEST
PWS type code:	C	Retail population served:	15288
Contact:	ROBERTS, THOMAS	Contact address:	202 MACKENAN COURT
Contact address:	AQUA NORTH CAROLINA	Contact city:	CARY
Contact state:	NC	Contact zip:	25711
Contact telephone:	919-467-9462		
County:	CUMBERLAND	Source:	Ground water
Treatment Objective:	CORROSION CONTROL	Process:	INHIBITOR, POLYPHOSPHATE
Population:	12420		
County:	CUMBERLAND	Source:	Ground water
Treatment Objective:	CORROSION CONTROL	Process:	PH ADJUSTMENT
Population:	12420		
County:	CUMBERLAND	Source:	Ground water
Treatment Objective:	DISINFECTION	Process:	HYPOCHLORINATION, POST
Population:	12420		
PWS ID:	NC0326332	Activity status:	Active
Date system activated:	7706	Date system deactivated:	Not Reported
Retail population:	00009450	System name:	CLIFFDALE WEST
System address:	Not Reported	System city:	FAYETTEVILLE
System state:	NC	System zip:	28309
County FIPS:	026	City served:	FAYETTEVILLE
Population served:	5,001 - 10,000 Persons	Treatment:	Treated
Latitude:	350350	Longitude:	0790435
Latitude:	350425	Longitude:	0790355
Latitude:	350250	Longitude:	0790440
Latitude:	350335	Longitude:	0790300
Latitude:	350330	Longitude:	0790400
Latitude:	350220	Longitude:	0790330
Latitude:	350225	Longitude:	0790330
Latitude:	350245	Longitude:	0790345

Latitude:	350255	Longitude:	0790400
Latitude:	350400	Longitude:	0790415
Latitude:	350350	Longitude:	0790420
Latitude:	350345	Longitude:	0790420
Latitude:	350330	Longitude:	0790420
Latitude:	350330	Longitude:	0790415
Latitude:	350345	Longitude:	0790300
Latitude:	350345	Longitude:	0790245
Latitude:	350309	Longitude:	0785242

State:	NC	Latitude degrees:	35
Latitude minutes:	2	Latitude seconds:	8.0000
Longitude degrees:	79	Longitude minutes:	3
Longitude seconds:	40.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	2	Latitude seconds:	20.0000
Longitude degrees:	79	Longitude minutes:	3
Longitude seconds:	30.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	2	Latitude seconds:	24.0000
Longitude degrees:	79	Longitude minutes:	2
Longitude seconds:	52.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	2	Latitude seconds:	25.0000
Longitude degrees:	79	Longitude minutes:	3
Longitude seconds:	30.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	2		
Latitude seconds:	35.0000	Longitude degrees:	79
Longitude minutes:	4	Longitude seconds:	12.0000

State:	NC	Latitude degrees:	35
Latitude minutes:	2	Latitude seconds:	45.0000
Longitude degrees:	79	Longitude minutes:	3
Longitude seconds:	45.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	2	Latitude seconds:	49.0000
Longitude degrees:	79	Longitude minutes:	2
Longitude seconds:	48.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	2	Latitude seconds:	50.0000
Longitude degrees:	79	Longitude minutes:	4
Longitude seconds:	40.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	2	Latitude seconds:	54.0000
Longitude degrees:	79	Longitude minutes:	2
Longitude seconds:	32.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	2	Latitude seconds:	55.0000
Longitude degrees:	79	Longitude minutes:	4
Longitude seconds:	0.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	2	Latitude seconds:	58.0000
Longitude degrees:	79	Longitude minutes:	3
Longitude seconds:	58.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	2	Latitude seconds:	59.0000
Longitude degrees:	79	Longitude minutes:	2
Longitude seconds:	45.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	3	Latitude seconds:	2.0000
Longitude degrees:	79	Longitude minutes:	2
Longitude seconds:	22.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	3	Latitude seconds:	5.0000
Longitude degrees:	79	Longitude minutes:	2
Longitude seconds:	27.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	3	Latitude seconds:	21.0000
Longitude degrees:	79	Longitude minutes:	2
Longitude seconds:	39.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	3	Latitude seconds:	21.0000
Longitude degrees:	79	Longitude minutes:	4
Longitude seconds:	3.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	3	Latitude seconds:	30.0000
Longitude degrees:	79	Longitude minutes:	2
Longitude seconds:	45.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	3	Latitude seconds:	30.0000
Longitude degrees:	79	Longitude minutes:	4
Longitude seconds:	0.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	3	Latitude seconds:	30.0000
Longitude degrees:	79	Longitude minutes:	4
Longitude seconds:	15.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	3	Latitude seconds:	30.0000
Longitude degrees:	79	Longitude minutes:	4
Longitude seconds:	20.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	3	Latitude seconds:	35.0000
Longitude degrees:	79	Longitude minutes:	3
Longitude seconds:	0.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	3	Latitude seconds:	45.0000

Longitude degrees:	79	Longitude minutes:	2
Longitude seconds:	45.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	3	Latitude seconds:	45.0000
Longitude degrees:	79	Longitude minutes:	3
Longitude seconds:	0.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	3	Latitude seconds:	45.0000
Longitude degrees:	79	Longitude minutes:	4
Longitude seconds:	20.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	3	Latitude seconds:	50.0000
Longitude degrees:	79	Longitude minutes:	4
Longitude seconds:	20.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	3	Latitude seconds:	50.0000
Longitude degrees:	79	Longitude minutes:	4
Longitude seconds:	35.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	3	Latitude seconds:	51.0000
Longitude degrees:	79	Longitude minutes:	4
Longitude seconds:	24.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	4	Latitude seconds:	0.0000
Longitude degrees:	79	Longitude minutes:	4
Longitude seconds:	15.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	4	Latitude seconds:	14.0000
Longitude degrees:	79	Longitude minutes:	3
Longitude seconds:	33.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	4	Latitude seconds:	21.0000
Longitude degrees:	79	Longitude minutes:	3
Longitude seconds:	24.0000		

State:	NC	Latitude degrees:	35
Latitude minutes:	4	Latitude seconds:	25.0000
Longitude degrees:	79	Longitude minutes:	3
Longitude seconds:	55.0000		

Violation id:	4499104	Orig code:	S
State:	NC	Violation Year:	2004
Contamination code:	7500	Contamination Name:	Public Notice
Violation code:	76	Violation name:	PN Violation without NPDWR Violation
Rule code:	410	Rule name:	PN rule
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/12/2004
Cmp edt:	Not Reported		

Violation id:	4499207	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads

Violation measur:	6.6	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	01/01/2007
Cmp edt:	03/31/2007		

Violation id:	4499307	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	6	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	01/01/2007
Cmp edt:	03/31/2007		

Violation id:	4499407	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	7	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	01/01/2007
Cmp edt:	03/31/2007		

Violation id:	4499507	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	11.6	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	01/01/2007
Cmp edt:	03/31/2007		

Violation id:	4499607	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	5.8	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	01/01/2007
Cmp edt:	03/31/2007		

Violation id:	4499707	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	9.1	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	01/01/2007
Cmp edt:	03/31/2007		

Violation id:	4499807	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	8.3	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	01/01/2007
Cmp edt:	03/31/2007		

Violation id:	4499907	Orig code:	S
State:	NC	Violation Year:	2006
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average

Rule code:	340	Rule name:	Rads
Violation measur:	7.8	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	10/01/2006
Cmp edt:	12/31/2006		

Violation id:	4500007	Orig code:	S
State:	NC	Violation Year:	2006
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	9.3	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	10/01/2006
Cmp edt:	12/31/2006		

Violation id:	4500107	Orig code:	S
State:	NC	Violation Year:	2006
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	6.4	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	10/01/2006
Cmp edt:	12/31/2006		

Violation id:	4500207	Orig code:	S
State:	NC	Violation Year:	2006
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	7.2	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	10/01/2006
Cmp edt:	12/31/2006		

Violation id:	4500307	Orig code:	S
State:	NC	Violation Year:	2006
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	5.5	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	10/01/2006
Cmp edt:	12/31/2006		

Violation id:	4500407	Orig code:	S
State:	NC	Violation Year:	2006
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	6.8	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	10/01/2006
Cmp edt:	12/31/2006		

Violation id:	4500408	Orig code:	S
State:	NC	Violation Year:	2006
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	9	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	10/01/2006
Cmp edt:	12/31/2006		

Violation id:	4500409	Orig code:	S
State:	NC	Violation Year:	2006
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)

Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	11	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	10/01/2006
Cmp edt:	12/31/2006		

Violation id:	4500410	Orig code:	S
State:	NC	Violation Year:	2006
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	8	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	10/01/2006
Cmp edt:	12/31/2006		

Violation id:	4500411	Orig code:	S
State:	NC	Violation Year:	2006
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	6	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	10/01/2006
Cmp edt:	12/31/2006		

Violation id:	4500412	Orig code:	S
State:	NC	Violation Year:	2006
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	13	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	10/01/2006
Cmp edt:	12/31/2006		

Violation id:	4500413	Orig code:	S
State:	NC	Violation Year:	2006
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	8	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	10/01/2006
Cmp edt:	12/31/2006		

Violation id:	4500414	Orig code:	S
State:	NC	Violation Year:	2006
Contamination code:	4000	Contamination Name:	Gross Alpha, Excl. Radon and U
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	23	Unit of measure:	PCI/L
State mcl:	15	Cmp bdt:	10/01/2006
Cmp edt:	12/31/2006		

Violation id:	4500415	Orig code:	S
State:	NC	Violation Year:	2006
Contamination code:	4000	Contamination Name:	Gross Alpha, Excl. Radon and U
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	25	Unit of measure:	PCI/L
State mcl:	15	Cmp bdt:	10/01/2006
Cmp edt:	12/31/2006		

Violation id:	4500416	Orig code:	S
State:	NC	Violation Year:	2006

Contamination code:	4000	Contamination Name:	Gross Alpha, Excl. Radon and U
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	22	Unit of measure:	PCI/L
State mcl:	15	Cmp bdt:	10/01/2006
Cmp edt:	12/31/2006		

Violation id:	4500417	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4000	Contamination Name:	Gross Alpha, Excl. Radon and U
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	20	Unit of measure:	PCI/L
State mcl:	15	Cmp bdt:	01/01/2007
Cmp edt:	03/31/2007		

Violation id:	4500418	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4000	Contamination Name:	Gross Alpha, Excl. Radon and U
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	20	Unit of measure:	PCI/L
State mcl:	15	Cmp bdt:	01/01/2007
Cmp edt:	03/31/2007		

Violation id:	4500419	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	8	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	01/01/2007
Cmp edt:	03/31/2007		

Violation id:	4500420	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	9	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	01/01/2007
Cmp edt:	03/31/2007		

Violation id:	4500421	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	7	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	01/01/2007
Cmp edt:	03/31/2007		

Violation id:	4500422	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	11	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	01/01/2007
Cmp edt:	03/31/2007		

Violation id:	4500423	Orig code:	S

State: NC
Contamination code: 4010
Violation code: 02
Rule code: 340
Violation measur: 6
State mcl: 5
Cmp edt: 03/31/2007
Violation Year: 2007
Contamination Name: Combined Radium (-226 and -228)
Violation name: MCL, Average
Rule name: Rads
Unit of measure: PCI/L
Cmp bdt: 01/01/2007

Violation id: 4500424
State: NC
Contamination code: 4000
Violation code: 02
Rule code: 340
Violation measur: 16
State mcl: 15
Cmp edt: 03/31/2007
Orig code: S
Violation Year: 2007
Contamination Name: Gross Alpha, Excl. Radon and U
Violation name: MCL, Average
Rule name: Rads
Unit of measure: PCI/L
Cmp bdt: 01/01/2007

Violation id: 4500425
State: NC
Contamination code: 7500
Violation code: 75
Rule code: 410
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: Not Reported
Orig code: S
Violation Year: 2007
Contamination Name: Public Notice
Violation name: PN Violation for NPDWR Violation
Rule name: PN rule
Unit of measure: Not Reported
Cmp bdt: 06/23/2007

Violation id: 4500426
State: NC
Contamination code: 7500
Violation code: 75
Rule code: 410
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: Not Reported
Orig code: S
Violation Year: 2007
Contamination Name: Public Notice
Violation name: PN Violation for NPDWR Violation
Rule name: PN rule
Unit of measure: Not Reported
Cmp bdt: 06/23/2007

Violation id: 4500427
State: NC
Contamination code: 7500
Violation code: 75
Rule code: 410
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: Not Reported
Orig code: S
Violation Year: 2007
Contamination Name: Public Notice
Violation name: PN Violation for NPDWR Violation
Rule name: PN rule
Unit of measure: Not Reported
Cmp bdt: 06/23/2007

Violation id: 4500429
State: NC
Contamination code: 4000
Violation code: 02
Rule code: 340
Violation measur: 16
State mcl: 15
Cmp edt: 06/30/2007
Orig code: S
Violation Year: 2007
Contamination Name: Gross Alpha, Excl. Radon and U
Violation name: MCL, Average
Rule name: Rads
Unit of measure: PCI/L
Cmp bdt: 04/01/2007

Violation id: 4500430
State: NC
Contamination code: 4010
Violation code: 02
Rule code: 340
Violation measur: 6
State mcl: 5
Cmp edt: 06/30/2007
Orig code: S
Violation Year: 2007
Contamination Name: Combined Radium (-226 and -228)
Violation name: MCL, Average
Rule name: Rads
Unit of measure: PCI/L
Cmp bdt: 04/01/2007

Violation id:	4500431	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	8	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	04/01/2007
Cmp edt:	06/30/2007		

Violation id:	4500432	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	6	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	04/01/2007
Cmp edt:	06/30/2007		

Violation id:	4500433	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	6	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	04/01/2007
Cmp edt:	06/30/2007		

Violation id:	4500434	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	11	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	04/01/2007
Cmp edt:	06/30/2007		

Violation id:	4500435	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	8	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	04/01/2007
Cmp edt:	06/30/2007		

Violation id:	4500436	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	7	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	04/01/2007
Cmp edt:	06/30/2007		

Violation id:	4500437	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	7	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	04/01/2007
Cmp edt:	06/30/2007		

Violation id:	4500438	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	6	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	07/01/2007
Cmp edt:	09/30/2007		

Violation id:	4500439	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	7	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	07/01/2007
Cmp edt:	09/30/2007		

Violation id:	4500440	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	6	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	07/01/2007
Cmp edt:	09/30/2007		

Violation id:	4500441	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	6	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	07/01/2007
Cmp edt:	09/30/2007		

Violation id:	4500442	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	11	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	07/01/2007
Cmp edt:	09/30/2007		

Violation id:	4500443	Orig code:	S
State:	NC	Violation Year:	2007
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	8	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	07/01/2007
Cmp edt:	09/30/2007		

Violation id:	4500444	Orig code:	S
State:	NC		
Violation Year:	2007	Contamination code:	4010
Contamination Name:	Combined Radium (-226 and -228)	Violation code:	02
Violation name:	MCL, Average	Rule code:	340
Rule name:	Rads	Violation measur:	7
Unit of measure:	PCI/L	State mcl:	5
Cmp bdt:	10/01/2007	Cmp edt:	12/31/2007

Violation id: 4500518
State: NC
Contamination code: 2039
Violation code: 03
Rule code: 320
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 12/31/2007
Orig code: S
Violation Year: 2007
Contamination Name: Di(2-ethylhexyl) phthalate
Violation name: Monitoring, Regular
Rule name: SOC
Unit of measure: Not Reported
Cmp bdt: 01/01/2007

Violation id: 4500525
State: NC
Contamination code: 4010
Violation code: 02
Rule code: 340
Violation measur: 6
State mcl: 5
Cmp edt: 03/31/2008
Orig code: S
Violation Year: 2008
Contamination Name: Combined Radium (-226 and -228)
Violation name: MCL, Average
Rule name: Rads
Unit of measure: PCI/L
Cmp bdt: 01/01/2008

Violation id: 4500526
State: NC
Contamination code: 4010
Violation code: 03
Rule code: 340
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 12/31/2007
Orig code: S
Violation Year: 2007
Contamination Name: Combined Radium (-226 and -228)
Violation name: Monitoring, Regular
Rule name: Rads
Unit of measure: Not Reported
Cmp bdt: 10/01/2007

Violation id: 4500528
State: NC
Contamination code: 4010
Violation code: 03
Rule code: 340
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 03/31/2008
Orig code: S
Violation Year: 2008
Contamination Name: Combined Radium (-226 and -228)
Violation name: Monitoring, Regular
Rule name: Rads
Unit of measure: Not Reported
Cmp bdt: 01/01/2008

Violation id: 4500529
State: NC
Contamination code: 4010
Violation code: 03
Rule code: 340
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: 06/30/2008
Orig code: S
Violation Year: 2008
Contamination Name: Combined Radium (-226 and -228)
Violation name: Monitoring, Regular
Rule name: Rads
Unit of measure: Not Reported
Cmp bdt: 04/01/2008

Violation id: 4500531
State: NC
Contamination code: 7500
Violation code: 75
Rule code: 410
Violation measur: Not Reported
State mcl: Not Reported
Cmp edt: Not Reported
Orig code: S
Violation Year: 2008
Contamination Name: Public Notice
Violation name: PN Violation for NPDWR Violation
Rule name: PN rule
Unit of measure: Not Reported
Cmp bdt: 08/11/2008

Violation id: 4500533
State: NC
Contamination code: 4010
Violation code: 02
Rule code: 340
Violation measur: 11
State mcl: 5
Cmp edt: 09/30/2006
Orig code: S
Violation Year: 2006
Contamination Name: Combined Radium (-226 and -228)
Violation name: MCL, Average
Rule name: Rads
Unit of measure: PCI/L
Cmp bdt: 07/01/2006

Violation id:	4500535	Orig code:	S
State:	NC	Violation Year:	2006
Contamination code:	4010	Contamination Name:	Combined Radium (-226 and -228)
Violation code:	02	Violation name:	MCL, Average
Rule code:	340	Rule name:	Rads
Violation measur:	11	Unit of measure:	PCI/L
State mcl:	5	Cmp bdt:	04/01/2006
Cmp edt:	06/30/2006		

Violation id:	500	Orig code:	S
State:	NC	Violation Year:	2000
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	23	Violation name:	Monitoring, Routine Major (TCR)
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	05/01/2000
Cmp edt:	05/31/2000		

Violation id:	603	Orig code:	S
State:	NC	Violation Year:	2002
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	23	Violation name:	Monitoring, Routine Major (TCR)
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	12/01/2002
Cmp edt:	12/31/2002		

Violation id:	703	Orig code:	S
State:	NC	Violation Year:	2003
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	24	Violation name:	Monitoring, Routine Minor (TCR)
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	02/01/2003
Cmp edt:	02/28/2003		

Violation id:	803	Orig code:	S
State:	NC	Violation Year:	2003
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	24	Violation name:	Monitoring, Routine Minor (TCR)
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	05/01/2003
Cmp edt:	05/31/2003		

Violation ID:	400	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	12/31/2003
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving

Violation ID:	4499104	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	04/17/2010
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving

Violation ID:	4499104	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	04/17/2010
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Resolving

Violation ID:	4499207	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/22/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal

Violation ID:	4499207	Orig Code:	S

Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4499207	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4499207	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4499207	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4499207	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/22/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4499207	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4499307	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/22/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4499307	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4499307	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	02/19/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4499307	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/22/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4499407	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4499407	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4499407	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4499407	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4499407	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/22/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4499407	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/22/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal

Violation ID:	4499407	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4499507	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4499507	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4499507	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4499507	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/22/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4499507	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/22/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4499507	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4499607	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4499607	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4499607	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4499607	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4499607	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4499607	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4499607	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4499707	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4499707	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/22/2007

Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4499707	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4499707	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4499707	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4499707	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4499707	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/22/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4499807	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4499807	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4499807	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/22/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4499807	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4499807	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4499807	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/22/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4499807	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4499907	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4499907	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4499907	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal

Violation ID:	4499907	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4499907	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4499907	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500007	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500007	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500007	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500007	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500007	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4500007	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500107	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500107	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4500107	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500107	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500107	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500107	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500207	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007

Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500207	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4500207	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500207	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500207	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500207	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500307	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	02/19/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500307	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500307	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500307	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500307	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4500407	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500407	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500407	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500407	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4500407	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving

Violation ID:	4500407	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500408	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500408	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	05/13/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500408	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	05/13/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500408	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500408	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500408	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500408	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500409	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500409	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	05/13/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500409	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	05/13/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500409	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4500409	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	07/10/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500410	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	05/13/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500410	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	05/13/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500410	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	11/03/2008

Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500410	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500411	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	05/13/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500411	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	04/14/2009
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500411	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500411	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	05/13/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500412	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	05/13/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500412	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	05/13/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500412	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4500412	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500412	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500412	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500413	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500413	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500413	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500413	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving

Violation ID:	4500413	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	05/13/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500413	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	05/13/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500413	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500414	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500414	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500414	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	05/13/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500414	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4500414	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500414	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	05/13/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500415	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	05/13/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500415	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500415	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4500415	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500415	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	05/13/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500415	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500416	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007

Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4500416	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	05/13/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500416	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500416	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	05/13/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500416	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500416	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500417	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500417	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500417	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/26/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500417	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4500417	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/04/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500417	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/04/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500418	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/04/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500418	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/26/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500418	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4500418	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal

Violation ID:	4500418	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500418	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/04/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500419	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/04/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500419	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500419	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/26/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500419	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500419	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500419	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/04/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500419	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500420	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/04/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500420	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500420	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/04/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500420	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	07/10/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500421	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/04/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500421	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	11/03/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500421	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/04/2007

Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500421	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500422	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4500422	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/04/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500422	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/04/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500422	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/26/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500422	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500422	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500423	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/04/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500423	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/04/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500423	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500423	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500423	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500423	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500423	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500424	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal

Violation ID:	4500424	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/04/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500424	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/04/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500424	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	06/26/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500424	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500424	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500425	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500426	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500427	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	04/20/2007
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500429	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/09/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500429	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/09/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500429	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500429	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500429	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4500429	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500430	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500430	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007

Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500430	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/09/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500430	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500430	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500430	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/09/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500430	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500431	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500431	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500431	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500431	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500431	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/09/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500431	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/09/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500431	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500432	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500432	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500432	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal

Violation ID:	4500432	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/09/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500432	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/09/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500432	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500432	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500433	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500433	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/09/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500433	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/09/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500433	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500433	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500433	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500433	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500434	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/09/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500434	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500434	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/09/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500434	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4500434	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007

Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500434	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500435	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500435	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/09/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500435	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500435	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500435	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/09/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500435	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500435	Orig Code:	S
Enforcemnt FY:	2010	Enforcement Action:	09/02/2010
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500436	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/09/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500436	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/09/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500436	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	11/03/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500436	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500437	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	07/10/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500437	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500437	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/09/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal

Violation ID:	4500437	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/09/2007
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500438	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4500438	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500438	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500438	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/07/2008
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500438	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/07/2008
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500438	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500439	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500439	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/07/2008
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500439	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	11/03/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500439	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/07/2008
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500439	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued	Enforcement Category:	Formal
Violation ID:	4500440	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule	Enforcement Category:	Resolving
Violation ID:	4500440	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/07/2008
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500440	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500440	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/07/2008

Enforcement Detail: St Formal NOV issued
Enforcement Category: Informal

Violation ID: 4500440
Orig Code: S
Enforcemnt FY: 2008
Enforcement Action: 12/31/2007
Enforcement Detail: St Intentional no-action
Enforcement Category: Informal

Violation ID: 4500440
Orig Code: S
Enforcemnt FY: 2007
Enforcement Action: 03/29/2007
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 4500441
Orig Code: S
Enforcemnt FY: 2008
Enforcement Action: 12/31/2007
Enforcement Detail: St Intentional no-action
Enforcement Category: Informal

Violation ID: 4500441
Orig Code: S
Enforcemnt FY: 2008
Enforcement Action: 01/07/2008
Enforcement Detail: St Public Notif requested
Enforcement Category: Informal

Violation ID: 4500441
Orig Code: S
Enforcemnt FY: 2008
Enforcement Action: 01/07/2008
Enforcement Detail: St Formal NOV issued
Enforcement Category: Informal

Violation ID: 4500441
Orig Code: S
Enforcemnt FY: 2007
Enforcement Action: 03/29/2007
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 4500441
Orig Code: S
Enforcemnt FY: 2008
Enforcement Action: 12/31/2007
Enforcement Detail: State No Longer Subject to Rule
Enforcement Category: Resolving

Violation ID: 4500441
Orig Code: S
Enforcemnt FY: 2008
Enforcement Action: 10/22/2007
Enforcement Detail: St Public Notif received
Enforcement Category: Informal

Violation ID: 4500442
Orig Code: S
Enforcemnt FY: 2008
Enforcement Action: 12/31/2007
Enforcement Detail: St Intentional no-action
Enforcement Category: Informal

Violation ID: 4500442
Orig Code: S
Enforcemnt FY: 2007
Enforcement Action: 03/29/2007
Enforcement Detail: St AO (w/o penalty) issued
Enforcement Category: Formal

Violation ID: 4500442
Orig Code: S
Enforcemnt FY: 2008
Enforcement Action: 01/07/2008
Enforcement Detail: St Formal NOV issued
Enforcement Category: Informal

Violation ID: 4500442
Orig Code: S
Enforcemnt FY: 2008
Enforcement Action: 10/22/2007
Enforcement Detail: St Public Notif received
Enforcement Category: Informal

Violation ID: 4500442
Orig Code: S
Enforcemnt FY: 2008
Enforcement Action: 12/31/2007
Enforcement Detail: State No Longer Subject to Rule
Enforcement Category: Resolving

Violation ID: 4500442
Orig Code: S
Enforcemnt FY: 2008
Enforcement Action: 01/07/2008
Enforcement Detail: St Public Notif requested
Enforcement Category: Informal

Violation ID:	4500443	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	03/29/2007
Enforcement Detail:	St AO (w/o penalty) issued		
Enforcement Category:	Formal		
Violation ID:	4500443	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/07/2008
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500443	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	State No Longer Subject to Rule		
Enforcement Category:	Resolving		
Violation ID:	4500443	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	12/31/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Informal
Violation ID:	4500443	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/22/2007
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500443	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/07/2008
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500444	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	11/03/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500444	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	03/28/2008
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500518	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	01/01/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500518	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	04/25/2008
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500518	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	04/25/2008
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500518	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	05/23/2008
Enforcement Detail:	St AO (w/penalty) issued	Enforcement Category:	Formal
Violation ID:	4500525	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	07/11/2008
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500525	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	03/16/2009
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500525	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	11/03/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving

Violation ID:	4500526	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	08/29/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500526	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	07/18/2008
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500526	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	03/24/2009
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500526	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	07/18/2008
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500526	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	08/07/2008
Enforcement Detail:	St AO (w/penalty) issued	Enforcement Category:	Formal
Violation ID:	4500528	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	09/24/2008
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500528	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	08/29/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500528	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	09/24/2008
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500528	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	10/22/2008
Enforcement Detail:	St AO (w/penalty) issued	Enforcement Category:	Formal
Violation ID:	4500529	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	08/29/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500529	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	11/12/2008
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	4500529	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	08/29/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500529	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	03/16/2009
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	4500529	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	11/12/2008
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	4500531	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	03/16/2009
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500533	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	07/10/2008

Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	4500535	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	07/10/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	500	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	12/31/2003
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	500	Orig Code:	S
Enforcemnt FY:	2000	Enforcement Action:	07/06/2000
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	500	Orig Code:	S
Enforcemnt FY:	2000	Enforcement Action:	07/06/2000
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	603	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	01/30/2003
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	603	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	01/30/2003
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	603	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	02/11/2003
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	703	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	04/04/2003
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	703	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	04/10/2003
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	703	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	04/04/2003
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	803	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	07/02/2003
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	803	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	12/31/2003
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	803	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	07/02/2003
Enforcement Detail:	St Formal NOV issued	Enforcement Category:	Informal
Violation ID:	Not Reported	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	07/11/2008
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Not Reported
PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4499104
Contaminant:	7500	Violation type:	76
Compliance start date:	7/12/2004 0:00:00	Compliance end date:	12/31/2025 0:00:00

Enforcement date: No Enf Action as of
Enforcement action: 7/8/2009 0:00:00
Violation measurement: Not Reported

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4499207
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 1/1/2007 0:00:00
Compliance end date: 3/31/2007 0:00:00
Enforcement date: 3/22/2007 0:00:00
Enforcement action: State Formal NOV Issued
Violation measurement: 6.6

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4499207
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 1/1/2007 0:00:00
Compliance end date: 3/31/2007 0:00:00
Enforcement date: 3/22/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 6.6

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4499207
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 1/1/2007 0:00:00
Compliance end date: 3/31/2007 0:00:00
Enforcement date: 4/20/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 6.6

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4499307
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 1/1/2007 0:00:00
Compliance end date: 3/31/2007 0:00:00
Enforcement date: 3/22/2007 0:00:00
Enforcement action: State Formal NOV Issued
Violation measurement: 6

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4499307
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 1/1/2007 0:00:00
Compliance end date: 3/31/2007 0:00:00
Enforcement date: 3/22/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 6

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4499307
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 1/1/2007 0:00:00
Compliance end date: 3/31/2007 0:00:00
Enforcement date: 4/20/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 6

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4499407
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 1/1/2007 0:00:00
Compliance end date: 3/31/2007 0:00:00
Enforcement date: 3/22/2007 0:00:00
Enforcement action: State Formal NOV Issued
Violation measurement: 7

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4499407
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 1/1/2007 0:00:00
Compliance end date: 3/31/2007 0:00:00
Enforcement date: 3/22/2007 0:00:00
Enforcement action: State Public Notif Requested

Violation measurement: 7

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 7
Population served: 15288
Violation ID: 4499407
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 4/20/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4499507
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 3/22/2007 0:00:00
Violation measurement: 11.6

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 11.6
Population served: 15288
Violation ID: 4499507
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 3/22/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State AO (w/o Penalty) Issued
Violation measurement: 11.6
Population served: 15288
Violation ID: 4499507
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 3/29/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 11.6
Population served: 15288
Violation ID: 4499507
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 4/20/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4499607
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 3/29/2007 0:00:00
Violation measurement: 5.8

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State AO (w/o Penalty) Issued
Violation measurement: 5.8
Population served: 15288
Violation ID: 4499607
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 3/29/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Public Notif Requested
Population served: 15288
Violation ID: 4499607
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 3/29/2007 0:00:00

Violation measurement: 5.8

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 5.8
Population served: 15288
Violation ID: 4499607
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 4/20/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4499707
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 3/22/2007 0:00:00
Violation measurement: 9.1

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 9.1
Population served: 15288
Violation ID: 4499707
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 3/22/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 9.1
Population served: 15288
Violation ID: 4499707
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 4/20/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4499807
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 3/22/2007 0:00:00
Violation measurement: 8.3

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 8.3
Population served: 15288
Violation ID: 4499807
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 3/22/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 8.3
Population served: 15288
Violation ID: 4499807
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 4/20/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 12/31/2006 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4499907
Compliance start date: 10/1/2006 0:00:00
Enforcement date: 3/29/2007 0:00:00
Violation measurement: 7.8

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4499907
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State AO (w/o Penalty) Issued		
Violation measurement:	7.8		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4499907
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	7.8		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4499907
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	4/20/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	7.8		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500007
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	9.3

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500007
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State AO (w/o Penalty) Issued		
Violation measurement:	9.3		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500007
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	9.3		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500007
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	4/20/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	9.3		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500107
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	6.4

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500107
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State AO (w/o Penalty) Issued		
Violation measurement:	6.4		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500107
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	6.4		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500107
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	4/20/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	6.4		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500207
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	7.2

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500207
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State AO (w/o Penalty) Issued		
Violation measurement:	7.2		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500207
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	7.2		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500207
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	4/20/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	7.2		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500307
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	5.5

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500307
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State AO (w/o Penalty) Issued		
Violation measurement:	5.5		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500307
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	5.5		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500307
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	4/20/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	5.5		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500407
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	6.8

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500407
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State AO (w/o Penalty) Issued		
Violation measurement:	6.8		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500407
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	6.8		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500407
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	4/20/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	6.8		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500408
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	5/13/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	9

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500408
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	5/13/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	9		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500408
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	6/26/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	9		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500409
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State AO (w/o Penalty) Issued		
Violation measurement:	11		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500409
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	5/13/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	11

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500409
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	5/13/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	11		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500409
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	6/26/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	11		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500410
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	5/13/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	8

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500410
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	5/13/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	8		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500410
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	6/22/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	8		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500411
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	5/13/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	6

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500411
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	5/13/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	6		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500411
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	6/26/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	6		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500412
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State AO (w/o Penalty) Issued		
Violation measurement:	13		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500412
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	5/13/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	13

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500412
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	5/13/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	13		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500412
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	6/22/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	13		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500413
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	5/13/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	8

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500413
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	5/13/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	8		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500413
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	6/22/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	8		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500414
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State AO (w/o Penalty) Issued		
Violation measurement:	23		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500414
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	5/13/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	23

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500414
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	5/13/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	23		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500414
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	6/22/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	23		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500415
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State AO (w/o Penalty) Issued		
Violation measurement:	25		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500415
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	5/13/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	25

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500415
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	5/13/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	25		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500415
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	6/22/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	25		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500416
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State AO (w/o Penalty) Issued		
Violation measurement:	22		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500416
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	5/13/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	22

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500416
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	5/13/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	22		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500416
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	10/1/2006 0:00:00
Compliance end date:	12/31/2006 0:00:00	Enforcement date:	6/22/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	22		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500417
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	1/1/2007 0:00:00
Compliance end date:	3/31/2007 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State AO (w/o Penalty) Issued		
Violation measurement:	20		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500417
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	1/1/2007 0:00:00
Compliance end date:	3/31/2007 0:00:00	Enforcement date:	6/26/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	20		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500417
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	1/1/2007 0:00:00
Compliance end date:	3/31/2007 0:00:00	Enforcement date:	6/4/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	20

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500417
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	1/1/2007 0:00:00
Compliance end date:	3/31/2007 0:00:00	Enforcement date:	6/4/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	20		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500418
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	1/1/2007 0:00:00
Compliance end date:	3/31/2007 0:00:00	Enforcement date:	3/29/2007 0:00:00
Enforcement action:	State AO (w/o Penalty) Issued		
Violation measurement:	20		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500418
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	1/1/2007 0:00:00
Compliance end date:	3/31/2007 0:00:00	Enforcement date:	6/26/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	20		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500418
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	1/1/2007 0:00:00
Compliance end date:	3/31/2007 0:00:00	Enforcement date:	6/4/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	20

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500418
Contaminant:	GROSS ALPHA, EXCL. RADON & U		
Violation type:	2	Compliance start date:	1/1/2007 0:00:00
Compliance end date:	3/31/2007 0:00:00	Enforcement date:	6/4/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	20		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500419
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	1/1/2007 0:00:00
Compliance end date:	3/31/2007 0:00:00	Enforcement date:	6/26/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	8		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500419
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	1/1/2007 0:00:00
Compliance end date:	3/31/2007 0:00:00	Enforcement date:	6/4/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	8

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500419
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	1/1/2007 0:00:00
Compliance end date:	3/31/2007 0:00:00	Enforcement date:	6/4/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	8		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500420
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	1/1/2007 0:00:00
Compliance end date:	3/31/2007 0:00:00	Enforcement date:	6/26/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	9		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500420
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	1/1/2007 0:00:00
Compliance end date:	3/31/2007 0:00:00	Enforcement date:	6/4/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	9

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500420
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	1/1/2007 0:00:00
Compliance end date:	3/31/2007 0:00:00	Enforcement date:	6/4/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	9		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500421
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	1/1/2007 0:00:00
Compliance end date:	3/31/2007 0:00:00	Enforcement date:	6/26/2007 0:00:00
Enforcement action:	State Public Notif Received		
Violation measurement:	7		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500421
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	1/1/2007 0:00:00
Compliance end date:	3/31/2007 0:00:00	Enforcement date:	6/4/2007 0:00:00
Enforcement action:	State Formal NOV Issued	Violation measurement:	7

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	4500421
Contaminant:	COMBINED RADIUM (-226 & -228)		
Violation type:	2	Compliance start date:	1/1/2007 0:00:00
Compliance end date:	3/31/2007 0:00:00	Enforcement date:	6/4/2007 0:00:00
Enforcement action:	State Public Notif Requested		
Violation measurement:	7		

PWS name:	CLIFFDALE WEST	Population served:	15288

PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State AO (w/o Penalty) Issued
Violation measurement: 11
Violation ID: 4500422
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 3/29/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 11
Population served: 15288
Violation ID: 4500422
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 6/26/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500422
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 6/4/2007 0:00:00
Violation measurement: 11

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 11
Population served: 15288
Violation ID: 4500422
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 6/4/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 6
Population served: 15288
Violation ID: 4500423
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 6/26/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500423
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 6/4/2007 0:00:00
Violation measurement: 6

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 6
Population served: 15288
Violation ID: 4500423
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 6/4/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: GROSS ALPHA, EXCL. RADON & U
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State AO (w/o Penalty) Issued
Violation measurement: 16
Population served: 15288
Violation ID: 4500424
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 3/29/2007 0:00:00

PWS name: CLIFFDALE WEST
Population served: 15288

PWS type code: C
Contaminant: GROSS ALPHA, EXCL. RADON & U
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 16
Violation ID: 4500424
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 6/26/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: GROSS ALPHA, EXCL. RADON & U
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500424
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 6/4/2007 0:00:00
Violation measurement: 16

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: GROSS ALPHA, EXCL. RADON & U
Violation type: 2
Compliance end date: 3/31/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 16
Population served: 15288
Violation ID: 4500424
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 6/4/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: 7500
Compliance start date: 6/23/2007 0:00:00
Enforcement date: 6/26/2007 0:00:00
Violation measurement: Not Reported
Population served: 15288
Violation ID: 4500425
Violation type: 75
Compliance end date: 6/26/2007 0:00:00
Enforcement action: State Compliance Achieved

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: 7500
Compliance start date: 6/23/2007 0:00:00
Enforcement date: 6/26/2007 0:00:00
Violation measurement: Not Reported
Population served: 15288
Violation ID: 4500426
Violation type: 75
Compliance end date: 6/26/2007 0:00:00
Enforcement action: State Compliance Achieved

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: 7500
Compliance start date: 6/23/2007 0:00:00
Enforcement date: 6/26/2007 0:00:00
Violation measurement: Not Reported
Population served: 15288
Violation ID: 4500427
Violation type: 75
Compliance end date: 6/26/2007 0:00:00
Enforcement action: State Compliance Achieved

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: GROSS ALPHA, EXCL. RADON & U
Violation type: 2
Compliance end date: 6/30/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 16
Population served: 15288
Violation ID: 4500429
Compliance start date: 4/1/2007 0:00:00
Enforcement date: 10/22/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: GROSS ALPHA, EXCL. RADON & U
Violation type: 2
Compliance end date: 6/30/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500429
Compliance start date: 4/1/2007 0:00:00
Enforcement date: 10/9/2007 0:00:00
Violation measurement: 16

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: GROSS ALPHA, EXCL. RADON & U
Violation type: 2
Population served: 15288
Violation ID: 4500429
Compliance start date: 4/1/2007 0:00:00

Compliance end date: 6/30/2007 0:00:00
Enforcement date: 10/9/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 16

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4500429
Contaminant: GROSS ALPHA, EXCL. RADON & U
Violation type: 2
Compliance start date: 4/1/2007 0:00:00
Compliance end date: 6/30/2007 0:00:00
Enforcement date: 3/29/2007 0:00:00
Enforcement action: State AO (w/o Penalty) Issued
Violation measurement: 16

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4500430
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 4/1/2007 0:00:00
Compliance end date: 6/30/2007 0:00:00
Enforcement date: 10/22/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 6

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4500430
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 4/1/2007 0:00:00
Compliance end date: 6/30/2007 0:00:00
Enforcement date: 10/9/2007 0:00:00
Enforcement action: State Formal NOV Issued
Violation measurement: 6

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4500430
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 4/1/2007 0:00:00
Compliance end date: 6/30/2007 0:00:00
Enforcement date: 10/9/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 6

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4500431
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 4/1/2007 0:00:00
Compliance end date: 6/30/2007 0:00:00
Enforcement date: 10/22/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 8

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4500431
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 4/1/2007 0:00:00
Compliance end date: 6/30/2007 0:00:00
Enforcement date: 10/9/2007 0:00:00
Enforcement action: State Formal NOV Issued
Violation measurement: 8

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4500431
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 4/1/2007 0:00:00
Compliance end date: 6/30/2007 0:00:00
Enforcement date: 10/9/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 8

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4500432
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 4/1/2007 0:00:00

Compliance end date: 6/30/2007 0:00:00
Enforcement date: 10/22/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 6

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4500432
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 4/1/2007 0:00:00
Compliance end date: 6/30/2007 0:00:00
Enforcement date: 10/9/2007 0:00:00
Enforcement action: State Formal NOV Issued
Violation measurement: 6

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4500432
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 4/1/2007 0:00:00
Compliance end date: 6/30/2007 0:00:00
Enforcement date: 10/9/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 6

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4500433
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 4/1/2007 0:00:00
Compliance end date: 6/30/2007 0:00:00
Enforcement date: 10/22/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 6

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4500433
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 4/1/2007 0:00:00
Compliance end date: 6/30/2007 0:00:00
Enforcement date: 10/9/2007 0:00:00
Enforcement action: State Formal NOV Issued
Violation measurement: 6

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4500433
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 4/1/2007 0:00:00
Compliance end date: 6/30/2007 0:00:00
Enforcement date: 10/9/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 6

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4500434
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 4/1/2007 0:00:00
Compliance end date: 6/30/2007 0:00:00
Enforcement date: 10/22/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 11

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4500434
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 4/1/2007 0:00:00
Compliance end date: 6/30/2007 0:00:00
Enforcement date: 10/9/2007 0:00:00
Enforcement action: State Formal NOV Issued
Violation measurement: 11

PWS name: CLIFFDALE WEST
Population served: 15288
PWS type code: C
Violation ID: 4500434
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance start date: 4/1/2007 0:00:00
Compliance end date: 6/30/2007 0:00:00
Enforcement date: 10/9/2007 0:00:00

Enforcement action: State Public Notif Requested
Violation measurement: 11

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 6/30/2007 0:00:00
Enforcement action: State AO (w/o Penalty) Issued
Violation measurement: 11
Population served: 15288
Violation ID: 4500434
Compliance start date: 4/1/2007 0:00:00
Enforcement date: 3/29/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 6/30/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 8
Population served: 15288
Violation ID: 4500435
Compliance start date: 4/1/2007 0:00:00
Enforcement date: 10/22/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 6/30/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500435
Compliance start date: 4/1/2007 0:00:00
Enforcement date: 10/9/2007 0:00:00
Violation measurement: 8

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 6/30/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 8
Population served: 15288
Violation ID: 4500435
Compliance start date: 4/1/2007 0:00:00
Enforcement date: 10/9/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Violation ID: 4500436
Violation type: 2
Compliance end date: 6/30/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 7
Population served: 15288
Contaminant: COMBINED RADIUM (-226 & -228)
Compliance start date: 4/1/2007 0:00:00
Enforcement date: 10/22/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 6/30/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500436
Compliance start date: 4/1/2007 0:00:00
Enforcement date: 10/9/2007 0:00:00
Violation measurement: 7

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 6/30/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 7
Population served: 15288
Violation ID: 4500436
Compliance start date: 4/1/2007 0:00:00
Enforcement date: 10/9/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 6/30/2007 0:00:00
Population served: 15288
Violation ID: 4500437
Compliance start date: 4/1/2007 0:00:00
Enforcement date: 10/22/2007 0:00:00

Enforcement action: State Public Notif Received
Violation measurement: 7

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 6/30/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500437
Compliance start date: 4/1/2007 0:00:00
Enforcement date: 10/9/2007 0:00:00
Violation measurement: 7

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 6/30/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 7
Population served: 15288
Violation ID: 4500437
Compliance start date: 4/1/2007 0:00:00
Enforcement date: 10/9/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500438
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 1/7/2008 0:00:00
Violation measurement: 6

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 6
Population served: 15288
Violation ID: 4500438
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 1/7/2008 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 6
Population served: 15288
Violation ID: 4500438
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 10/22/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State AO (w/o Penalty) Issued
Violation measurement: 6
Population served: 15288
Violation ID: 4500438
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 3/29/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500439
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 1/7/2008 0:00:00
Violation measurement: 7

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State Public Notif Requested
Population served: 15288
Violation ID: 4500439
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 1/7/2008 0:00:00

Violation measurement: 7

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 7
Population served: 15288
Violation ID: 4500439
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 10/22/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State AO (w/o Penalty) Issued
Violation measurement: 7
Population served: 15288
Violation ID: 4500439
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 3/29/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500440
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 1/7/2008 0:00:00
Violation measurement: 6

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 6
Population served: 15288
Violation ID: 4500440
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 1/7/2008 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 6
Population served: 15288
Violation ID: 4500440
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 10/22/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State AO (w/o Penalty) Issued
Violation measurement: 6
Population served: 15288
Violation ID: 4500440
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 3/29/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500441
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 1/7/2008 0:00:00
Violation measurement: 6

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State Public Notif Requested
Population served: 15288
Violation ID: 4500441
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 1/7/2008 0:00:00

Violation measurement: 6

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 6
Population served: 15288
Violation ID: 4500441
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 10/22/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State AO (w/o Penalty) Issued
Violation measurement: 6
Population served: 15288
Violation ID: 4500441
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 3/29/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500442
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 1/7/2008 0:00:00
Violation measurement: 11

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 11
Population served: 15288
Violation ID: 4500442
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 1/7/2008 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 11
Population served: 15288
Violation ID: 4500442
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 10/22/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State AO (w/o Penalty) Issued
Violation measurement: 11
Population served: 15288
Violation ID: 4500442
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 3/29/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500443
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 1/7/2008 0:00:00
Violation measurement: 8

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State Public Notif Requested
Population served: 15288
Violation ID: 4500443
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 1/7/2008 0:00:00

Violation measurement: 8

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State Public Notif Received
Violation measurement: 8
Population served: 15288
Violation ID: 4500443
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 10/22/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 9/30/2007 0:00:00
Enforcement action: State AO (w/o Penalty) Issued
Violation measurement: 8
Population served: 15288
Violation ID: 4500443
Compliance start date: 7/1/2007 0:00:00
Enforcement date: 3/29/2007 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 12/31/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500444
Compliance start date: 10/1/2007 0:00:00
Enforcement date: 3/28/2008 0:00:00
Violation measurement: 7

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: DI (2-ETHYLHEXYL) PHTHALATE
Violation type: 3
Compliance end date: 12/31/2007 0:00:00
Enforcement action: State Compliance Achieved
Population served: 15288
Violation ID: 4500518
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 1/1/2008 0:00:00
Violation measurement: Not Reported

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: DI (2-ETHYLHEXYL) PHTHALATE
Violation type: 3
Compliance end date: 12/31/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500518
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 4/25/2008 0:00:00
Violation measurement: Not Reported

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: DI (2-ETHYLHEXYL) PHTHALATE
Violation type: 3
Compliance end date: 12/31/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: Not Reported
Population served: 15288
Violation ID: 4500518
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 4/25/2008 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: DI (2-ETHYLHEXYL) PHTHALATE
Violation type: 3
Compliance end date: 12/31/2007 0:00:00
Enforcement action: State AO (w/penalty) Issued
Violation measurement: Not Reported
Population served: 15288
Violation ID: 4500518
Compliance start date: 1/1/2007 0:00:00
Enforcement date: 5/23/2008 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2008 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500525
Compliance start date: 1/1/2008 0:00:00
Enforcement date: 7/11/2008 0:00:00
Violation measurement: 6

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 2
Compliance end date: 3/31/2008 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: 6
Population served: 15288
Violation ID: 4500525
Compliance start date: 1/1/2008 0:00:00
Enforcement date: 7/11/2008 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 3
Compliance end date: 12/31/2007 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500526
Compliance start date: 10/1/2007 0:00:00
Enforcement date: 7/18/2008 0:00:00
Violation measurement: Not Reported

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 3
Compliance end date: 12/31/2007 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: Not Reported
Population served: 15288
Violation ID: 4500526
Compliance start date: 10/1/2007 0:00:00
Enforcement date: 7/18/2008 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 3
Compliance end date: 12/31/2007 0:00:00
Enforcement action: State AO (w/penalty) Issued
Violation measurement: Not Reported
Population served: 15288
Violation ID: 4500526
Compliance start date: 10/1/2007 0:00:00
Enforcement date: 8/7/2008 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 3
Compliance end date: 3/31/2008 0:00:00
Enforcement action: State AO (w/penalty) Issued
Violation measurement: Not Reported
Population served: 15288
Violation ID: 4500528
Compliance start date: 1/1/2008 0:00:00
Enforcement date: 10/22/2008 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 3
Compliance end date: 3/31/2008 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500528
Compliance start date: 1/1/2008 0:00:00
Enforcement date: 9/24/2008 0:00:00
Violation measurement: Not Reported

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 3
Compliance end date: 3/31/2008 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: Not Reported
Population served: 15288
Violation ID: 4500528
Compliance start date: 1/1/2008 0:00:00
Enforcement date: 9/24/2008 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 3
Compliance end date: 6/30/2008 0:00:00
Enforcement action: State Formal NOV Issued
Population served: 15288
Violation ID: 4500529
Compliance start date: 4/1/2008 0:00:00
Enforcement date: 11/12/2008 0:00:00
Violation measurement: Not Reported

PWS name: CLIFFDALE WEST
Population served: 15288

PWS type code: C
Contaminant: COMBINED RADIUM (-226 & -228)
Violation type: 3
Compliance end date: 6/30/2008 0:00:00
Enforcement action: State Public Notif Requested
Violation measurement: Not Reported
Violation ID: 4500529
Compliance start date: 4/1/2008 0:00:00
Enforcement date: 11/12/2008 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: 7500
Compliance start date: 8/11/2008 0:00:00
Enforcement date: No Enf Action as of
Violation measurement: Not Reported
Population served: 15288
Violation ID: 4500531
Violation type: 75
Compliance end date: 12/31/2025 0:00:00
Enforcement action: 7/8/2009 0:00:00

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COLIFORM (TCR)
Compliance start date: 5/1/2000 0:00:00
Enforcement date: 12/31/2003 0:00:00
Violation measurement: Not Reported
Population served: 15288
Violation ID: 500
Violation type: Monitoring, Routine Major (TCR)
Compliance end date: 5/31/2000 0:00:00
Enforcement action: State Compliance Achieved

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COLIFORM (TCR)
Compliance start date: 5/1/2000 0:00:00
Enforcement date: 7/6/2000 0:00:00
Violation measurement: Not Reported
Population served: 15288
Violation ID: 500
Violation type: Monitoring, Routine Major (TCR)
Compliance end date: 5/31/2000 0:00:00
Enforcement action: State Formal NOV Issued

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COLIFORM (TCR)
Compliance start date: 5/1/2000 0:00:00
Enforcement date: 7/6/2000 0:00:00
Violation measurement: Not Reported
Population served: 15288
Violation ID: 500
Violation type: Monitoring, Routine Major (TCR)
Compliance end date: 5/31/2000 0:00:00
Enforcement action: State Public Notif Requested

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COLIFORM (TCR)
Compliance start date: 12/1/2002 0:00:00
Enforcement date: 1/30/2003 0:00:00
Violation measurement: Not Reported
Population served: 15288
Violation ID: 603
Violation type: Monitoring, Routine Major (TCR)
Compliance end date: 12/31/2002 0:00:00
Enforcement action: State Formal NOV Issued

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COLIFORM (TCR)
Compliance start date: 12/1/2002 0:00:00
Enforcement date: 1/30/2003 0:00:00
Violation measurement: Not Reported
Population served: 15288
Violation ID: 603
Violation type: Monitoring, Routine Major (TCR)
Compliance end date: 12/31/2002 0:00:00
Enforcement action: State Public Notif Requested

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COLIFORM (TCR)
Compliance start date: 12/1/2002 0:00:00
Enforcement date: 2/11/2003 0:00:00
Violation measurement: Not Reported
Population served: 15288
Violation ID: 603
Violation type: Monitoring, Routine Major (TCR)
Compliance end date: 12/31/2002 0:00:00
Enforcement action: State Compliance Achieved

PWS name: CLIFFDALE WEST
PWS type code: C
Contaminant: COLIFORM (TCR)
Compliance start date: 2/1/2003 0:00:00
Enforcement date: 4/10/2003 0:00:00
Violation measurement: Not Reported
Population served: 15288
Violation ID: 703
Violation type: Monitoring, Routine Minor (TCR)
Compliance end date: 2/28/2003 0:00:00
Enforcement action: State Compliance Achieved

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	703
Contaminant:	COLIFORM (TCR)	Violation type:	Monitoring, Routine Minor (TCR)
Compliance start date:	2/1/2003 0:00:00	Compliance end date:	2/28/2003 0:00:00
Enforcement date:	4/4/2003 0:00:00	Enforcement action:	State Formal NOV Issued
Violation measurement:	Not Reported		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	703
Contaminant:	COLIFORM (TCR)	Violation type:	Monitoring, Routine Minor (TCR)
Compliance start date:	2/1/2003 0:00:00	Compliance end date:	2/28/2003 0:00:00
Enforcement date:	4/4/2003 0:00:00	Enforcement action:	State Public Notif Requested
Violation measurement:	Not Reported		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	803
Contaminant:	COLIFORM (TCR)	Violation type:	Monitoring, Routine Minor (TCR)
Compliance start date:	5/1/2003 0:00:00	Compliance end date:	5/31/2003 0:00:00
Enforcement date:	12/31/2003 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	803
Contaminant:	COLIFORM (TCR)	Violation type:	Monitoring, Routine Minor (TCR)
Compliance start date:	5/1/2003 0:00:00	Compliance end date:	5/31/2003 0:00:00
Enforcement date:	7/2/2003 0:00:00	Enforcement action:	State Formal NOV Issued
Violation measurement:	Not Reported		

PWS name:	CLIFFDALE WEST	Population served:	15288
PWS type code:	C	Violation ID:	803
Contaminant:	COLIFORM (TCR)	Violation type:	Monitoring, Routine Minor (TCR)
Compliance start date:	5/1/2003 0:00:00	Compliance end date:	5/31/2003 0:00:00
Enforcement date:	7/2/2003 0:00:00	Enforcement action:	State Public Notif Requested
Violation measurement:	Not Reported		

A4
NNE
1/4 - 1/2 Mile
Lower

NC WELLS **NC3000000005119**

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #13
Facility Type:	Well	Well Depth:	91
Owner:	AQUA NORTH CAROLINA INC.		

5
East
1/4 - 1/2 Mile
Lower

NC WELLS **NC3000000005130**

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #23
Facility Type:	Well	Well Depth:	92
Owner:	AQUA NORTH CAROLINA INC.		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

6
NNW
1/2 - 1 Mile
Higher

NC WELLS **NC3000000005122**

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #16
Facility Type:	Well	Well Depth:	98
Owner:	AQUA NORTH CAROLINA INC.		

7
NE
1/2 - 1 Mile
Lower

NC WELLS **NC3000000005108**

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #2
Facility Type:	Well	Well Depth:	120
Owner:	AQUA NORTH CAROLINA INC.		

8
NE
1/2 - 1 Mile
Lower

NC WELLS **NC3000000005126**

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #1A
Facility Type:	Well	Well Depth:	360
Owner:	AQUA NORTH CAROLINA INC.		

9
SSE
1/2 - 1 Mile
Lower

NC WELLS **NC3000000005141**

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #36
Facility Type:	Well	Well Depth:	400
Owner:	AQUA NORTH CAROLINA INC.		

10
West
1/2 - 1 Mile
Lower

NC WELLS **NC3000000005118**

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #12

Facility Type:	Well	Well Depth:	75
Owner:	AQUA NORTH CAROLINA INC.		

11
ENE **NC WELLS** **NC3000000005138**
1/2 - 1 Mile
Lower

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #33
Facility Type:	Well	Well Depth:	70
Owner:	AQUA NORTH CAROLINA INC.		

12
SSE **NC WELLS** **NC3000000005133**
1/2 - 1 Mile
Lower

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #26
Facility Type:	Well	Well Depth:	72
Owner:	AQUA NORTH CAROLINA INC.		

13
NNW **NC WELLS** **NC3000000005139**
1/2 - 1 Mile
Higher

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #34
Facility Type:	Well	Well Depth:	92
Owner:	AQUA NORTH CAROLINA INC.		

14
West **NC WELLS** **NC3000000005125**
1/2 - 1 Mile
Lower

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #19
Facility Type:	Well	Well Depth:	77
Owner:	AQUA NORTH CAROLINA INC.		

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

15
ESE
1/2 - 1 Mile
Lower

NC WELLS **NC3000000005135**

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #28
Facility Type:	Well	Well Depth:	66
Owner:	AQUA NORTH CAROLINA INC.		

16
SE
1/2 - 1 Mile
Lower

NC WELLS **NC3000000005134**

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #27
Facility Type:	Well	Well Depth:	480
Owner:	AQUA NORTH CAROLINA INC.		

17
SSW
1/2 - 1 Mile
Lower

NC WELLS **NC3000000005115**

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #9
Facility Type:	Well	Well Depth:	88
Owner:	AQUA NORTH CAROLINA INC.		

18
West
1/2 - 1 Mile
Lower

NC WELLS **NC3000000005109**

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #3
Facility Type:	Well	Well Depth:	120
Owner:	AQUA NORTH CAROLINA INC.		

19
WSW
1/2 - 1 Mile
Lower

NC WELLS **NC3000000005129**

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #22

Facility Type:	Well	Well Depth:	95
Owner:	AQUA NORTH CAROLINA INC.		

20
ESE
1/2 - 1 Mile
Lower

NC WELLS **NC3000000005136**

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #29
Facility Type:	Well	Well Depth:	75
Owner:	AQUA NORTH CAROLINA INC.		

21
SW
1/2 - 1 Mile
Lower

NC WELLS **NC3000000005114**

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #8
Facility Type:	Well	Well Depth:	88
Owner:	AQUA NORTH CAROLINA INC.		

22
SSE
1/2 - 1 Mile
Lower

NC WELLS **NC3000000005137**

PWD ID:	NC0326332	System Name:	CLIFFDALE WEST
PWS Type:	Community	Primary Source:	Ground Water
Water Type:	Ground Water	Facility Name:	WELL #30A
Facility Type:	Well	Well Depth:	360
Owner:	AQUA NORTH CAROLINA INC.		

Map ID
Direction
Distance

Database EDR ID Number

NC_NHEO NC50002194

Elclass: C
Eostat: E
Edr id: NC50002194
Precision1: S
Gisid: 422108

NC_NHEO NC50004291

Elclass: C
Eostat: E
Edr id: NC50004291
Precision1: S
Gisid: 622604

NC_NHEO NC50004843

Elclass: P
Eostat: E
Edr id: NC50004843
Precision1: S
Gisid: 862366

NC_NHEO NC50007535

Elclass: A
Eostat: E
Edr id: NC50007535
Precision1: S
Gisid: 3281616

NC_NHEO NC50009155

Elclass: P
Eostat: E
Edr id: NC50009155
Precision1: S
Gisid: 461861

NC_NHEO NC50011140

Elclass: C
Eostat: E
Edr id: NC50011140
Precision1: S
Gisid: 632604

NC_NHEO NC50011450

Elclass: P
Eostat: E
Edr id: NC50011450
Precision1: S
Gisid: 521641

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

NC_NHEO NC50011685

Elclass:	P	Precision1:	S
Eostat:	E	Gisid:	162197
Edr id:	NC50011685		

NC_NHEO NC50013351

Elclass:	P	Precision1:	S
Eostat:	E	Gisid:	262484
Edr id:	NC50013351		

NC_SNHA NC10000894

Acres:	4478.24	Sitename:	FORT BRAGG LITTLE ROCKFISH CREEK NATUR
Quality type:	Not Reported	Sig:	A
Site id:	894	Edr id:	NC10000894

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: NC Radon

Radon Test Results

Num Results	Avg pCi/L	Min pCi/L	Max pCi/L
1	0.70	0.7	0.7

Federal EPA Radon Zone for CUMBERLAND County: 3

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 28314

Number of sites tested: 2

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	2.450 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	Not Reported	Not Reported	Not Reported	Not Reported

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005 and 2010 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: US Fish & Wildlife Service
Telephone: 703-358-2171

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

North Carolina Public Water Supply Wells
Source: Department of Environmental Health
Telephone: 919-715-3243

OTHER STATE DATABASE INFORMATION

North Carolina Wildlife Resources/Game Lands
Source: Center for Geographic Information and Analysis
Telephone: 919-733-2090
All publicly owned game lands managed by the North Carolina Wildlife Resources Commission and as listed in Hunting and Fishing Maps.

NC Natural Heritage Sites: Natural Heritage Element Occurrence Sites
Source: Natural Heritage Occurrence Sites Center for Geographic Information and Analysis
Telephone: 919-733-2090
A point coverage identifying locations of rare and endangered species, occurrences of exemplary or unique natural ecosystems (terrestrial or aquatic), and special animal habitats (e.g., colonial waterbird nesting sites).

NC Natural Areas: Significant Natural Heritage Areas
Source: Center for Geographic Information and Analysis
Telephone: 919-733-2090
A polygon converage identifying sites (terrestrial or aquatic) that have particular biodiversity significance. A site's significance may be due to the presenceof rare species, rare or high quality natural communities, or other important ecological features.

RADON

State Database: NC Radon
Source: Department of Environment & Natural Resources
Telephone: 919-733-4984
Radon Statistical and Non Statiscal Data

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

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RECEIVED
APR 30 1999
FAYETTEVILLE
REG. OFFICE

North Carolina - Department of Environment, Health, and Natural Resources
Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

FOR OFFICE USE ONLY
QUAD. NO. _____ SERIAL NO. _____
Lat. _____ Long. _____ RO. _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR: ECS Inc

DRILLER REGISTRATION NUMBER: 1405

STATE WELL CONSTRUCTION PERMIT NUMBER: 196068

1. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Fayetteville County: Cumberland
   8191 Cliffdale Rd
   (Road, Community, or Subdivision and Lot No.)
2. OWNER The Pantry, Inc #456
   ADDRESS POB 1410
   (Street or Route No.)
   Sanford NC 27331
   City or Town State Zip Code
3. DATE DRILLED 3-11-99 USE OF WELL MonHor
4. TOTAL DEPTH 50'
5. CUTTINGS COLLECTED YES ☐ NO ☒
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
7. STATIC WATER LEVEL Below Top of Casing: 35 FT.
   (Use "+" if Above Top of Casing)
8. TOP OF CASING IS Ø FT. Above Land Surface*

* Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118

9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): N/A
11. CHLORINATION: Type _____ Amount _____
12. CASING:

	Depth From	To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
From	0	20	Ft.	2"	Sch 40	PVC
From			Ft.			
From			Ft.			

13. GROUT:

	Depth From	To	Ft.	Material	Method
From	0.3	16'	Ft.	Portland	Slury
From			Ft.		

14. SCREEN:

	Depth From	To	Ft.	Diameter	Slot Size	Material
From	30	50	Ft.	2" in.	010 in.	PVC
From			Ft.	in.	in.	
From			Ft.	in.	in.	

15. SAND/GRAVEL PACK:

	Depth From	To	Ft.	Size	Material
From	18	50	Ft.	20/30	Silica San
From			Ft.		

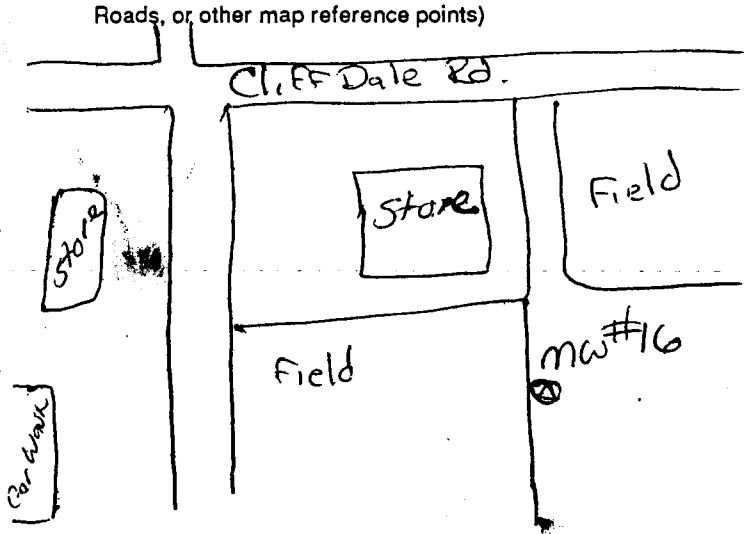
16. REMARKS: MW#18 Bentonite Seal from 16'-18'

DEPTH From	To	DRILLING LOG Formation Description
0	40	Brn Org cl si
40	50	Org Fine S

If additional space is needed use back of form

99 APR -5 PM 1:38
RECEIVED/DEMR
GROUNDWATER SECTION

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Chris Bender 3-15-99
SIGNATURE OF CONTRACTOR OR AGENT DATE

Submit original to Division of Environmental Management and copy to well owner.

GW-1 REV. 9/91

RECEIVED
APR 30 1999
FAYETTEVILLE
REG. OFFICE

North Carolina - Department of Environment, Health, and Natural Resources
Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

FOR OFFICE USE ONLY
QUAD. NO. SERIAL NO.
Lat. Long. RO
Minor Basin
Basin Code
Header Ent. GW-1 Ent.

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR: ECS Inc

DRILLER REGISTRATION NUMBER: 1405

STATE WELL CONSTRUCTION PERMIT NUMBER: 196069

1. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Fayetteville County: Cumberland
   8191 Cliffdale Rd
   (Road, Community, or Subdivision and Lot No.)
2. OWNER The Pantry, Inc
   ADDRESS POB 1410
   (Street or Route No.)
   Sanford NC 27331
   City or Town State Zip Code
3. DATE DRILLED 3-10-99 USE OF WELL Monitor
4. TOTAL DEPTH 50'
5. CUTTINGS COLLECTED YES ☐ NO ☒
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
7. STATIC WATER LEVEL Below Top of Casing: 35' FT.
   (Use "+" if Above Top of Casing)
8. TOP OF CASING IS Ø FT. Above Land Surface*
   * Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): N/A
11. CHLORINATION: Type ______ Amount ______
12. CASING:

Depth		Diameter	Wall Thickness or Weight/Ft.	Material
From 0	To 20 Ft.	2"	Sch40	PVC
From	To Ft.			
From	To Ft.			

13. GROUT:

Depth		Material	Method
From 0.5	To 16' Ft.	Portland	Slurry
From	To Ft.		

14. SCREEN:

Depth		Diameter	Slot Size	Material
From 20	To 50 Ft.	2" in.	.010 in.	PVC
From	To Ft.	in.	in.	
From	To Ft.	in.	in.	

15. SAND/GRAVEL PACK:

Depth		Size	Material
From 18	To 50 Ft.	20/30	Silica Sand
From	To Ft.		

16. REMARKS: MW#17 Bentonite Seal from 16'-18'

DEPTH From	To	DRILLING LOG Formation Description
0	40	Brn Org Cl St
40	50	Org Fine S

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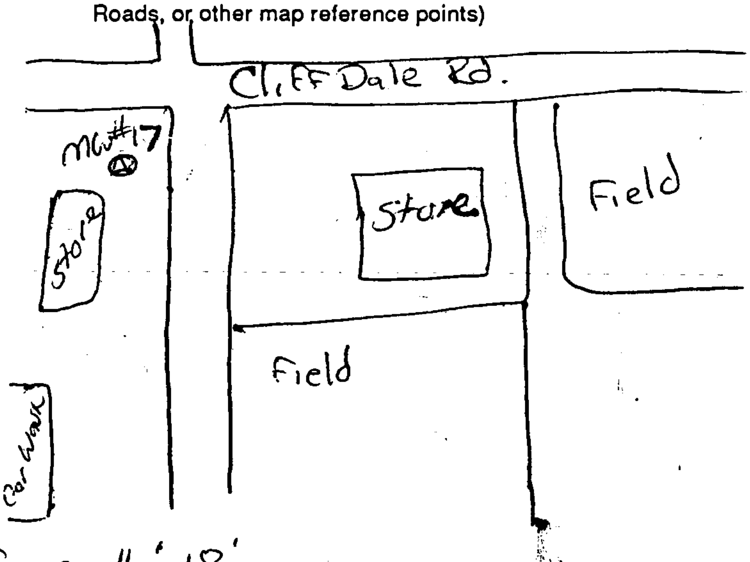
DWQ GROUNDWATER SECTION

If additional space is needed use back of form

LOCATION SKETCH

(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Chris Bender 3-15-99

SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91 Submit original to Division of Environmental Management and copy to well owner.

RECEIVED
APR 30 1999
FAYETTEVILLE
REG. OFFICE

North Carolina - Department of Environment, Health, and Natural Resources
Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

FOR OFFICE USE ONLY
QUAD. NO. _____ SERIAL NO. _____
Lat. _____ Long. _____ RO _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR: ECS Inc

DRILLER REGISTRATION NUMBER: 1405

STATE WELL CONSTRUCTION PERMIT NUMBER: 196070

1. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Fayetteville County: Cumberland
   8191 Cliffdale Rd
   (Road, Community, or Subdivision and Lot No.)
2. OWNER The Pantry, Inc
   ADDRESS POB 1410
   (Street or Route No.)
   Sanford NC 27331
   City or Town State Zip Code
3. DATE DRILLED 3-11-99 USE OF WELL Monitor
4. TOTAL DEPTH 50'
5. CUTTINGS COLLECTED YES ☐ NO ☒
6. DOES WELL REPLACE EXISTING WELL? YES ☐, NO ☒
7. STATIC WATER LEVEL Below Top of Casing: 35 FT.
   (Use "+" if Above Top of Casing)
8. TOP OF CASING IS Ø FT. Above Land Surface*

* Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118

9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth): N/A
11. CHLORINATION: Type _____ Amount _____
12. CASING:

	Depth From	To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
	0	20		2"	Sch 40	PVC

13. GROUT:

	Depth From	To	Ft.	Material	Method
	0.3	16'		Portland	Slury

14. SCREEN:

	Depth From	To	Ft.	Diameter	Slot Size	Material
	30	50		2" in.	.010 in.	PVC
				in.	in.	
				in.	in.	

15. SAND/GRAVEL PACK:

	Depth From	To	Ft.	Size	Material
	18	50		20/30	Silica San

16. REMARKS: MW#1, Bentonite Seal from 16'-18'

DEPTH From	To	DRILLING LOG Formation Description
0	40	Brn Org cl sl
40	50	Org fine S

If additional space is needed use back of form

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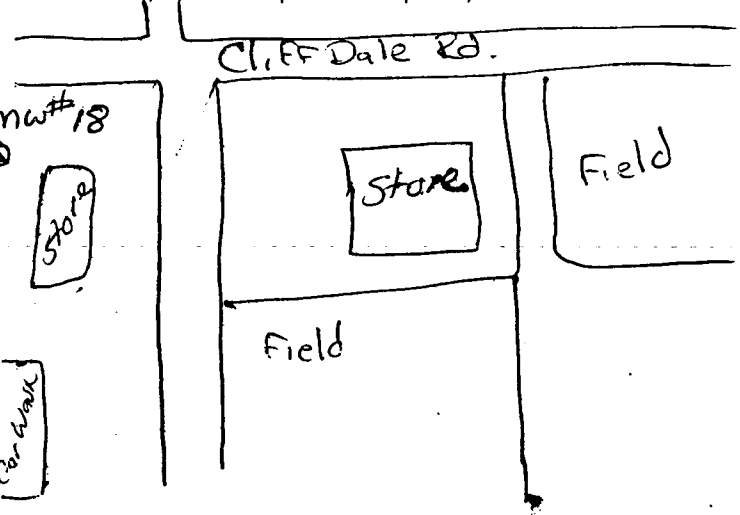
LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Chris Bender 3-15-99
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91

Submit original to Division of Environmental Management and copy to well owner.

RECEIVED
APR 30 1999
FAYETTEVILLE REG. OFFICE

North Carolina - Department of Environment, Health, and Natural Resources
Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

FOR OFFICE USE ONLY
QUAD. NO. SERIAL NO.
Lat. Long. HO.
Minor Basin
Basin Code
Header Ent. GW-1 Ent.

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR: ECS Inc

DRILLER REGISTRATION NUMBER: 1405

STATE WELL CONSTRUCTION PERMIT NUMBER: 196071

1. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Fayetteville County: Cumberland
   8191 Cliffdale Rd
   (Road, Community, or Subdivision and Lot No.)
2. OWNER The Pantry, Inc
   ADDRESS POB 1410
   (Street or Route No.)
   Sanford NC 27331
   City or Town State Zip Code
3. DATE DRILLED 3-11-99 USE OF WELL MonHor
4. TOTAL DEPTH 50'
5. CUTTINGS COLLECTED YES ☐ NO ☒
6. DOES WELL REPLACE EXISTING WELL? YES ☐, NO ☒
7. STATIC WATER LEVEL Below Top of Casing: 35 FT.
   (Use "+" if Above Top of Casing)
8. TOP OF CASING IS Ø FT. Above Land Surface*
   * Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118
9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth):
11. CHLORINATION: Type Amount
12. CASING:

Depth From	To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
0	20		2"	Sch 40	PVC

13. GROUT:

Depth From	To	Ft.	Material	Method
0.3	16'		Portland	Slury

14. SCREEN:

Depth From	To	Ft.	Diameter	Slot Size	Material
30	50		2" in.	.010 in.	PVC
			in.	in.	
			in.	in.	

15. SAND/GRAVEL PACK:

Depth From	To	Ft.	Size	Material
18	50		20/30	Silica San

16. REMARKS: MW#19 Bentonite Seal from 16'-18'

DEPTH From	To	DRILLING LOG Formation Description
0	40	Brn Org Cl Sl
40	50	Org Fine S

If additional space is needed use back of form

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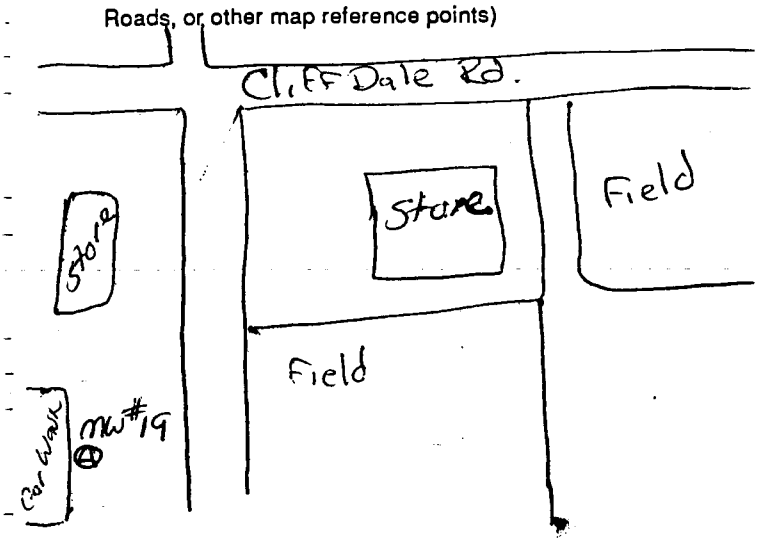
LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Chris Bender 3-15-99
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91

Submit original to Division of Environmental Management and copy to well owner.

RECEIVED

North Carolina - Department of Environment, Health, and Natural Resources
Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

APR 30 1999

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QUAD. NO. SERIAL NO.
Lat. Long. RO
Minor Basin
Basin Code
Header Ent. GW-1 Ent.

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR: ECS Inc

DRILLER REGISTRATION NUMBER: 1405

STATE WELL CONSTRUCTION PERMIT NUMBER: 196072

1. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Fayetteville County: Cumberland
   8191 Cliffdale Rd
   (Road, Community, or Subdivision and Lot No.)
2. OWNER The Pantry, Inc
   ADDRESS POB 1410
   (Street or Route No.)
   Sanford NC 27331
   City or Town State Zip Code
3. DATE DRILLED 3-10-99 USE OF WELL Monitor
4. TOTAL DEPTH 50'
5. CUTTINGS COLLECTED YES ☐ NO ☒
6. DOES WELL REPLACE EXISTING WELL? YES ☐ NO ☒
7. STATIC WATER LEVEL Below Top of Casing: 35 FT.
   (Use "+" if Above Top of Casing)
8. TOP OF CASING IS Ø FT. Above Land Surface*

* Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118

9. YIELD (gpm): N/A METHOD OF TEST N/A
10. WATER ZONES (depth):
11. CHLORINATION: Type Amount
12. CASING:

Depth From	To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
0	20		2"	Sch 40	PVC

13. GROUT:

Depth From	To	Ft.	Material	Method
0.3	16'		Portland	Slury

14. SCREEN:

Depth From	To	Ft.	Diameter	Slot Size	Material
30	50		2" in.	010 in.	PVC
			in.	in.	
			in.	in.	

15. SAND/GRAVEL PACK:

Depth From	To	Ft.	Size	Material
18	50		20/30	Silica Sand

16. REMARKS: MW#14 Bentonite Seal from 16'-18'

DEPTH From	To	DRILLING LOG Formation Description
0	40	Brn Org cl sl
40	50	Org fine S

If additional space is needed use back of form

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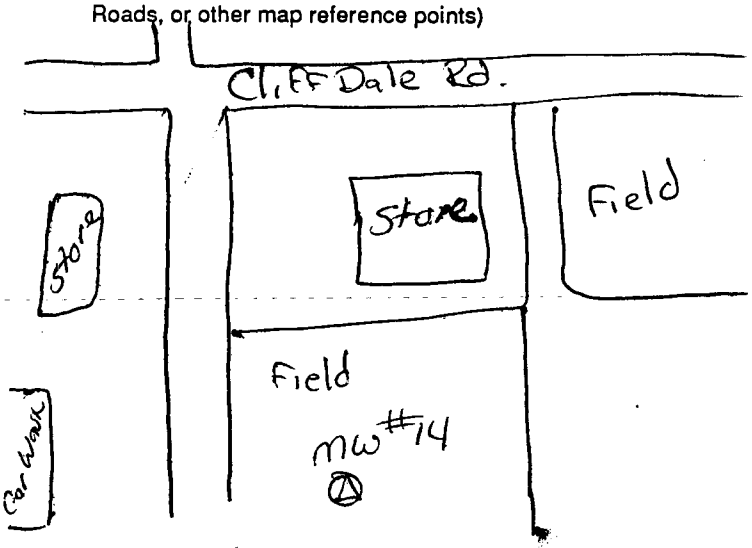
GROUNDWATER SECTION

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Chris Bender 3-15-99
SIGNATURE OF CONTRACTOR OR AGENT DATE

Submit original to Division of Environmental Management and copy to well owner.

GW-1 REV. 9/91

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Environmental, Inc.

REC'D AUG 1 4 1998
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AUG 1 4 1998
FAYETTEVILLE
REG. OFFICE

Initial Site Assessment

Site Location
Pantry #456
8191 Cliffdale Road
Fayetteville, North Carolina
Cumberland County

Site Owner
The Pantry, Inc.
P.O. Box 1410
Sanford, North Carolina 27331

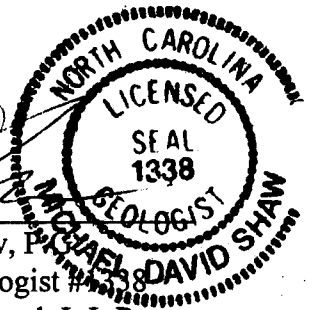
UST Owner:
The Pantry, Inc.
P.O. Box 1410
Sanford, North Carolina 27331

SEI Project Number 197-986

General Site Information:
Risk Assessment – Water Supply Wells within 1,500 feet
Surrounding Land Use – Residential, Commercial, and Undeveloped
Latitude/Longitude - N 35° 3' 25" / W 79° 3' 15"

Prepared By:

Michelle McGinnis
SEI Environmental, Inc.
130 Penmarc Drive Suite 108
Raleigh, North Carolina 27603
(919)832-2535



Michael D. Shaw, P.G.
NC Professional Geologist #1338
SPATCO Environmental, L.L.P.
5100 I-85 Service Road, Suite 7
Charlotte, North Carolina 28206

August 11, 1998

SEI
Environmental, Inc.

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LIMITATIONS

This report has been prepared under the guidance of a North Carolina Licensed Geologist and meet the requirements of the North Carolina Department of Environment and Natural Resources. The information and conclusions expressed in this report are based upon normal standards of the profession and limited to information available at this time. Chemical analyses of samples associated with this report were performed by a subcontracted, independent, and certified laboratory. All data and parameters have been reviewed for accuracy and, excepting obvious errors, have been accepted as correct. SEI Environmental reserves the right to revise estimates of performance as required by changes in the data supplied by Environmental Conservation Laboratories.

SEI
Environmental, Inc.

1.0 INTRODUCTION

The Pantry #456 is an active convenience/fuel retail store located at 8919 Cliffdale Road (northeast corner of Cliffdale and Rim Roads) in Fayetteville, Cumberland County, North Carolina. Figure 1 is an excerpt from a United States Geological Survey (USGS) 7.5 minute topographical quadrangle map identifying the location of the site. Four 10,000-gallon USTs are currently present on site, three gasoline and one kerosene.

In correspondence dated April 29, 1998, The Pantry, Inc. was requested by the North Carolina Division of Waste Management, UST Section (formerly the Division of Water Quality, Groundwater Section) to conduct a subsurface investigation to determine if Pantry #456 is the source of a public water supply well contamination in the area. LaGrange Waterworks has detected petroleum constituents in two public water supply wells (Well #23 and Well #32) of the Cliffdale West System. Quick Stop #81, located across Rim Road to the west of Pantry #456, has active USTs and is another possible source of the contamination. SEI Environmental, Inc. (SEI) was contracted by The Pantry, Inc. to comply with the State's request.

This report summarizes the findings of the initial investigation conducted at the site. Three monitoring wells were installed, soil samples were collected from the borings, and groundwater samples were collected from the monitoring wells.

2.0 RECEPTOR INFORMATION AND RISK CHARACTERIZAATION

SEI performed a radius receptor survey and identified five water supply wells within 1,500 feet of the site. Two of these five wells, Well #13 and Well #32, are located within 1,000 feet of the site. Well #13 is located 700 feet to the north-northeast, and Well #32 is located 850 feet to the southeast. The water supply well locations are shown on Figure 2. The water supply well construction data are included in Table 1, and the Water Supply Well Construction Records are included in Appendix A. Well #32 was installed in February 1996. All five wells are part of the Cliffdale West and are operated by LaGrange Waterworks in Fayetteville, NC.

According to records provided by LaGrange Waterworks, Well #32 was sampled on July 7, 1996, October 29, 1996, April 28, 1997 and December 16, 1997. MTBE and DIPE were detected in July 1996; benzene, xylene, MTBE and DIPE were detected in October 1996, April 1997, and December 1997. The greatest concentrations were detected in the April 1997 sampling with the following concentrations: benzene at 7.56 micrograms per liter (ug/l), total xylenes at 2.44 ug/l, MTBE at 40.0 ug/l, and DIPE at 11.1 ug/l. Well #32 well was taken off-line in the fall of 1997. Well #23 was sampled on April 21, December 15, 1997, and May 11, 1998. MTBE and DIPE were detected in April and December 1997, however, were not reported in May 1998. The water supply well laboratory reports are included in Appendix B.

This site is classified as High Risk due to the potable water wells within 1,000 feet of the site. The Risk Classification and Land Use Form is included in Appendix C.

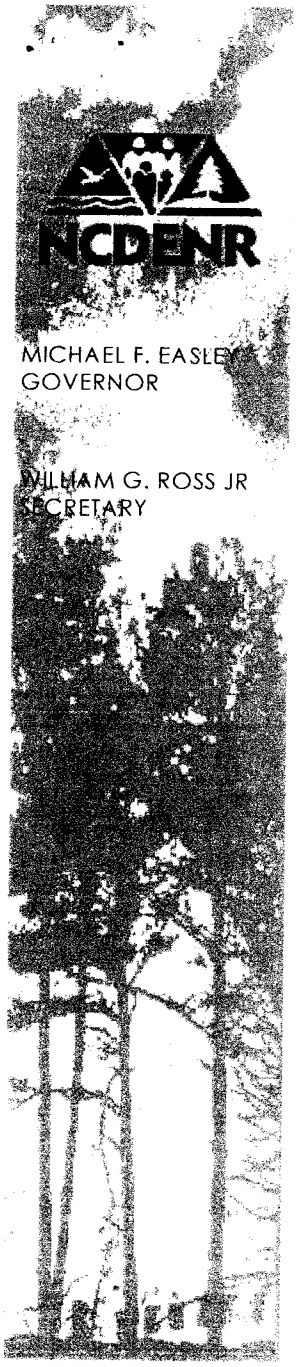
The nearest surface water is the intermittent Bones Creek, located approximately 2,000 feet east of the site, according to Figure 1. To date, there are no well head protection areas as defined in 42 USC 300h-7(e) within a 1,500-foot radius of the site, nor is there recharge to an unconfined or semi-confined deeper aquifer.

3.0 SITE GEOLOGY AND SOIL SAMPLING

The Pantry #456 is located in the Middendorf Formation of the Coastal Plain, according to the 1985 Geological Map of North Carolina. The Middendorf Formation is characterized by gray to pale gray (with an orange cast), mottled sand, sandstone, and mudstone. Clay balls and iron cemented concretions are common. Beds are laterally discontinuous, and cross-bedding is common.

On May 14-15, 1998, three borings (MW-1, MW-2, and MW-3) were advanced around the UST system to determine if a release had occurred. During the drilling activities, split spoon samples were collected at 5 foot intervals from the surface to 32 feet following the procedures outlined in ASTM D-1586 entitled "Penetration Test and Split Barrel Sampling of Soils". Two of the borings were advanced to a depth of 40 feet below land surface (bls), and the third boring was advanced to a depth of 50 feet bls. The soils encountered onsite while performing the soil borings were mainly reddish-brown clay with silt and sand. Boring Logs are included in Appendix D.

The soil samples collected were divided into two representative portions. One portion was placed in a polyethylene bag for a minimum of five minutes to allow any petroleum hydrocarbons to volatilize. An organic vapor analyzer (OVA) was used to screen the head spaced of the bagged sample for volatile hydrocarbons. The OVA results are presented in Table 2. No OVA readings above 100 parts per million (ppm) were measured. The second portion of each soil sample was placed into a laboratory supplied glass container, sealed with a Teflon lined cap, placed in an iced cooler, and maintained at 4°C. Either two or three samples from each boring were submitted under chain-of-custody procedures to Environmental Conservation Laboratories in Jacksonville, Florida for laboratory analysis. The samples were analyzed by EPA methods 8260 and 8270 for volatile and semi-volatile organic compounds. MADEP VPH and EPH were not analyzed from the samples with the highest OVA reading (MW-2 (25-27')) due to insufficient sample recovery.



NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES
FAYETTEVILLE REGIONAL OFFICE

DIVISION OF WASTE MANAGEMENT
UNDERGROUND STORAGE TANK SECTION

August 31, 2001

Renee Thomas
The Pantry, Inc.
Post Office Box 1410
Sanford, North Carolina 27330

Subject: No Further Action
Pantry #456
8191 Cliffdale Road
Fayetteville, Cumberland County
Incident: 19702
Facility ID: 0-012310

Dear Ms. Thomas:

On April 28, 1998, the Division of Waste Management requested Pantry to conduct a subsurface investigation to determine if Pantry #456 was the source of contamination for a local public water supply well. During the subsurface investigation, it was discovered that the contamination originated from the facility across the street, Pantry #3031 (d/b/a Quick Stop).

Based on information provided to date, the UST Section determines that no further action by Pantry #456 is warranted for this incident. Should new information become available concerning this matter, we reserve the right to reopen the investigation.

This no further action determination only applies to the above-referenced incident and that for any other incidents, the responsible party is expected to address the contamination as required by the applicable rules.

If you have any questions, please contact me at (910) 486-1541. Thank you.

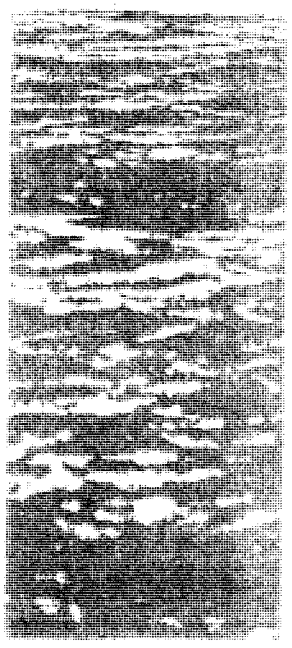
Sincerely,

Jennifer Phillips

Jennifer Phillips
Hydrogeologist

C: Fay Sweat, UST Central office

225 GREEN STREET - SUITE 714 - SYSTEL BUILDING, FAYETTEVILLE, NC 28301-5043
PHONE (910) 486-1541- FAX (910) 486-0707 WWW.ENR.STATE.NC.US/ENR/
AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER



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Environmental, Inc.

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MAY 19 1999
FAYETTEVILLE
REG. OFFICE

Comprehensive Site Assessment

Site Location:
The Pantry #3031, DBA Quick Stop
8215 Cliffdale Road
Fayetteville, North Carolina
Cumberland County

Site Owner:
McCauley & McDonald Investments, Inc.
P.O. Box 1410
Sanford, North Carolina 27330

UST Owner:
The Pantry, Inc.
P.O. Box 1410
Sanford, North Carolina 27331
(919) 774-6700

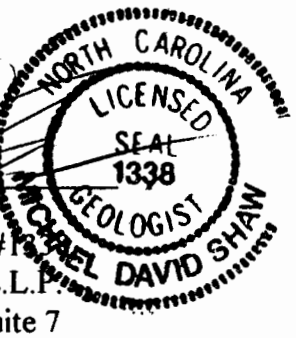
SEI Project Number 597986
Facility ID Number: 0-028888
Incident Number: 19702
Site Priority Ranking: High

General Site Information:
Risk Assessment – Water Supply Wells within 1,500 feet
Surrounding Land Use – Residential, Commercial, and Undeveloped
Latitude/Longitude – N 35° 03' 25" / W 79° 03' 15"

Prepared By:

Gretchen L. Miller
SEI Environmental, Inc.
130 Penmarc Drive Suite 108
Raleigh, North Carolina 27603
(919)832-2535

Michael D. Shaw, P.G.
NC Professional Geologist #1338
SPATCO Environmental, L.L.P.
5100 I-85 Service Road, Suite 7
Charlotte, North Carolina 28206



May 14, 1999

DIVISION OF WATER QUALITY
Certification for the Submittal of a Comprehensive Site Assessment

Responsible Party: The Pantry, Inc.
Contact Person: Ms. Renee' Thomas, Manager of Gas. Admin.
Address: P.O. Box 1410
City: Sanford, **State:** NC, **Zip Code:** 27331

Site Name: The Pantry #456 / The Pantry #3031(DBA Quick Stop)
Address: 8191 Cliffdale Rd. / 8215 Cliffdale Rd.
City: Fayetteville, **State:** NC, **Zip Code:** 28314
Groundwater Incident Number: 19702, **Site Priority Ranking:** High Risk

I, Michael D. Shaw, a Professional Engineer/Licensed Geologist (circle one) for SPATCO Environmental, L.L.P. (firm or company of employment) do hereby certify that the information indicated below is enclosed as part of the required Comprehensive Site Assessment (CSA) and that to the best of my knowledge the data, assessments, conclusions, recommendations and other associated materials are correct, complete and accurate.

(Each item must be initialed by the certifying licensed professional)

1. MDS The source of the contamination has been identified. A list of all potential sources of the contamination is attached.
2. MDS Imminent hazards to public health and safety have been identified.
3. MDS Potential receptors and significant exposure pathways have been identified.
4. MDS Geological and hydrogeological features influencing the movement of groundwater have been identified. The chemical and physical character of the contaminants have been identified.
5. MDS The CSA sufficiently characterizes the cause, significance and extent of groundwater and soil contamination such that a Corrective Action Plan can be developed.

If any of the above statements have been altered or items not initialed, provide a detailed explanation. Failure to initial any item or to provide written justification for the lack thereof will result in immediate return of the CSA to the responsible party.

NORTH CAROLINA LICENSED SEAL 1338 GEOLOGIST MICHAEL DAVID SHAW

(Please Affix Seal and Signature)

GW-100(csa) 3/17/97

SEI
Environmental, Inc.

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LIMITATIONS

This report has been prepared under the guidance of a North Carolina Licensed Geologist and meet the requirements of the North Carolina Department of Environment and Natural Resources. The information and conclusions expressed in this report are based upon normal standards of the profession and limited to information available at this time. Chemical analyses of samples associated with this report were performed by a subcontracted, independent, and certified laboratory. All data and parameters have been reviewed for accuracy and, excepting obvious errors, have been accepted as correct. SEI Environmental reserves the right to revise estimates of performance as required by changes in the data supplied by Environmental Conservation Laboratories.

EXECUTIVE SUMMARY

The Pantry #3031, DBA Quick Stop (Quick Stop) is an active convenience/fuel retail store located at 8215 Cliffdale Road in Fayetteville, Cumberland County, North Carolina. The Pantry #456 is located across Rim Road to the east of the Quick Stop, and is also an active convenience/fuel retail store. In correspondence dated April 29, 1998, The Pantry, Inc. was requested by the North Carolina Division of Waste Management, UST Section to conduct a subsurface investigation to determine if The Pantry #456 is the source of a public water supply well contamination in the area. LaGrange Waterworks has detected petroleum constituents in two public water supply wells (Well #23 and Well #32) of the Cliffdale West System.

An Initial Site Assessment Report was completed on August 11, 1998, and summarizes the findings of the initial investigation conducted at The Pantry #456 with the installation of three groundwater monitoring wells. Preliminary groundwater and soil analytical data around the UST system at The Pantry #456 suggested that the facility is not the source of the water supply well contamination.

A Comprehensive Site Assessment (CSA) was initiated to delineate the groundwater contaminant plume at The Pantry #456 facility. Fifteen additional type II and one type III groundwater monitoring wells were installed around The Pantry #456 and Quick Stop properties.

Soil samples collected at various depths around the UST system did not exhibit petroleum constituents above the Soil-to-Groundwater Maximum Soil Contaminant Concentrations. The maximum benzene concentration of 6,600 µg/l was detected in the groundwater at the Quick Stop property (MW-19). The groundwater flow direction appears to be to the southeast. The contaminated water supply wells are located approximately 850 feet southeast (Well #32) and 1,500 feet southeast (Well #23), apparently down-gradient from The Pantry #456 and Quick Stop.

Two potable water supply wells were noted within 1,000 feet of the site, thus classifying the site as high risk. Water supply well #32 has been found to be contaminated above the EPA Drinking Water Standards. Groundwater analytical data around the UST systems at The Pantry #456 and Quick Stop suggest that the Quick Stop facility is the source of contamination in water supply well #32.

Statistical Inventory Reconciliation (SIR) data for the last eight months at the Quick Stop show that during the time period covered there has been no detectable leak rate from the tanks. Therefore, it appears that gasoline is no longer being released into the subsurface.

Additional monitoring wells will be required to fully delineate the groundwater contaminant plume. A Corrective Action Plan (CAP) will be prepared immediately in order to assess remediation options for this release.

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1.0 SITE HISTORY AND SOURCE CHARACTERIZATION

The Pantry #3031, DBA Quick Stop (Quick Stop), is an active convenience/fuel retail store located at 8215 Cliffdale Road (southwest corner of Cliffdale and Rim Roads) in Fayetteville, Cumberland County, North Carolina. Figure 1 is an excerpt from a United States Geological Survey (USGS) 7.5 minute topographical quadrangle map identifying the location of the site. Three 12,000-gallon gasoline USTs are currently present on site. The Pantry #456 is located across Rim Road at 8191 Cliffdale Road. The Pantry #456 site currently contains four 10,000-gallon USTs, three gasoline and one kerosene.

In correspondence dated April 29, 1998, The Pantry, Inc. was requested by the North Carolina Division of Waste Management, UST Section (formerly the Division of Water Quality, Groundwater Section) to conduct a subsurface investigation to determine if The Pantry #456 is the source of a public water supply well contamination in the area. LaGrange Waterworks has detected petroleum constituents in two public water supply wells (Well #23 and Well #32) of the Cliffdale West System. Figure 2 is a vicinity map showing the locations of the water supply wells. SEI Environmental, Inc. (SEI) was contracted by The Pantry, Inc. to comply with the State's request.

An Initial Site Assessment Report was completed on August 11, 1998, and summarizes the findings of the initial investigation conducted at The Pantry #456 with the installation of three groundwater monitoring wells. Preliminary groundwater and soil analytical data around the UST system at The Pantry #456 suggested that the facility is not the source of the water supply well contamination.

A Comprehensive Site Assessment (CSA) was initiated to delineate the groundwater contaminant plume at The Pantry #456 facility. This report summarizes results of soil samples collected during monitoring well installation around The Pantry #456 and Quick Stop properties from September 1998 through March 1999, and groundwater samples collected from the monitoring wells during the same period. Through this investigation, it was determined that the Quick Stop property is the source of the groundwater contamination.

2.0 POTENTIAL RECEPTORS AND MIGRATION PATHWAYS

2.1 Potential Receptors

The Quick Stop property is currently an active retail gasoline and convenience store. The properties immediately adjacent to the subject property contain businesses or are undeveloped. An active gasoline station (The Pantry #456) is located across Rim Road from the subject property. A table containing the names and addresses of surrounding property owners adjacent to the subject site is contained in Appendix C, along with a vicinity map showing the locations of the properties.

SEI performed a radius receptor survey and identified five water supply wells within 1,500 feet of the site. Two of these five wells, Well #13 and Well #32, are located within 1,000 feet of the site. Well #13 is located 700 feet to the north-northeast, and Well #32 is located 850 feet to the southeast. The water supply well locations are shown on Figure 2. Well #32 was taken off-line in the fall of 1997. All five wells are part of the Cliffdale West System and are operated by LaGrange Waterworks in Fayetteville, North Carolina.

The nearest surface water is the intermittent Bones Creek, located approximately 2,000 feet east of the site, according to Figure 1. To date, there are no well head protection areas as defined in 42 USC 300h-7(e) within a 1,500-foot radius of the site, nor is there recharge to an unconfined or semi-confined deeper aquifer.

2.2 Migration Pathways

Water, underground electric, telephone, and storm and sanitary sewer lines are located on site. Figure 3 is a site map identifying underground utility lines. Backfill used in utility line trenches commonly has a higher conductivity than the native soil surrounding them, therefore, utility lines may present potential migration pathways for petroleum vapors and impacted groundwater. Typically, underground utilities are installed to an average depth of two to five feet bls.

3.0 GEOLOGY AND SOIL SAMPLING

3.1 Regional Geology

The Quick Stop is located in the Middendorf Formation of the Coastal Plain, according to the 1985 Geological Map of North Carolina. The Middendorf Formation is characterized by gray to pale gray (with an orange cast), mottled sand, sandstone, and mudstone. Clay balls and iron cemented concretions are common. Beds are laterally discontinuous, and cross-bedding is common.

3.2 Site Geology

On May 14 and 15, 1998, three soil borings (MW-1 through MW-3) were advanced around the UST system on The Pantry #456 property to determine if a release had occurred. Borings MW-1 and MW-2 were advanced to a depth of 40 feet below land surface (bls), and boring MW-3 was advanced to a depth of 50 feet bls. During the drilling activities, split spoon samples were collected at 5 foot intervals from the surface to 32 feet bls following the procedures outlined in ASTM D-1586 entitled "Penetration Test and Split Barrel Sampling of Soils".

On September 8 and 9, 1998, five soil borings (MW-4 through MW-8) were advanced around the UST system on The Pantry #456 property in an attempt to delineate the contaminant plume. Two of the borings (MW-5 and MW-8) were advanced to a depth of 45 bls, two borings (MW-6 and MW-7) were advanced to a depth of 50 feet bls, and one boring (MW-4) was advanced to a depth of 60 feet bls. During the drilling activities, split spoon samples were collected at 5 foot intervals from the surface to 37 feet bls.

On January 21 and 22, 1999, five soil borings (MW-9 through MW-13) were advanced around The Pantry #456, including two borings on the adjacent property to the south (MW-9 and MW-10) and one boring on the Quick Stop property to the west (MW-13). All of the borings were advanced to a depth of 50 feet bls. During drilling activities, split spoon samples were collected at 10 foot intervals from the surface to 37 feet bls in borings MW-9 through MW-12, and at 5 foot intervals from the surface to 37 feet bls in boring MW-13.

On March 10 and 11, 1999, six soil borings (MW-14 through MW-19) were advanced around The Pantry #456, including three borings on the adjacent property to the south and east (MW-14, MW-15 and MW-16) and three borings on the Quick Stop property to the west (MW-17, MW-18, and MW-19). All of the borings were advanced to a depth of 50 feet bls, except boring MW-15, which was advanced to a depth of 52 feet. During drilling activities, split spoon samples were collected at 10 foot intervals from the surface to 42 feet bls. The soil encountered while performing the soil borings was mainly sandy silt and clay above the water table, and light brown fine to medium sand below the water table. Soil boring logs are included in Appendix D. The locations of the soil borings are noted on Figure 3.

3.3 Soil Sampling

The soil samples collected were divided into two representative portions. One portion was placed in a polyethylene bag for a minimum of five minutes to allow any petroleum hydrocarbons to volatilize. An organic vapor analyzer (OVA) was used to screen the head spaced of the bagged sample for volatile hydrocarbons. The OVA results are presented in Table 2. The second portion of each soil sample was placed into a laboratory supplied glass container, sealed with a Teflon lined cap, placed in an iced cooler, and maintained at 4°C.

Eight samples from the May 14 and 15, 1998, sampling event (two from boring MW-1 and three each from borings MW-2 and MW-3) were submitted under chain-of-custody procedures to Environmental Conservation Laboratories (ENCO) in Jacksonville, Florida for laboratory analysis. The samples were analyzed by EPA methods 8260 and 8270 and MADEP methods VPH and EPH. One sample from the September 8, 1998, sampling event (MW-5 (25-27')) was submitted under chain-of-custody procedures to ENCO for laboratory analysis. The sample was analyzed by EPA methods 8260 and 8270 and MADEP methods VPH and EPH. Two samples were submitted from the January 22, 1999, sampling event (MW-13 (15-17') and MW-13 (25-27')) under chain-of-custody procedures to ENCO for laboratory analysis by EPA method 8260 and MADEP method VPH.

4.0 MONITORING WELL CONSTRUCTION

On May 14 and 15, 1998, all three soil borings were completed as type II groundwater monitoring wells. Monitoring wells MW-1 and MW-2 were installed to a depth of 40 feet bls and were completed with 20 feet of 2-inch schedule 40 PVC casing and 20 feet of 0.010-inch slot PVC screen. Monitoring well MW-3 was installed to a depth of 50 feet bls and was completed with 20 feet of 2-inch schedule 40 PVC casing and 30 feet of 0.010-inch slot PVC screen.

On September 8 and 9, 1998, four of the borings (MW-5 through MW-8) were completed as type II groundwater monitoring wells. Monitoring wells MW-5 and MW-6 were installed to a depth of 45 feet bls and were completed with 25 feet of 2-inch schedule 40 PVC casing and 20 feet of 0.010-inch slot PVC screen. Monitoring wells MW-6 and MW-7 were installed to a depth of 50 feet bls and were completed with 30 feet of 2-inch schedule 40 PVC casing and 20 feet of 0.010-inch slot PVC screen.

On January 21 and 22, 1999, the five soil borings (MW-9 through MW-13) were completed as type II groundwater monitoring wells. All five wells were installed to a depth of 50 feet bls and were completed with 20 feet of 2-inch schedule 40 PVC casing and 30 feet of 0.010-inch slot PVC screen.

On March 10 and 11, 1999, the six soil borings (MW-14 through MW-19) were completed as type II groundwater monitoring wells. Monitoring wells MW-14 and MW-16 through MW-19 were installed to a depth of 50 feet bls and were completed with 20 feet of 2-inch schedule 40 PVC casing and 30 feet of 0.010-inch slot PVC screen. Monitoring well MW-15 was installed to a depth of 52 feet bls and was completed with 22 feet of 2-inch schedule 40 PVC casing and 30 feet of 0.010-inch slot PVC screen.

The well annulus for each well was filled with a sand filter pack to two feet above the top of screened interval. A two foot thick bentonite seal was placed above the sand filter pack and hydrated with water. The annulus was filled with portland grout from the bentonite seal to 1 foot below grade. The well was completed flush to grade with a locking cap, water-tight seal, and a bolt-

down manhole. The monitoring well construction data is summarized in Table 3. The Well Construction Records are included in Appendix D.

On September 8 and 9, 1998, one of the borings (MW-4) was completed as a type III groundwater monitoring well by setting a 6-inch PVC outer casing to a depth of 50 feet. The borehole annulus was filled with grout and allowed to harden over one night. The end plug of the outer casing was drilled out, extending the boring to a depth of 60 feet. The well was completed with 5 feet of 0.010 inch slot PVC screen and 55 feet of 2-inch schedule 40 PVC casing to the surface.

The well annulus was filled with a sand filter pack to two feet above the top of screened interval. A four foot thick bentonite seal was placed above the sand filter pack and hydrated with water. The annulus was filled with portland grout from the bentonite seal to 1 foot below grade. The well was completed flush to grade with a locking cap, water-tight seal, and a bolt-down manhole. The Well Construction Records are included in Appendix D.

5.0 GROUNDWATER SAMPLING AND HYDROGEOLOGY

5.1 Groundwater Sampling

After each round of monitoring well installation, the new wells were sampled. On March 16 and 17, 1999, after the final six monitoring wells were installed, all nineteen of the monitoring wells were sampled. Prior to sampling, the monitoring wells were gauged with a properly decontaminated electronic oil/water interface probe to determine the groundwater level and investigate for the presence of free product. Free product was not detected in any of the monitoring wells. The groundwater elevation data are presented in Table 4. The relative groundwater elevation data from March 16, 1999, were used to construct the groundwater elevation contour map presented as Figure 5. The groundwater flow appears to be to the southeast.

Each groundwater monitoring well was purged prior to sampling by removing a minimum of three well volumes from the well. After a sufficient time for groundwater recharge was allowed, the wells were sampled using new, disposable bailers, placed in laboratory supplied containers, sealed, labeled, and maintained at 4°C. The samples were submitted under chain-of-custody procedures to ENCO in Jacksonville, Florida for laboratory analysis. The groundwater samples collected on March 17, 1999, were analyzed by EPA methods 601, 602 w/ MTBE and IPE, 504.1 (EDB), and 625, standard method 3030c (lead), and MADEP methods VPH and EPH.

5.2 Site Hydrogeology

The hydraulic conductivity (K) value at the site was estimated to range from 50 to 130 feet/day (Heath). Groundwater flow velocity ($v=Ki/n$) was estimated using this range of hydraulic conductivity values, the range of hydraulic gradient (i) values estimated from the water table elevation contour map (Figure 5), and assumed an effective porosity (n) of 25%, which is a typical value for well sorted sand. Using combinations of these parameters, the shallow groundwater flow velocity at the site appears to range from 152 feet/year to 395 feet/year.

6.0 LABORATORY ANALYTICAL RESULTS

6.1 Soil Sample Results

Eight samples from the May 14 and 15, 1998, sampling event (MW-1 (15-17'), MW-1 (30-31.5'), MW-2 (5-7'), MW-2 (15-17'), MW-2 (25-27'), MW-3 (5-7'), MW-3 (15-17'), and MW-3 (25-27')) were submitted for laboratory analysis by EPA methods 8260 and 8270 and MADEP methods VPH and EPH. One sample from the September 8, 1998, sampling event (MW-5 (25-27')) was submitted for laboratory analysis by EPA methods 8260 and 8270 and MADEP methods VPH and EPH. Two samples were submitted from the January 22, 1999, sampling event (MW-13 (15-17') and MW-13 (25-27')) for laboratory analysis by EPA method 8260 and MADEP method VPH.

Petroleum constituents were detected at concentrations below the Soil-to-Groundwater Maximum Soil Contaminant Concentrations (MSCC) in the soil samples collected on May 14 and 15, 1998, September 8, 1998, and January 22, 1999. The soil sample locations and benzene concentrations are shown in Figure 4. The analytical results are presented in Table 2, and the laboratory reports and chain-of-custody forms are included in Appendix E.

6.2 Groundwater Results

On March 17, 1999, eighteen of the nineteen monitoring wells were sampled. Monitoring well MW-2 was dry and could not be sampled. The groundwater samples were analyzed by EPA methods 601, 602 w/ MTBE and IPE, 504.1 (EDB), and 625, standard method 3030c (lead), and MADEP methods VPH and EPH.

Petroleum constituents were detected above the 15A NCAC 2L Standards in fourteen of the eighteen monitoring wells sampled. Monitoring well MW-19 contained the highest concentrations of benzene (6,600 micrograms per liter (µg/l)), ethylbenzene (2,600 µg/l), toluene (29,000 µg/l), xylenes (19,600 µg/l), MTBE (4,000 µg/l), aliphatics in the C5-C8 range (61,000 µg/l), aliphatics in the C9-C18 range (44,100 µg/l), and aromatics in the C9-C10 range (9,000

µg/l). Monitoring well MW-9 contained the highest concentration of IPE (1,300 µg/l), and monitoring well MW-13 contained the highest concentration of EDB (0.98 µg/l).

Figures 6 to 12 present concentration isopleths of the targeted constituents. Figures 14 and 15 are the generalized geologic cross sections through the site, and Figures 16 through 19 show the vertical profiles with benzene and MTBE concentration isopleths. The groundwater analytical results are summarized in Tables 5A and 5B, and copies of the laboratory reports and chain-of-custody forms are included in Appendix F.

Delineation of the groundwater contaminant plume was not achieved to the south and east. Off-site access will be pursued to add further monitoring wells in order to delineate the plume.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Soil samples collected at various depths around the UST systems at the Quick Stop and The Pantry #456 did not exhibit petroleum constituents above the Soil-to-Groundwater MSCCs. The maximum benzene concentration of 6,600 µg/l was detected in the groundwater at the Quick Stop property (MW-19). The groundwater flow direction, measured on March 16, 1999, appears to be to the southeast. The contaminated water supply wells are located approximately 850 feet southeast (Well #32) and 1,500 feet southeast (Well #23), apparently down-gradient from the Quick Stop and The Pantry #456.

Two potable water supply wells were noted within 1,000 feet of the site, thus classifying the site as high risk. Water supply well #32 has been found to be contaminated above the EPA Drinking Water Standards. Groundwater analytical data around the UST systems at the Quick Stop and The Pantry #456 suggest that the Quick Stop facility is the source of contamination in water supply well #32.

Statistical Inventory Reconciliation (SIR) data for the last eight months at the Quick Stop are included in Appendix G. The data show that during the time period covered there has been no detectable leak rate from the tanks. Therefore, it appears that gasoline is no longer being released into the subsurface.

Additional monitoring wells will be required to fully delineate the groundwater contaminant plume. A Corrective Action Plan (CAP) will be prepared immediately in order to assess remediation options for this release.

8.0 REFERENCES

Brown, P.M. et al., "Geologic Map of North Carolina," Scale 1:500,000, North Carolina Geological Survey, 1985.

Heath, R.C., "Basic Elements of Ground-Water Hydrology with Reference to Conditions in North Carolina," U.S. Geological Survey Water-Resources Investigations Open-File Report 80-44, Raleigh, North Carolina, 1980.

NCDENR Division of Water Quality, Groundwater Section, "Groundwater Section Guidelines for the Investigation and Remediation of Soil and Groundwater, Volume II: Petroleum Underground Storage Tanks," January 2, 1998.

North Carolina Administrative Code (NCAC) Title 15A Subchapter 2L, "Classifications and Water Quality Standards Applicable to the Groundwater of North Carolina," November 1993.

SEI Environmental, Inc., "Initial Site Assessment," August 11, 1998.

U.S. Geological Survey Water-Supply Paper 2275, "North Carolina Ground-Water Resources."

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TABLE 1

Water Supply Well Construction Data The Pantry #3031, DBA Quick Stop 8215 Cliffdale Road Fayetteville, North Carolina SEI Project 597986				
Well ID*	**Date Installed**	**Distance (Feet) and Direction from Site**	**Total Depth (Feet)**	**Screened Interval (Feet)**
Well #1	05/04/81	1,300' NE	98	53-59 71-75 79-89
Well #2	11/04/82	1,300' NE	97	46-61 73-91
Well #13	09/09/87	700' NNW	91	45-85
Well #23	08/21/92	1,500' SE	92	58-85
Well #32	02/16/96	850' SE	90	54-84

*Well shown on Figure 2

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TABLE 2

Soil Sample Field Screening and Analytical Results

The Pantry #3031, DBA Quick Stop
8215 Cliffdale Road
Fayetteville, North Carolina
SEI Project 597986

Sample Location	Sample Depth (feet)	Date Sampled	OVA (ppm)	Acetone* (µg/kg)	Methylene Chloride* (µg/kg)	Benzene (µg/kg)	MTBE (µg/kg)	Naphthalene (µg/kg)	Toluene (µg/kg)	Tetrachloroethene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	1,3,5-Trimethylbenzene (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)
MW-1	5-7	05/14/98	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10-12	05/14/98	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15-17**	05/14/98	5	120	110	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	20-22	05/14/98	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	25-27	05/14/98	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	30-31.5**	05/14/98	0	BDL	110	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-2	5-7**	05/14/98	42	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	10-12	05/14/98	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15-17**	05/14/98	38	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	20-22	05/14/98	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	25-27**	05/14/98	98	BDL	BDL	BDL	57	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	30-32	05/14/98	90	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3	5-7**	05/15/98	0	BDL	110	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	10-12	05/15/98	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15-17**	05/15/98	0	210	120	BDL	BDL	12	BDL	BDL	BDL	BDL	BDL	BDL
	20-22	05/15/98	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	25-27**	05/15/98	10	140	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	30-32	05/15/98	3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-5	5-7	09/08/98	44	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 2 (Continued)

Soil Sample Field Screening and Analytical Results

The Pantry #3031, DBA Quick Stop
8215 Cliffdale Road
Fayetteville, North Carolina
SEI Project 597986

Sample Location	Sample Depth (feet)	Date Sampled	OVA (ppm)	Acetone* (µg/kg)	Methylene Chloride* (µg/kg)	Benzene (µg/kg)	MTBE (µg/kg)	Naphthalene (µg/kg)	Toluene (µg/kg)	Tetrachloroethene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	1,3,5-Trimethylbenzene (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)
MW-5 continued	10-12	09/08/98	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15-17	09/08/98	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	20-22	09/08/98	34	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	25-27**	09/08/98	30	BDL	BDL	BDL	BDL	2.8	3.0	8.0	2.0	14.4	1.8	8.4
	30-32	09/08/98	20	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	35-37	09/08/98	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-6	5-7	09/09/98	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10-12	09/09/98	4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15-17	09/09/98	26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	20-22	09/09/98	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	25-27	09/09/98	21	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	30-32	09/09/98	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	35-37	09/09/98	7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	5-7	09/09/98	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10-12	09/09/98	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15-17	09/09/98	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	20-22	09/09/98	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	25-27	09/09/98	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	30-32	09/09/98	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	35-37	09/09/98	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

SEI Environmental, Inc.

TABLE 2 (Continued)

Soil Sample Field Screening and Analytical Results

The Pantry #3031, DBA Quick Stop
8215 Cliffdale Road
Fayetteville, North Carolina
SEI Project 597986

Sample Location	Sample Depth (feet)	Date Sampled	OVA (ppm)	Acetone* (µg/kg)	Methylene Chloride* (µg/kg)	Benzene (µg/kg)	MTBE (µg/kg)	Naphthalene (µg/kg)	Toluene (µg/kg)	Tetrachloroethene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	1,3,5-Trimethylbenzene (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)
MW-8	5-7	09/09/98	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10-12	09/09/98	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15-17	09/09/98	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	20-22	09/09/98	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	25-27	09/09/98	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	30-32	09/09/98	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	35-37	09/09/98	<1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	5-7	01/21/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15-17	01/21/99	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	25-27	01/21/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	35-37	01/21/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-10	5-7	01/21/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15-17	01/21/99	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	25-27	01/21/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	35-37	01/21/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-11	5-7	01/21/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15-17	01/21/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	25-27	01/21/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	35-37	01/21/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-12	5-7	01/22/99	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 2 (Continued)

Soil Sample Field Screening and Analytical Results

The Pantry #3031, DBA Quick Stop
8215 Cliffdale Road
Fayetteville, North Carolina
SEI Project 597986

Sample Location	Sample Depth (feet)	Date Sampled	OVA (ppm)	Acetone* (µg/kg)	Methylene Chloride* (µg/kg)	Benzene (µg/kg)	MTBE (µg/kg)	Naphthalene (µg/kg)	Toluene (µg/kg)	Tetrachloroethene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	1,3,5-Trimethylbenzene (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)
MW-12 continued	15-17	01/22/99	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	25-27	01/22/99	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	35-37	01/22/99	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-13	5-7	01/22/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	10-12	01/22/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	15-17**	01/22/99	5	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	20-22	01/22/99	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	25-27**	01/22/99	58	BDL	BDL	5.4	BDL	BDL	BDL	BDL	BDL	4.0	BDL	1.6
	30-32	01/22/99	44	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	35-37	01/22/99	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-14	10-12	03/10/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	20-22	03/10/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	30-32	03/10/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	40-42	03/10/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-15	10-12	03/10/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	20-22	03/10/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	30-32	03/10/99	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	40-42	03/10/99	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-16	10-12	03/11/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	20-22	03/11/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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TABLE 2 (Continued)

Soil Sample Field Screening and Analytical Results

The Pantry #3031, DBA Quick Stop
8215 Cliffdale Road
Fayetteville, North Carolina
SEI Project 597986

Sample Location	Sample Depth (feet)	Date Sampled	OVA (ppm)	Acetone* (µg/kg)	Methylene Chloride* (µg/kg)	Benzene (µg/kg)	MTBE (µg/kg)	Naphthalene (µg/kg)	Toluene (µg/kg)	Tetrachlorothene (µg/kg)	Ethylbenzene (µg/kg)	Total Xylenes (µg/kg)	1,3,5-Trimethylbenzene (µg/kg)	1,2,4-Trimethylbenzene (µg/kg)
MW-16	30-32	03/11/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
continued	40-42	03/11/99	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-17	10-12	03/11/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	20-22	03/11/99	32	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	30-32	03/11/99	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	40-42	03/11/99	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-18	10-12	03/11/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	20-22	03/11/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	30-32	03/11/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	40-42	03/11/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-19	10-12	03/11/99	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	20-22	03/11/99	<10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	30-32	03/11/99	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	40-42	03/11/99	10	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Maximum Soil Contaminant Concentration				**NE**	**NE**	**5.6**	**920**	**580**	**7,000**	**NE**	**240**	**5,000**	**7,000**	**8,000**

*Acetone and methylene chloride are laboratory solvents and common laboratory contaminants

**Submitted for analysis

ppm = parts per million

µg/kg – micrograms per kilogram

NA – Not Analyzed

Bold concentrations are above Soil-to-Groundwater Maximum Soil Contaminant Concentrations

NE – Maximum Soil Contaminant Concentration has not been established by the Central Office of the UST Section

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TABLE 3

Monitoring Well Construction Data The Pantry #3031, DBA Quick Stop 8215 Cliffdale Road Fayetteville, North Carolina SEI Project 597986			
Well ID	**Date Installed**	**Total Depth (Feet)**	**Screened Interval (Feet)**
MW-1	05/14/98	40	20-40
MW-2	05/14/98	40	20-40
MW-3	05/15/98	50	20-50
MW-4*	09/08/98 & 09/09/98	60	55-60
MW-5	09/08/98	45	25-45
MW-6	09/09/98	50	30-50
MW-7	09/09/98	50	30-50
MW-8	09/09/98	45	25-45
MW-9	01/21/99	50	20-50
MW-10	01/21/99	50	20-50
MW-11	01/21/99	50	20-50
MW-12	01/22/99	50	20-50
MW-13	01/22/99	50	20-50
MW-14	03/10/99	50	20-50
MW-15	03/10/99	52	22-52
MW-16	03/11/99	50	20-50
MW-17	03/11/99	50	20-50
MW-18	03/11/99	50	20-50
MW-19	03/11/99	50	20-50

* Type III Monitoring Well

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TABLE 4

Historical Groundwater Elevation Data The Pantry #3031, DBA Quick Stop 8215 Cliffdale Road Fayetteville, North Carolina SEI Project 597986				
Well ID	**Date Gauged**	**Top of Casing Elevation* (feet)**	**Depth to Groundwater (feet)**	**Groundwater Elevation (feet)**
MW-1	05/18/98	101.43	35.19	66.24
	07/07/98		39.28	62.15
	09/23/98		39.61	61.82
	01/22/99		Not gauged – inaccessible	
	01/25/99		39.63	61.80
	03/16/99	245.37**	39.00	206.37
MW-2	05/18/98	100.00	33.92	66.08
	07/07/98		38.95	61.05
	09/23/98		Not gauged – dry	
	01/22/99		Not gauged – dry	
	01/25/99		Not gauged – dry	
	03/16/99	244.35**	Not gauged – dry	
MW-3	05/18/98	102.00	36.00	66.00
	07/07/98		40.35	61.65
	09/23/98		42.93	59.07
	01/22/99		44.74	57.26
	01/25/99		44.71	57.29
	03/16/99	245.92**	45.00	200.92
MW-4	09/23/98	100.26	44.00	56.26
	01/22/99		45.56	54.70
	01/25/99		45.59	54.67
	03/16/99	244.61**	45.85	198.76
MW-5	09/23/98	100.30	41.51	58.79
	01/22/99		43.40	56.90
	01/25/99		43.33	56.97
	03/16/99	244.65**	43.72	200.93
MW-6	09/23/98	99.91	41.15	58.76
	01/22/99		43.00	56.91

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TABLE 4 (Continued)

Historical Groundwater Elevation Data The Pantry #3031, DBA Quick Stop 8215 Cliffdale Road Fayetteville, North Carolina SEI Project 597986				
Well ID	**Date Gauged**	**Top of Casing Elevation* (feet)**	**Depth to Groundwater (feet)**	**Groundwater Elevation (feet)**
MW-6 (continued)	01/25/99		42.96	56.95
	03/16/99	244.25**	43.39	200.86
MW-7	09/23/98	99.32	40.72	58.60
	01/22/99		42.62	56.70
	01/25/99		42.57	56.75
	03/16/99	243.66**	42.94	200.72
MW-8	09/23/98	100.64	42.15	58.49
	01/22/99		Not gauged – inaccessible	
	01/25/99		44.00	56.64
	03/16/99	244.99**	44.42	200.57
MW-9	01/25/99	99.30	42.83	56.47
	03/16/99	243.86**	43.24	200.62
MW-10	01/25/99	99.77	43.44	56.33
	03/16/99	244.33**	43.82	200.51
MW-11	01/25/99	100.03	43.64	56.39
	03/16/99	244.57**	44.00	200.57
MW-12	01/25/99	100.27	43.18	57.09
	03/16/99	244.82**	43.59	201.23
MW-13	01/25/99	100.46	43.37	57.09
	03/16/99	245.02**	43.85	201.17
MW-14	03/16/99	243.33**	42.81	200.52
MW-15	03/16/99	241.40**	41.29	200.11
MW-16	03/16/99	243.12**	42.55	200.57
MW-17	03/16/99	245.13**	43.69	201.44
MW-18	03/16/99	246.10**	44.71	201.39
MW-19	03/16/99	244.51**	43.45	201.06

* Top of Casing Elevation based on arbitrary datum of 100.00 feet

** Surveyed by WK Dickson

SEI Environmental, Inc.

TABLE 5A

Groundwater Analytical Results

The Pantry #3031, DBA Quick Stop
8215 Cliffdale Road
Fayetteville, North Carolina
SEI Project 597986

Well ID	Sample Date	Benzene (µg/l)	Ethylbenzene (µg/l)	Toluene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)	IPE (µg/l)	1,2-Dichloroethane (µg/l)	Bromoform (µg/l)	Methylene Chloride* (µg/l)	EDB (µg/l)	Lead (µg/l)
MW-1	05/18/98	**180**	BDL	2.0	18	**280**	3	BDL	BDL	BDL	NA	BDL
	03/17/99	**72**	BDL	6.8	BDL	110	1.5	BDL	BDL	BDL	NA	BDL
MW-2	05/18/98	**92**	BDL	12	70	**6,100**	56	**4.0**	BDL	BDL	NA	BDL
	03/17/99	Not sampled - dry										
MW-3	05/18/98	**1**	BDL	BDL	BDL	42	BDL	BDL	BDL	BDL	NA	**20**
	03/17/99	BDL	BDL	BDL	BDL	43	BDL	BDL	BDL	BDL	BDL	10
MW-4	09/23/98	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2.0	BDL	BDL
	03/17/99	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-5	09/23/98	**99**	1.0	97	135	BDL	46	BDL	BDL	BDL	BDL	BDL
	03/17/99	**80**	6.1	11	53	17	BDL	BDL	BDL	BDL	BDL	BDL
MW-6	09/23/98	**75**	1.5	30	19.3	**340**	7.0	BDL	BDL	BDL	BDL	BDL
	03/17/99	**660**	**120**	620	**1,100**	74	**210**	BDL	BDL	BDL	**0.048**	BDL
MW-7	09/23/98	**740**	6.1	380	226	180	43	BDL	BDL	BDL	BDL	BDL
	03/17/99	**920**	**120**	**1,000**	**1,380**	**460**	**230**	BDL	BDL	BDL	**0.051**	BDL
MW-8	09/23/98	**950**	8.8	30	185	**4,000**	54	**1.2**	**1.2**	BDL	BDL	**27**
	03/17/99	**430**	BDL	280	500	**940**	BDL	BDL	BDL	BDL	BDL	BDL
MW-9	01/25/99	**3,700**	**540**	**10,000**	**3,500**	**290**	**1,200**	BDL	BDL	BDL	**0.39**	BDL
	03/17/99	**3,500**	**800**	**12,000**	**5,600**	**420**	**1,300**	BDL	BDL	BDL	**0.74**	BDL

SEI Environmental, Inc.

TABLE 5A (Continued)

Groundwater Analytical Results

The Pantry #3031, DBA Quick Stop
8215 Cliffdale Road
Fayetteville, North Carolina
SEI Project 597986

Well ID	Sample Date	Benzene (µg/l)	Ethylbenzene (µg/l)	Toluene (µg/l)	Total Xylenes (µg/l)	MTBE (µg/l)	IPE (µg/l)	1,2-Dichloroethane (µg/l)	Bromoform (µg/l)	Methylene Chloride* (µg/l)	EDB (µg/l)	Lead (µg/l)
MW-10	01/25/99	**750**	**80**	**1,000**	**750**	**1,200**	**320**	BDL	BDL	BDL	**0.040**	BDL
	03/17/99	**1,400**	**200**	**1,800**	**1,950**	**3,300**	**180**	BDL	BDL	BDL	**0.036**	BDL
MW-11	01/25/99	**14**	BDL	2.0	2.0	36	33	BDL	BDL	BDL	BDL	BDL
	03/17/99	**7.3**	BDL	BDL	BDL	3.0	BDL	BDL	BDL	BDL	BDL	BDL
MW-12	01/25/99	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	03/17/99	**6.3**	BDL	BDL	BDL	3.2	BDL	BDL	BDL	BDL	BDL	BDL
MW-13	01/25/99	**2,300**	**950**	**6,200**	**4,400**	BDL	**1,100**	BDL	BDL	BDL	**0.61**	BDL
	03/17/99	**2,100**	**710**	**4,800**	**3,500**	**210**	**590**	BDL	BDL	BDL	**0.98**	BDL
MW-14	03/17/99	**340**	**56**	260	**830**	100	**76**	BDL	BDL	BDL	BDL	BDL
MW-15	03/17/99	**94**	16	60	116	**1,600**	9.2	BDL	BDL	BDL	**0.027**	BDL
MW-16	03/17/99	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-17	03/17/99	**10**	7.3	14	29	BDL	2.6	BDL	BDL	BDL	BDL	BDL
MW-18	03/17/99	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-19	03/17/99	**6,600**	**2,600**	**29,000**	**19,600**	**4,000**	**890**	BDL	BDL	BDL	**0.25**	BDL
2L Standards		**1**	**29**	**1,000**	**530**	**200**	**70**	**0.38**	**0.19**	**5**	**0.004**	**15**

* Methylene chloride is a laboratory solvent and common laboratory contaminant.
µg/l - micrograms per liter
BDL - below detection limits
Bold denotes concentration is greater than the 15A NCAC 2L Standards
NA - Not analyzed

SEI Environmental, Inc.

TABLE 5B

Groundwater Analytical Results (Continued)

The Pantry #3031, DBA Quick Stop
8215 Cliffdale Road
Fayetteville, North Carolina
SEI Project 597986

Well ID	Sample Date	1-Methylnapthalene (µg/l)	2-Methylnapthalene (µg/l)	Naphthalene (µg/l)	2,4-Dimethylphenol (µg/l)	Phenol (µg/l)	C5-C8 Aliphatics (µg/l)	C9-C12 Aliphatics (µg/l)	C9-C18 Aliphatics (µg/l)	C19-C36 Aliphatics (µg/l)	C9-C10 Aromatics (µg/l)	C11-C22 Aromatics (µg/l)
MW-1	05/18/98	NA	BDL	BDL	NA	NA	**630**	57	BDL	BDL	20	BDL
	03/17/99	BDL	BDL	BDL	BDL	BDL	240	38	NA	NA	35	NA
MW-2	05/18/98	NA	BDL	BDL	NA	NA	**6,200**	480	BDL	BDL	140	BDL
	03/17/99	Not sampled - dry										
MW-3	05/18/98	NA	BDL	BDL	NA	NA	120	BDL	BDL	BDL	BDL	BDL
	03/17/99	BDL	BDL	BDL	BDL	BDL	49	BDL	BDL	BDL	BDL	BDL
MW-4	09/23/98	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	03/17/99	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-5	09/23/98	BDL	BDL	BDL	BDL	BDL	**3,300**	380	BDL	BDL	13	BDL
	03/17/99	BDL	BDL	BDL	BDL	BDL	**900**	72	BDL	BDL	BDL	BDL
MW-6	09/23/98	BDL	BDL	BDL	BDL	BDL	**1,800**	89	BDL	BDL	BDL	BDL
	03/17/99	BDL	BDL	BDL	**14**	BDL	**3,800**	1,900	290	BDL	**710**	BDL
MW-7	09/23/98	BDL	BDL	BDL	BDL	BDL	**2,800**	520	BDL	BDL	46	BDL
	03/17/99	BDL	BDL	BDL	**56**	BDL	**6,900**	2,700	400	BDL	**710**	BDL
MW-8	09/23/98	BDL	BDL	10	BDL	BDL	**5,900**	1,100	BDL	BDL	180	BDL
	03/17/99	BDL	BDL	BDL	BDL	BDL	**2,400**	140	BDL	BDL	64	BDL
MW-9	01/25/99	**20**	**47**	**140**	**30**	100	**9,700**	**2,000**	**2,360**	BDL	**470**	**277**
	03/17/99	**13**	**33**	**160**	**24**	180	**39,000**	**18,000**	**1,800**	BDL	**5,100**	BDL

SEI Environmental, Inc.

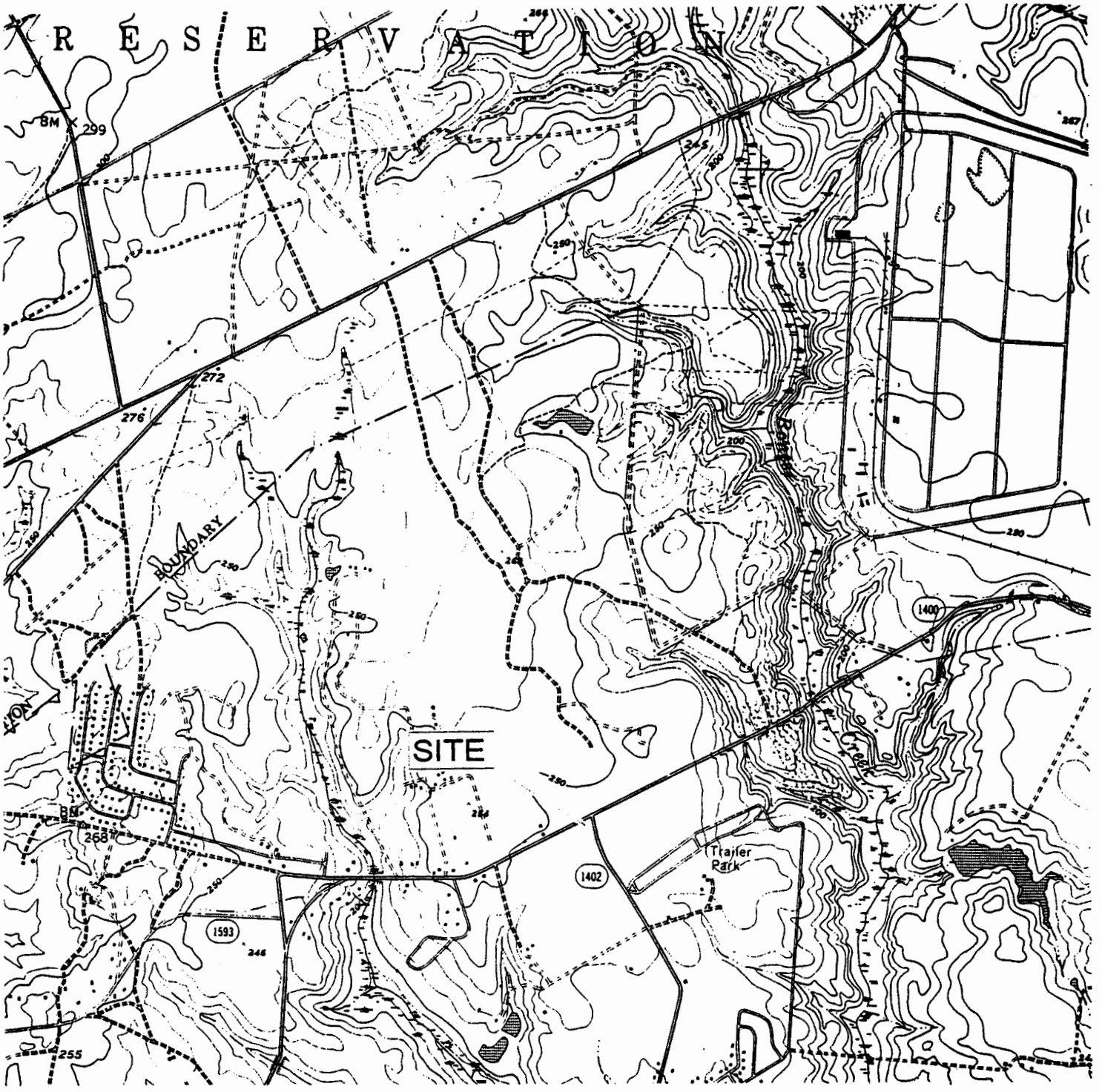
TABLE 5B (Continued)

Groundwater Analytical Results (Continued)

The Pantry #3031, DBA Quick Stop
8215 Cliffdale Road
Fayetteville, North Carolina
SEI Project 597986

Well ID	Sample Date	1-Methylnapthalene (µg/l)	2-Methylnapthalene (µg/l)	Naphthalene (µg/l)	2,4-Dimethylphenol (µg/l)	Phenol (µg/l)	C5-C8 Aliphatics (µg/l)	C9-C12 Aliphatics (µg/l)	C9-C18 Aliphatics (µg/l)	C19-C36 Aliphatics (µg/l)	C9-C10 Aromatics (µg/l)	C11-C22 Aromatics (µg/l)
MW-10	01/25/99	BDL	BDL	BDL	**10**	BDL	**9,000**	BDL	480	BDL	BDL	BDL
	03/17/99	BDL	BDL	18	**50**	BDL	**5,300**	1,600	670	BDL	**410**	BDL
MW-11	01/25/99	BDL	BDL	BDL	BDL	BDL	100	BDL	BDL	BDL	BDL	BDL
	03/17/99	BDL	BDL	BDL	BDL	BDL	120	BDL	BDL	BDL	BDL	BDL
MW-12	01/25/99	BDL	BDL	BDL	BDL	BDL	BDL	34	BDL	BDL	BDL	BDL
	03/17/99	BDL	BDL	BDL	BDL	BDL	190	BDL	BDL	BDL	BDL	BDL
MW-13	01/25/99	**23**	**60**	**160**	**10**	61	**26,000**	**17,000**	**2,870**	BDL	**2,500**	**410**
	03/17/99	**18**	**45**	**250**	**19**	160	**27,000**	**13,000**	**2,000**	BDL	BDL	BDL
MW-14	03/17/99	BDL	BDL	13	BDL	BDL	**1,100**	1,600	450	BDL	**400**	BDL
MW-15	03/17/99	BDL	BDL	19	**10**	BDL	**3,400**	790	240	BDL	**350**	BDL
MW-16	03/17/99	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-17	03/17/99	BDL	BDL	BDL	BDL	BDL	BDL	32	BDL	BDL	BDL	BDL
MW-18	03/17/99	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-19	03/17/99	**35**	**80**	**510**	**270**	**380**	**61,000**	**39,000**	**5,100**	BDL	**9,000**	BDL
2L Standards		**NE**	**28**	**21**	**NE**	**300**	**420**	**4,200**		**42,000**	**210**	

µg/l - micrograms per liter
BDL - below detection limits
Bold denotes concentration is greater than the 15A NCAC 2L Standards
NE - 15A NCAC 2L Standard has not been established by the Central Office of the UST Section
NA - Not analyzed



SCALE 1:24000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

NORTH

N.C.

QUADRANGLE LOCATION

CLIFDALE, N.C.

SE/4 CLIFDALE 15' QUADRANGLE

N3500—W7900/7.5

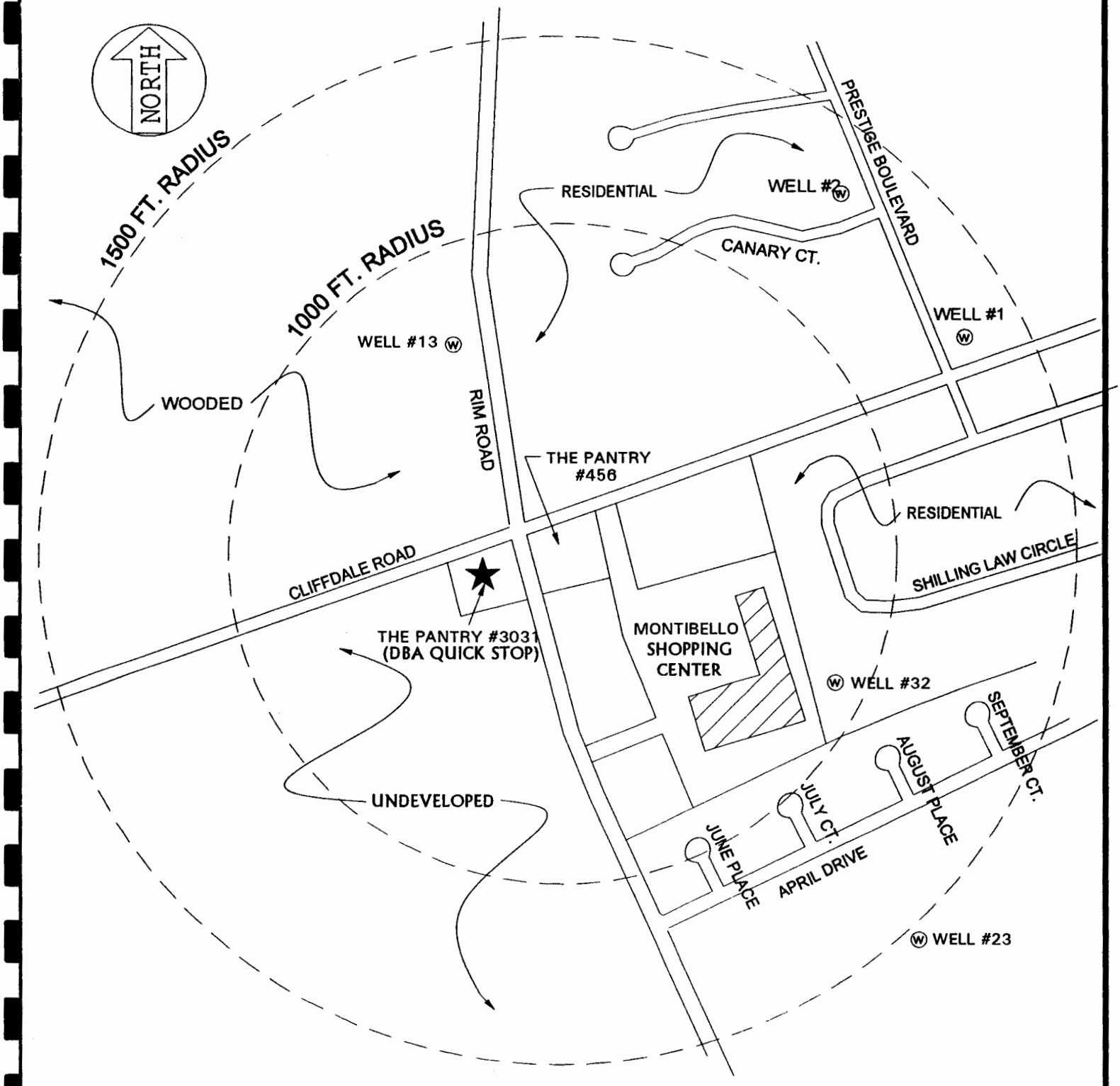
1948

PHOTOREVISED 1982

DMA 5154 II SE-SERIES V842

SEI Environmental, Inc.

FIGURE 1: USGS QUADRANGLE MAP
THE PANTRY #3031 (DBA QUICK STOP)
8215 CLIFFDALE RD.
FAYETTEVILLE, NC



LEGEND:

Ⓦ WATER SUPPLY WELL

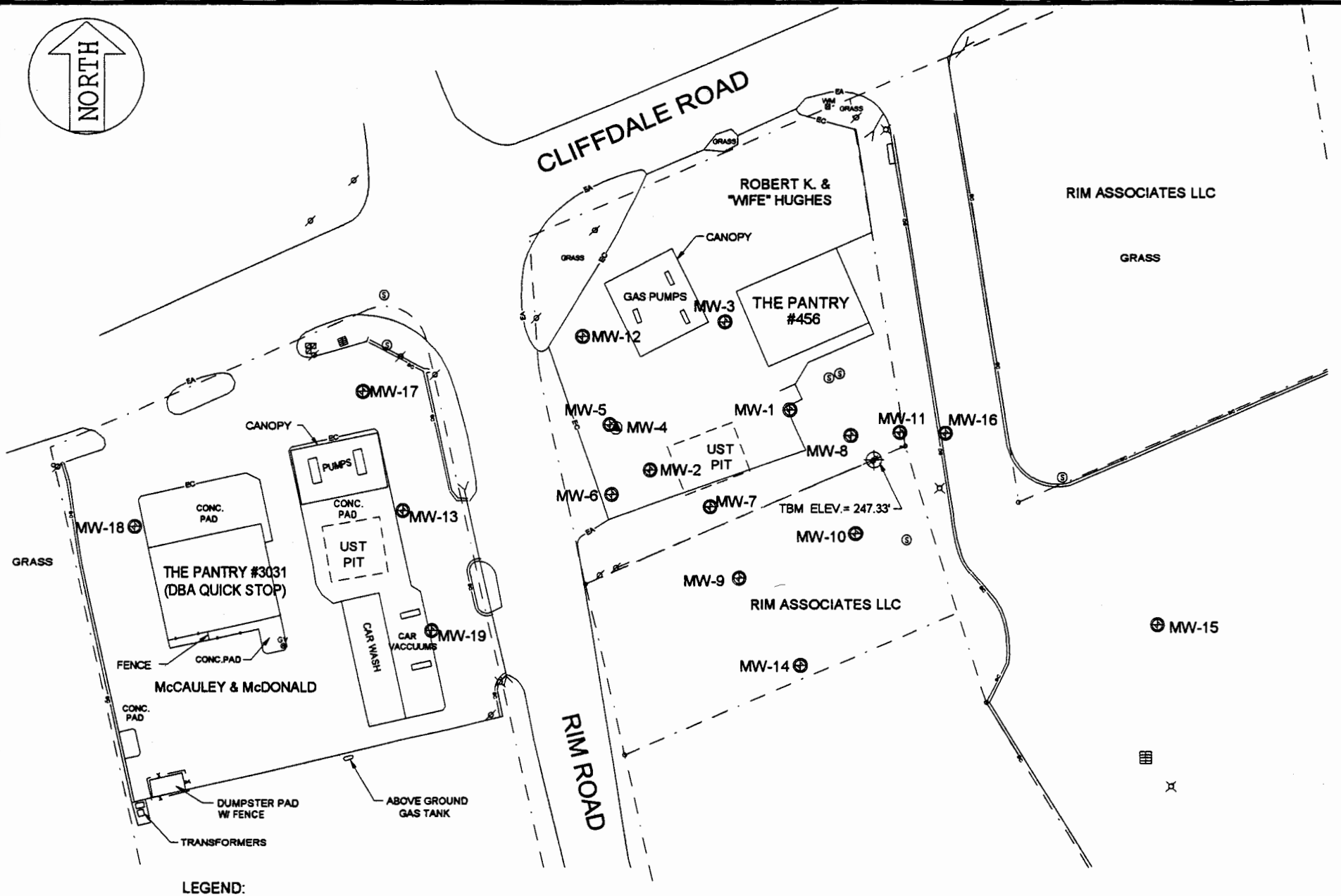
0 200 400 FT.

APPROXIMATE SCALE

SEI Environmental, Inc.

FIGURE 2: VICINITY MAP
THE PANTRY #3031 (QUICK STOP)
8215 CLIFFDALE ROAD
FAYETTEVILLE, NC

WO #197-986	DATE: 7/16/98
DWG #PA0986F1	DRAWN BY: JCJ



LEGEND:

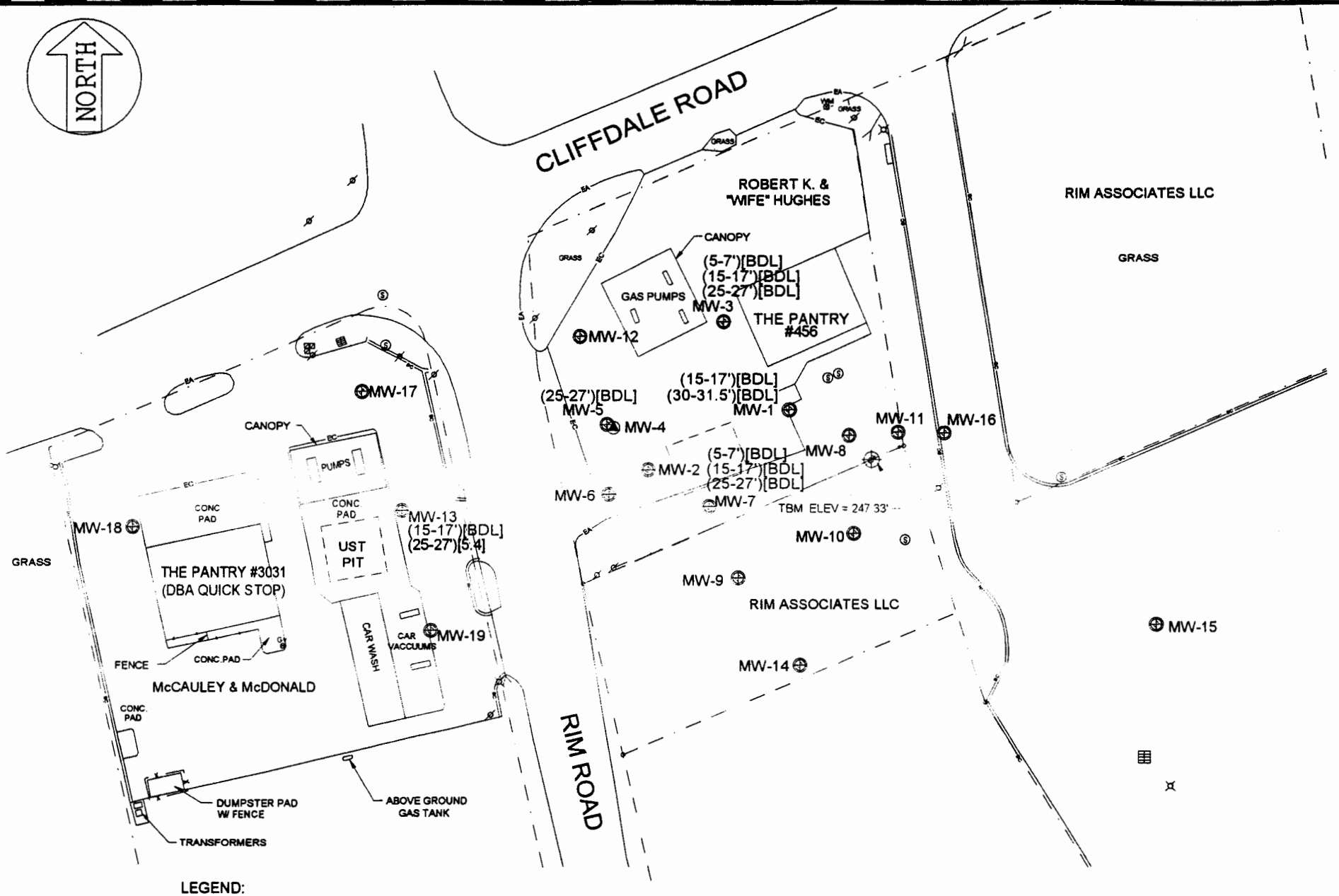
- TYPE II MONITORING WELL
- TYPE III MONITORING WELL
- POWER POLE
- LIGHT POLE
- CATCH BASIN
- SEWER MANHOLE

0 40 80 FT.

SEI Environmental, Inc.

FIGURE 3: SITE MAP
THE PANTRY #3031 (DBA QUICK STOP)
8215 CLIFFDALE RD.
FAYETTEVILLE, NC

W.O. #: 597-986	DATE: 4/23/99
DWG #: PA09862C	DRAWN BY: JCJ



LEGEND:

- TYPE II MONITORING WELL
- TYPE III MONITORING WELL
- POWER POLE
- LIGHT POLE
- CATCH BASIN
- SEWER MANHOLE

(15-17')[BDL] (SAMPLE DEPTH)[BENZENE CONCENTRATION IN ug/kg]

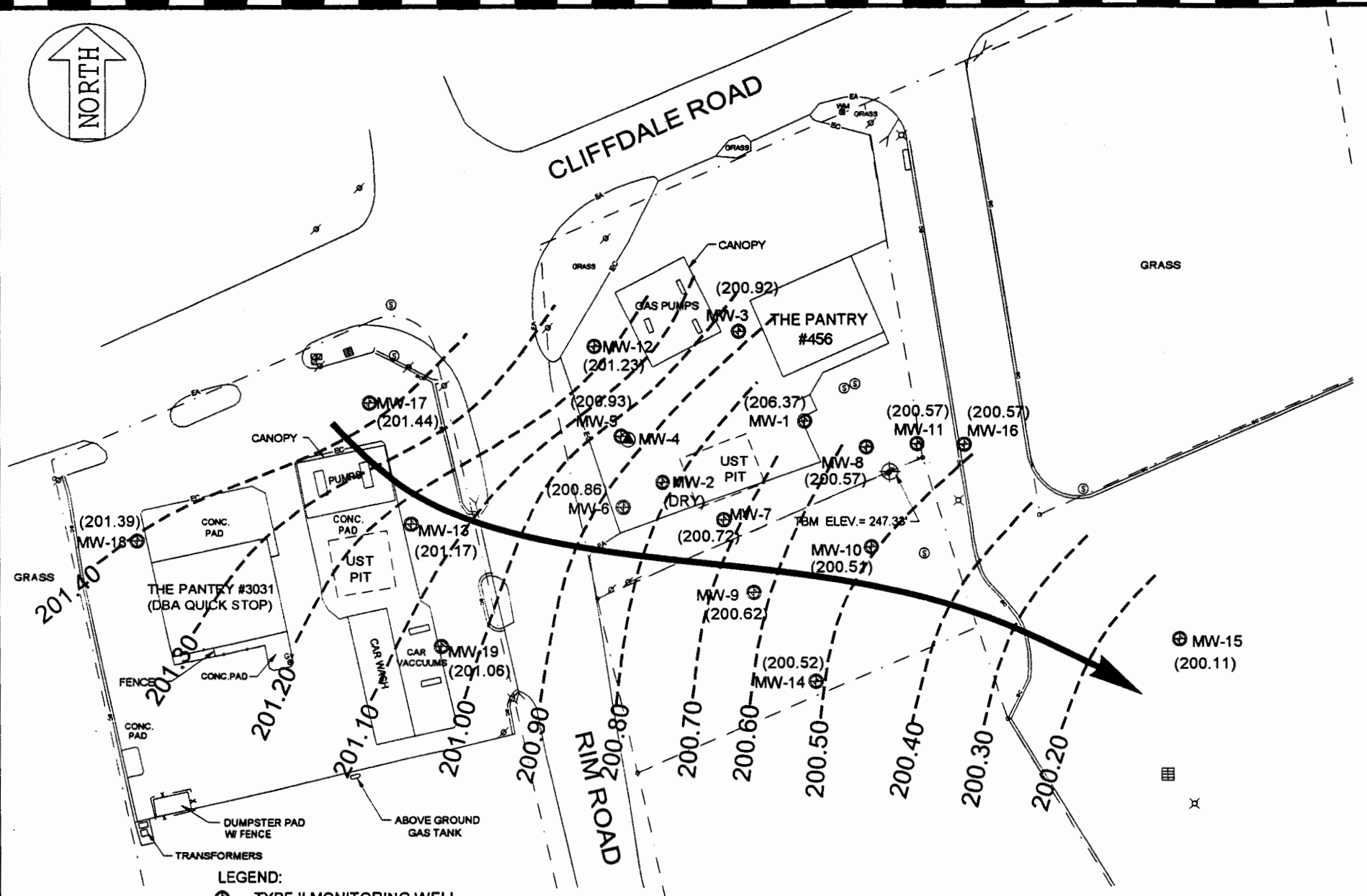
0 40 80 FT.

SEI Environmental, Inc.

FIGURE 4: SOIL BENZENE CONCENTRATION MAP
THE PANTRY #456
8191 CLIFFDALE RD.
FAYETTEVILLE, NC

W.O. #: 597-986
DWG #: PA09862C

DATE: 4/23/99
DRAWN BY: JCJ



LEGEND:

- TYPE II MONITORING WELL
- TYPE III MONITORING WELL
- POWER POLE
- LIGHT POLE
- CATCH BASIN
- SEWER MANHOLE
- (XXX) GROUNDWATER ELEVATION(FT.) BASED ON ARBITRARY DATUM OF 100.00 FT.
- 201.00 GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION

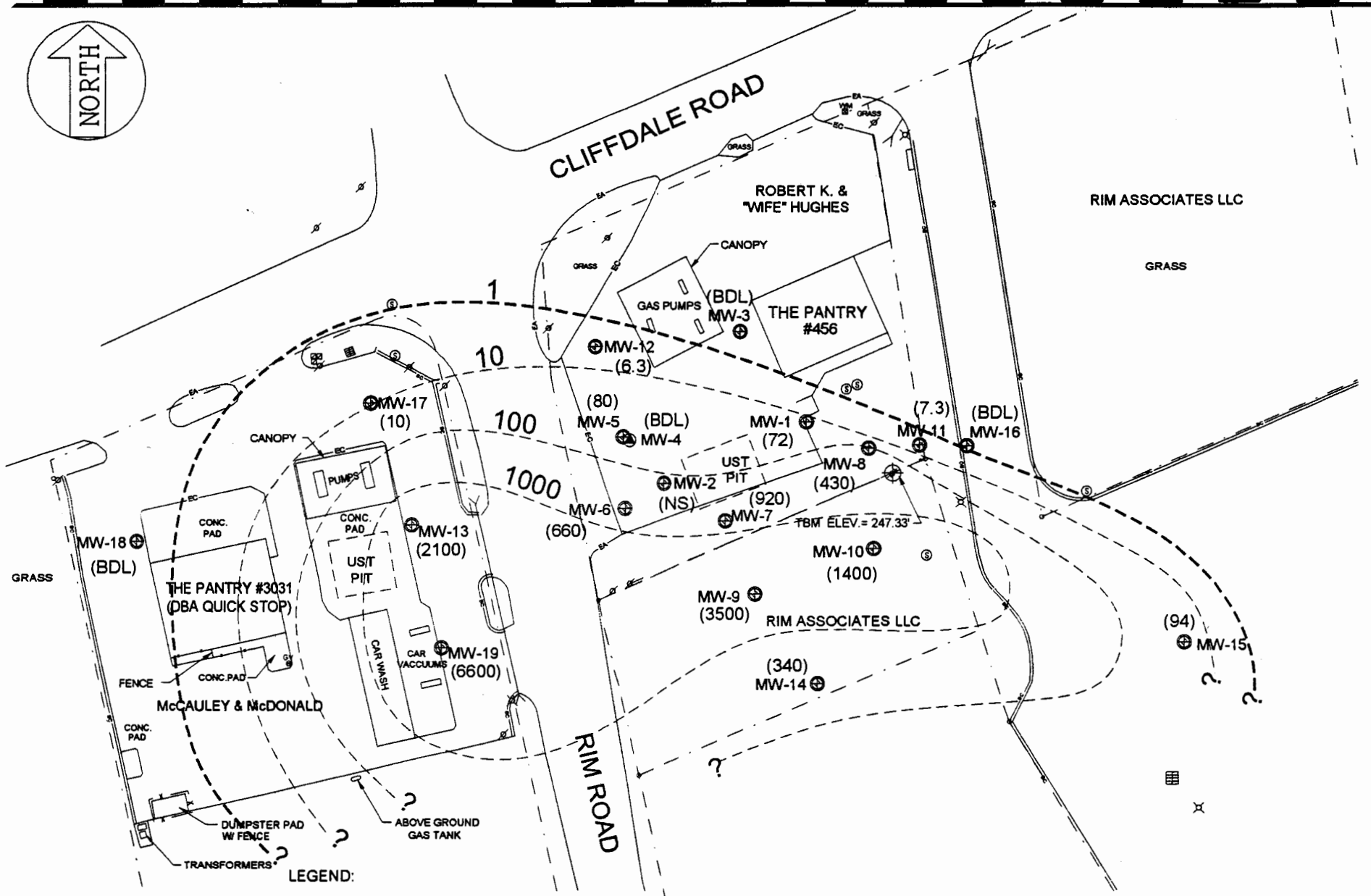
NOTE: WELLS GAUGED 3/16/99.

0 40 80 FT.

SEI Environmental, Inc.

FIGURE 5: GROUNDWATER ELEVATION CONTOUR MAP
THE PANTRY #456
8191 CLIFFDALE RD.
FAYETTEVILLE, NC

W.O. #: 597-986	DATE: 4/23/99
DWG #: PA098610C	DRAWN BY: JCJ

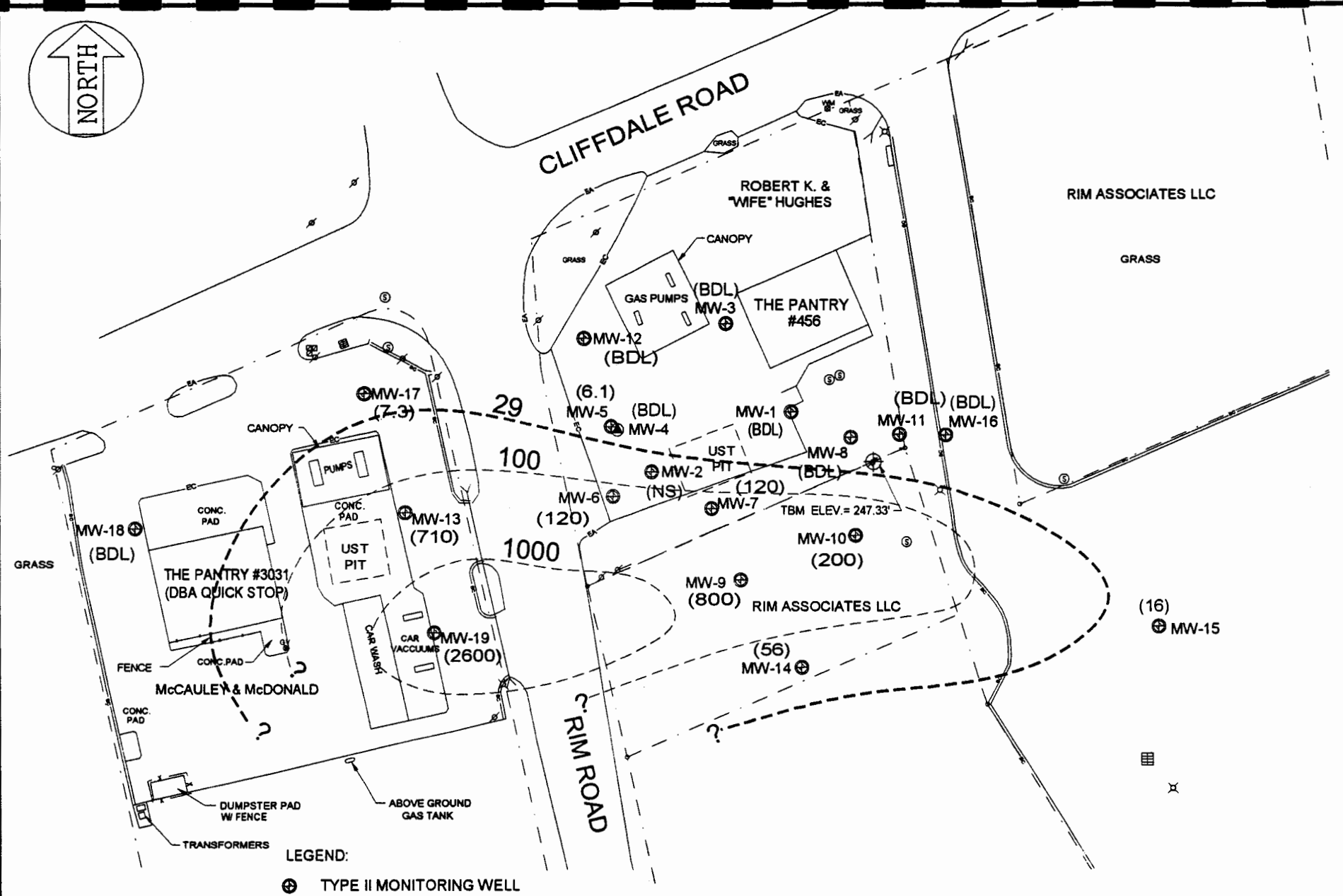


NOTE: WELLS SAMPLED 3/17/99.

SEI Environmental, Inc.

FIGURE 6: BENZENE CONCENTRATION ISOPLETH
THE PANTRY #456
8191 CLIFFDALE RD.
FAYETTEVILLE, NC

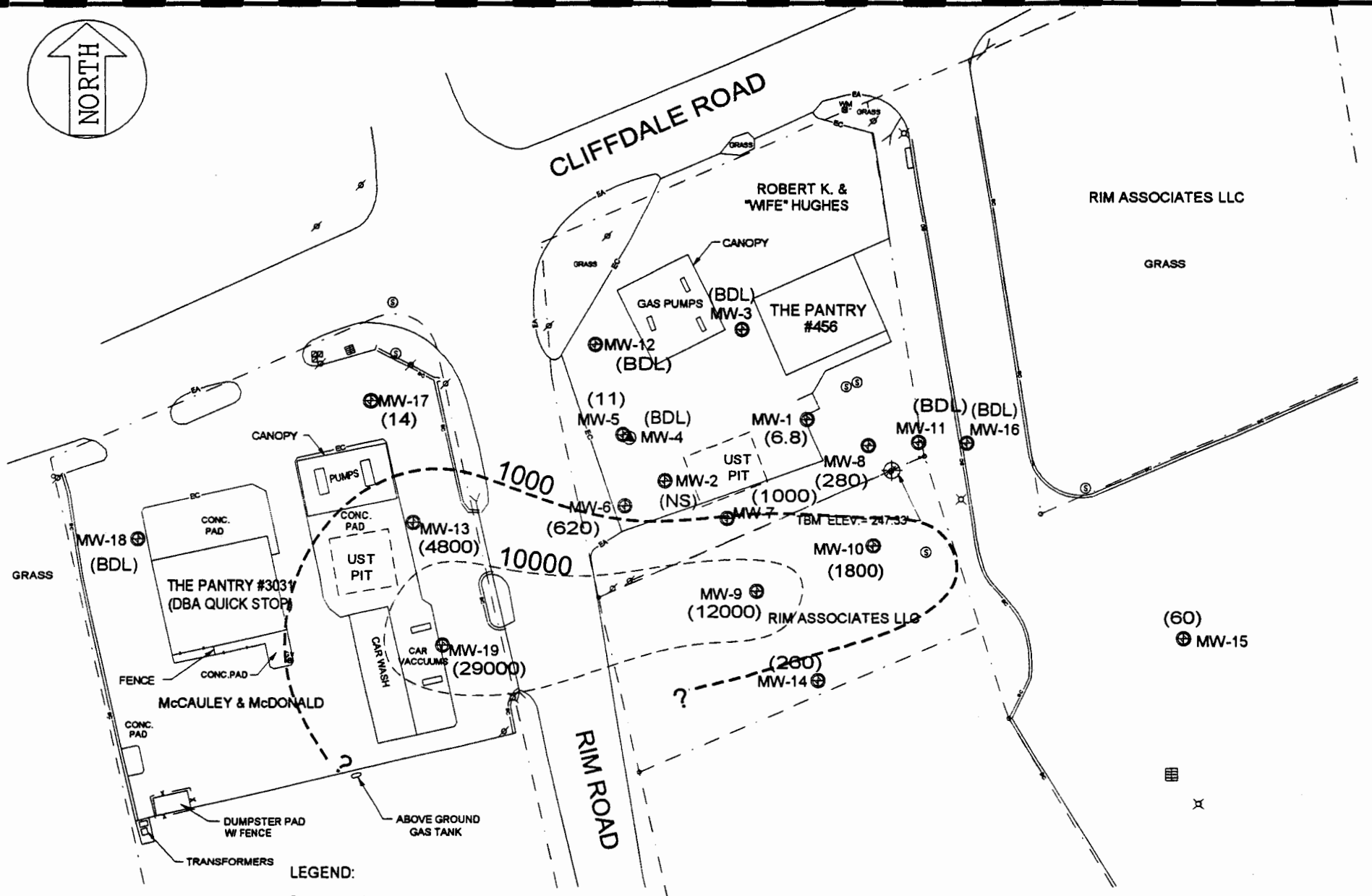
W.O. #: 597-986	DATE: 4/23/99
DWG #: PA098611C	DRAWN BY: JCJ



SEI Environmental, Inc.

FIGURE 7: ETHYLBENZENE CONCENTRATION ISOPLETH
THE PANTRY #456
8191 CLIFFDALE RD.
FAYETTEVILLE, NC

W.O. #: 597-986	DATE: 4/23/99
DWG #: PA098612C	DRAWN BY: JCJ



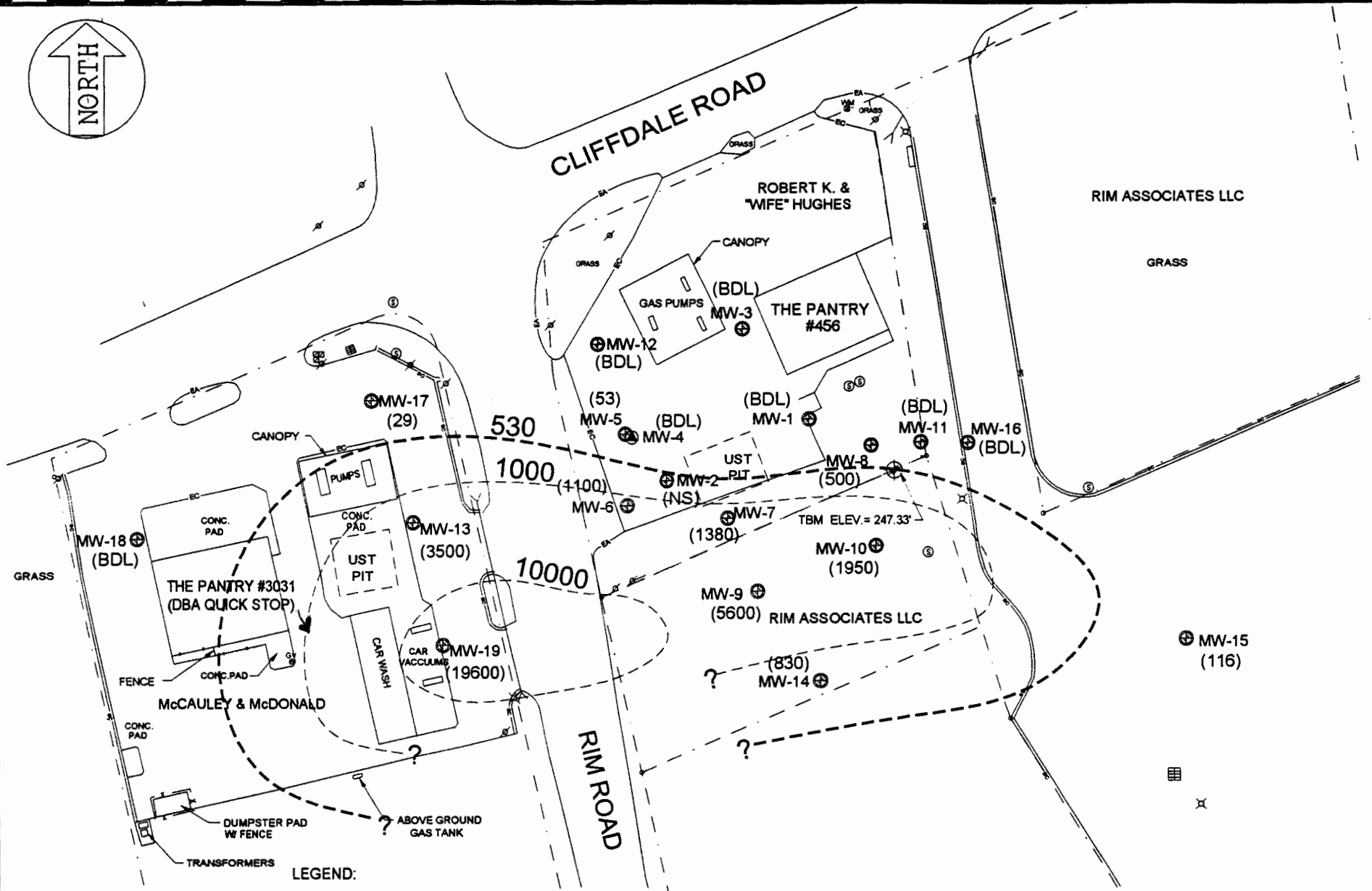
NOTE: WELLS SAMPLED 3/17/99.

SEI Environmental, Inc.

FIGURE 8: TOLUENE CONCENTRATION ISOPLETH
THE PANTRY #456
8191 CLIFFDALE RD.
FAYETTEVILLE, NC

W.O. #: 597-986
DWG #: PA098613C

DATE: 4/23/99
DRAWN BY: JCJ



LEGEND:

- TYPE II MONITORING WELL
- TYPE III MONITORING WELL
- POWER POLE
- LIGHT POLE
- SEWER MANHOLE
- (XXX) XYLENES CONCENTRATION(ug/l)
  BDL = BELOW DETECTION LIMITS
  NS = NOT SAMPLED
- 530 CONCENTRATION CONTOUR

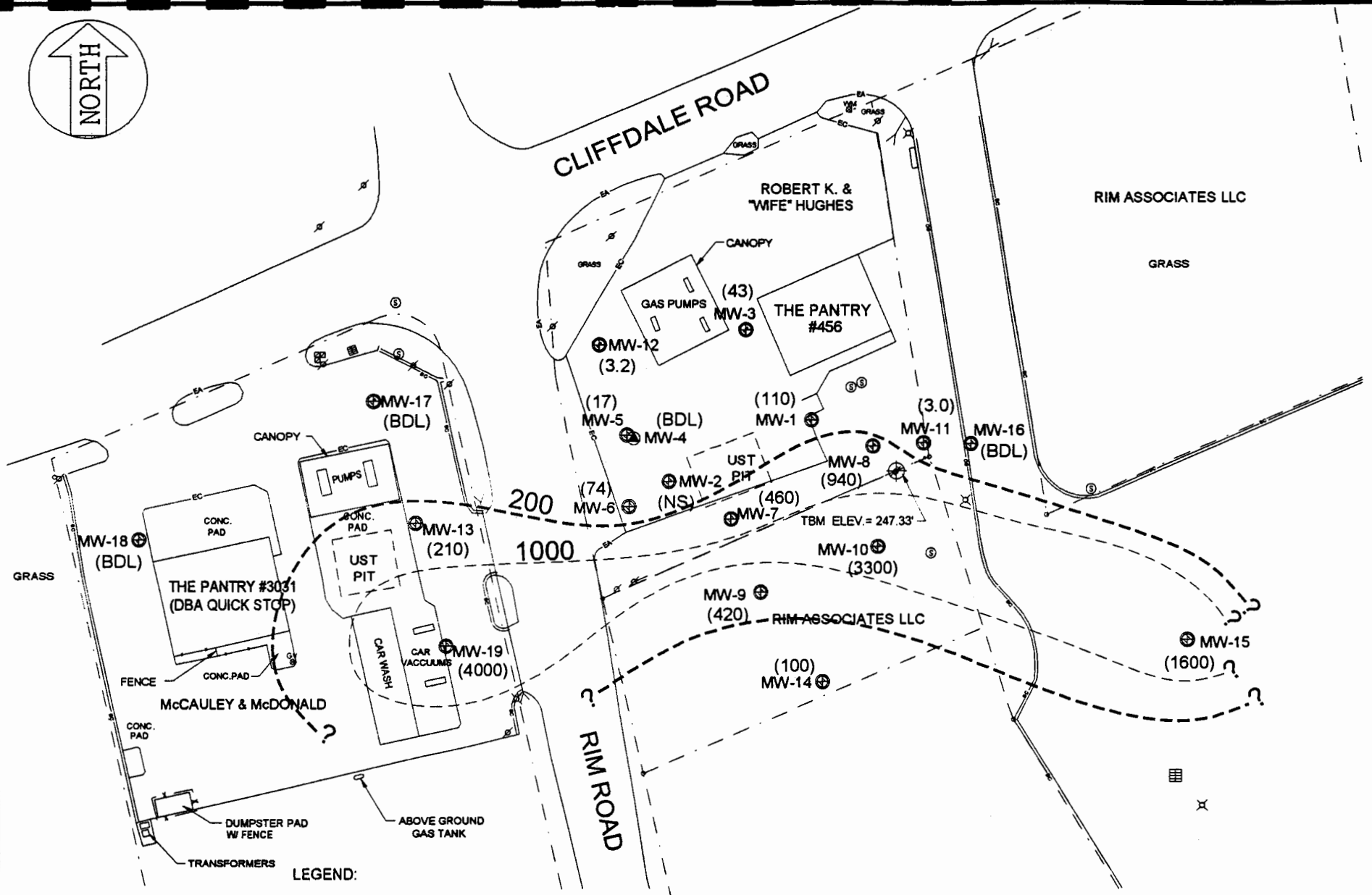
0 40 80 FT.

NOTE: WELLS SAMPLED 3/17/99.

SEI Environmental, Inc.

FIGURE 9: XYLENES CONCENTRATION ISOPLETH
THE PANTRY #456
8191 CLIFFDALE RD.
FAYETTEVILLE, NC

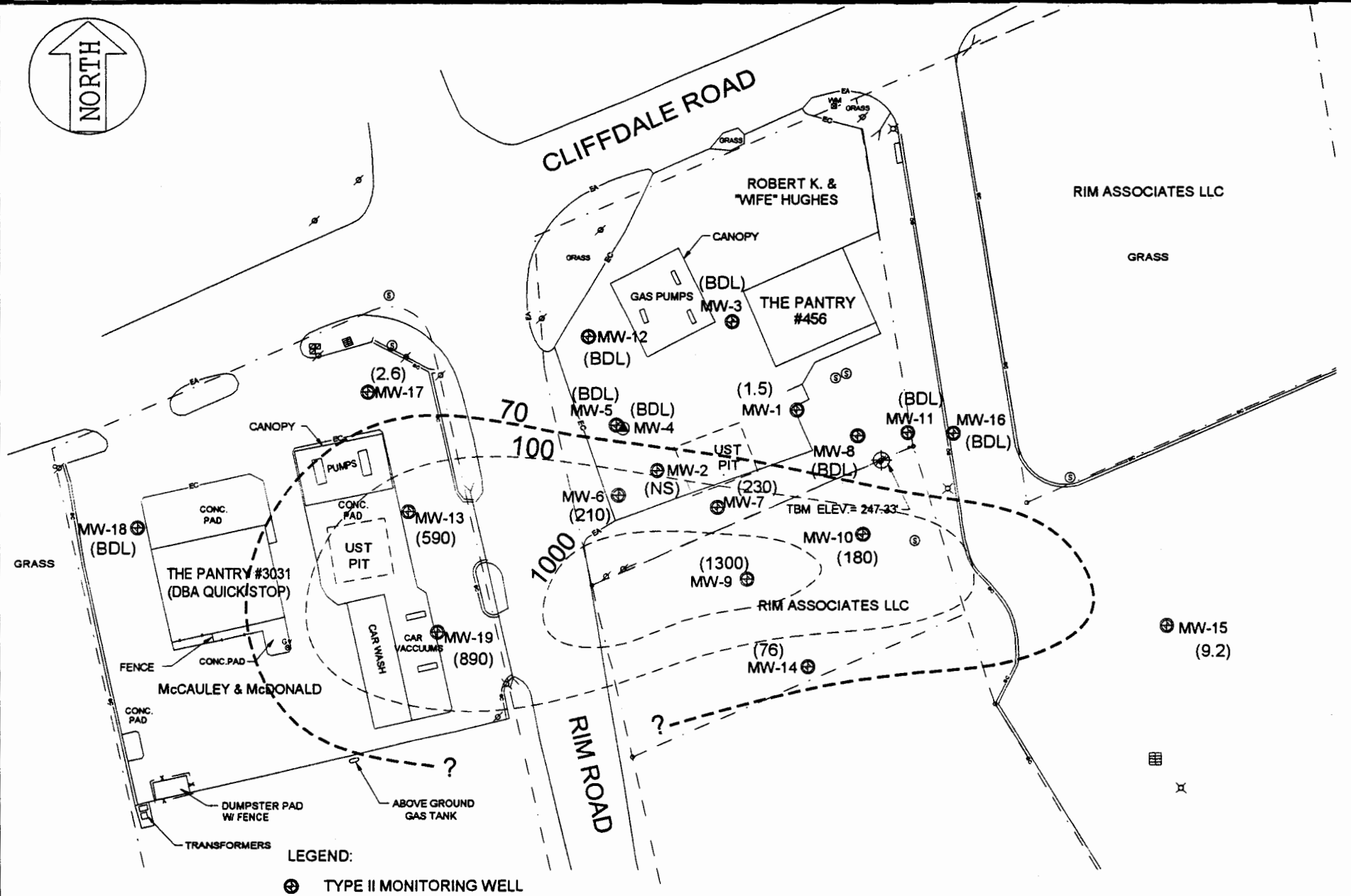
W.O. #: 597-986	DATE: 4/23/99
DWG #: PA098614C	DRAWN BY: JCJ



SEI Environmental, Inc.

FIGURE 10: MTBE CONCENTRATION ISOPLETH
THE PANTRY #456
8191 CLIFFDALE RD.
FAYETTEVILLE, NC

W.O. #: 597-986	DATE: 4/23/99
DWG #: PA098615C	DRAWN BY: JCJ



LEGEND:

- TYPE II MONITORING WELL
- TYPE III MONITORING WELL
- POWER POLE
- LIGHT POLE
- SEWER MANHOLE
- (XXX) IPE CONCENTRATION(ug/l)
- BDL = BELOW DETECTION LIMITS
- NS = NOT SAMPLED
- 70 CONCENTRATION CONTOUR

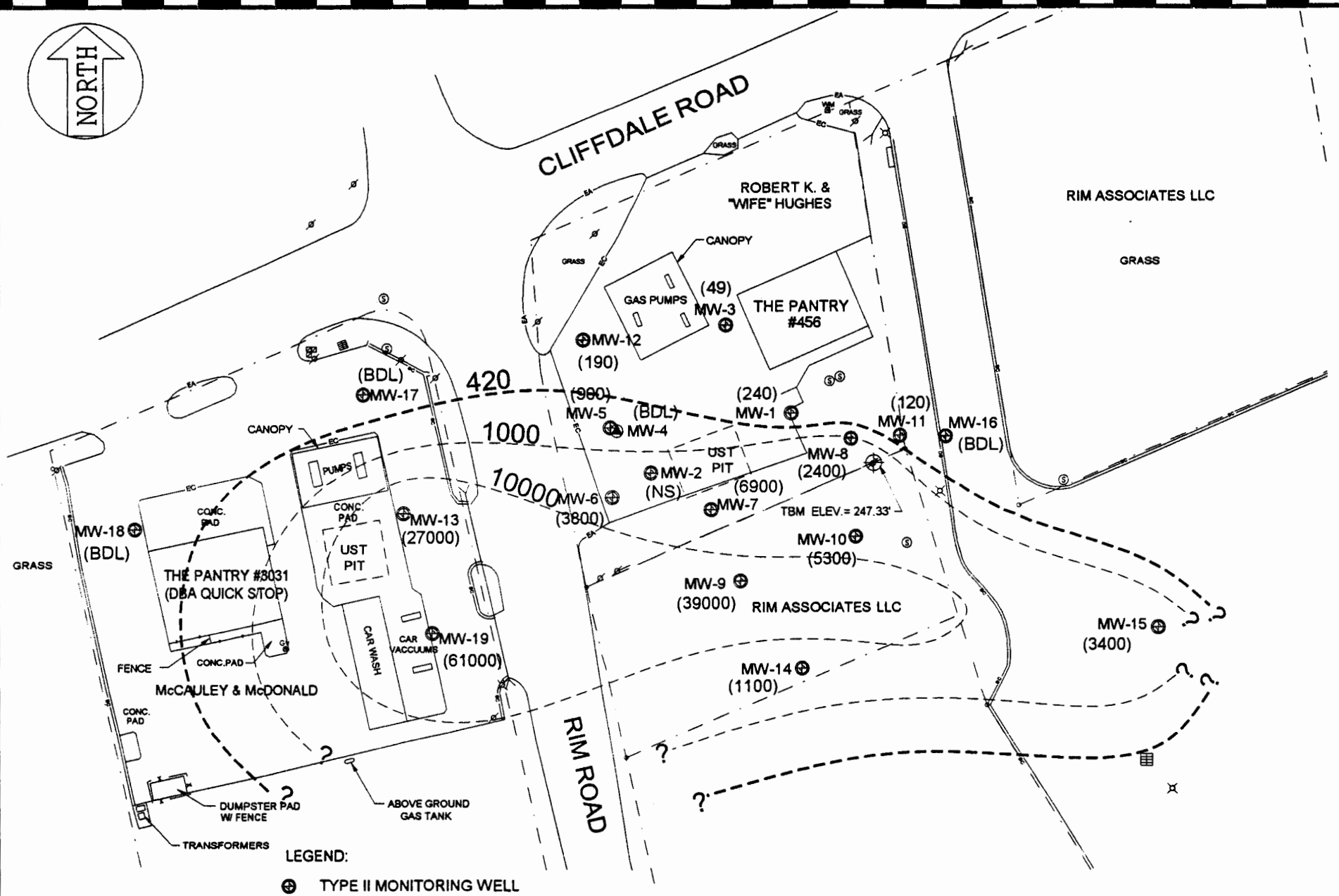
0 40 80 FT.

NOTE: WELLS SAMPLED 3/17/99.

SEI Environmental, Inc.

FIGURE 11: IPE CONCENTRATION ISOPLETH
THE PANTRY #456
8191 CLIFFDALE RD.
FAYETTEVILLE, NC

W.O. #: 597-986	DATE: 4/23/99
DWG #: PA098616C	DRAWN BY: JCJ



LEGEND:

- TYPE II MONITORING WELL
- TYPE III MONITORING WELL
- POWER POLE
- LIGHT POLE
- SEWER MANHOLE
- (XXX) C5-C8 ALIPHATICS CONCENTRATION(ug/l)
  BDL = BELOW DETECTION LIMITS
  NS = NOT SAMPLED
- 420 CONCENTRATION CONTOUR

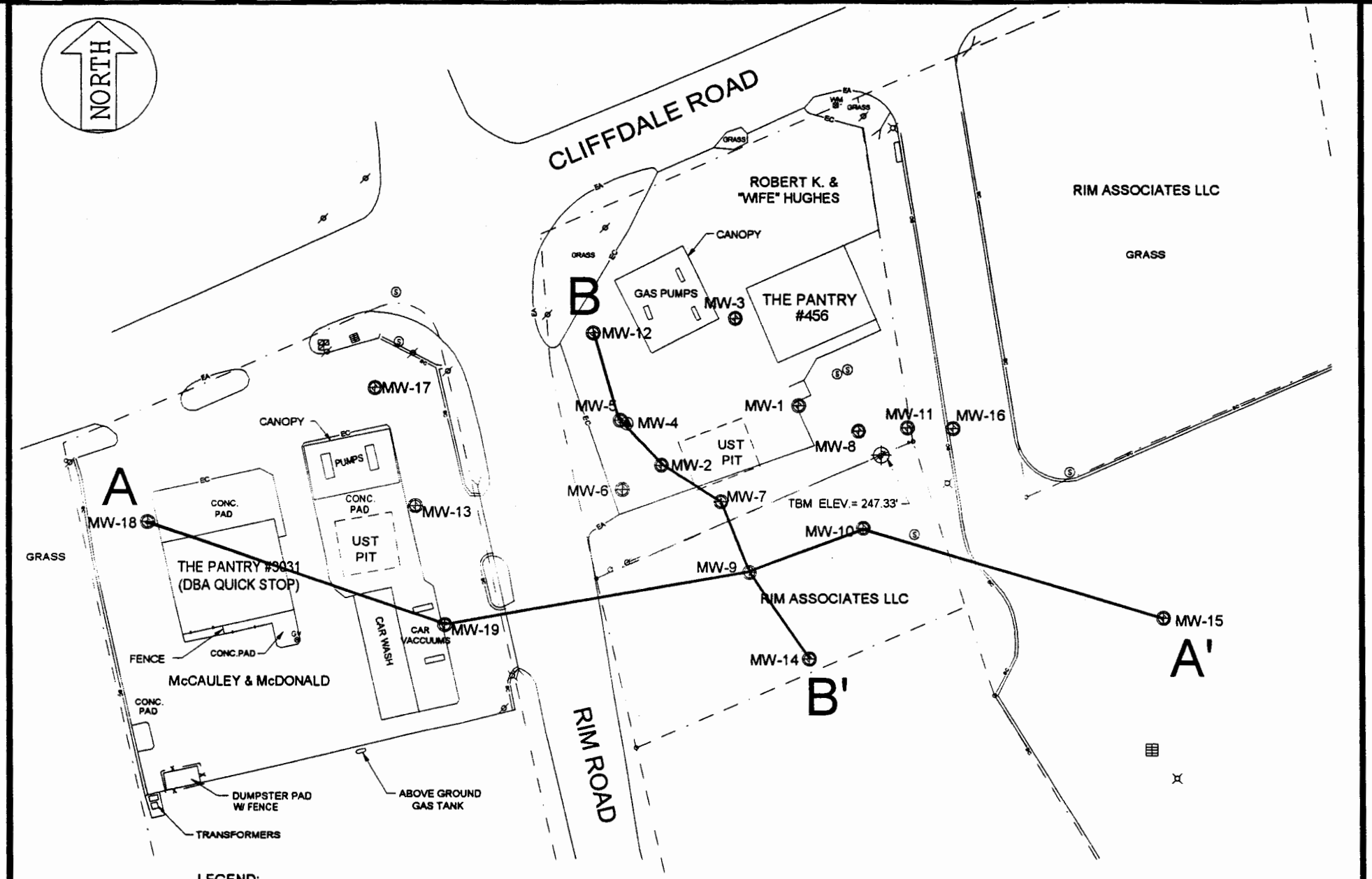
0 40 80 FT.

NOTE: WELLS SAMPLED 3/17/99.

SEI Environmental, Inc.

FIGURE 12: C5-C8 ALIPHATICS CONCENTRATION ISOPLETH
THE PANTRY #456
8191 CLIFFDALE RD.
FAYETTEVILLE, NC

W.O. #: 597-986	DATE: 4/23/99
DWG #: PA098617C	DRAWN BY: JCJ



LEGEND:

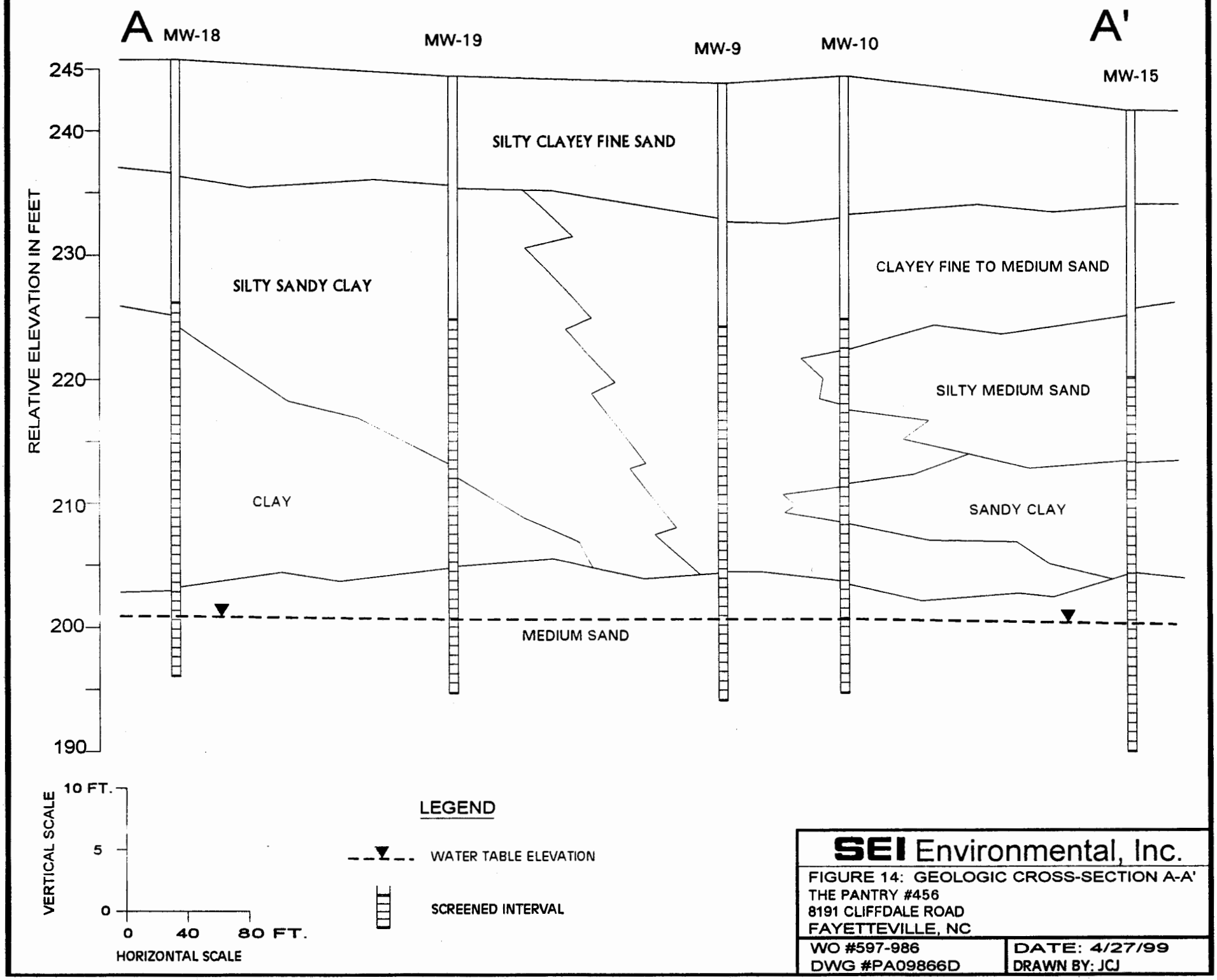
- TYPE II MONITORING WELL
- TYPE III MONITORING WELL
- POWER POLE
- LIGHT POLE
- CATCH BASIN
- SEWER MANHOLE

0 40 80 FT.

SEI Environmental, Inc.

FIGURE 13: LINES OF GEOLOGIC CROSS-SECTION
THE PANTRY #456
8191 CLIFFDALE RD.
FAYETTEVILLE, NC

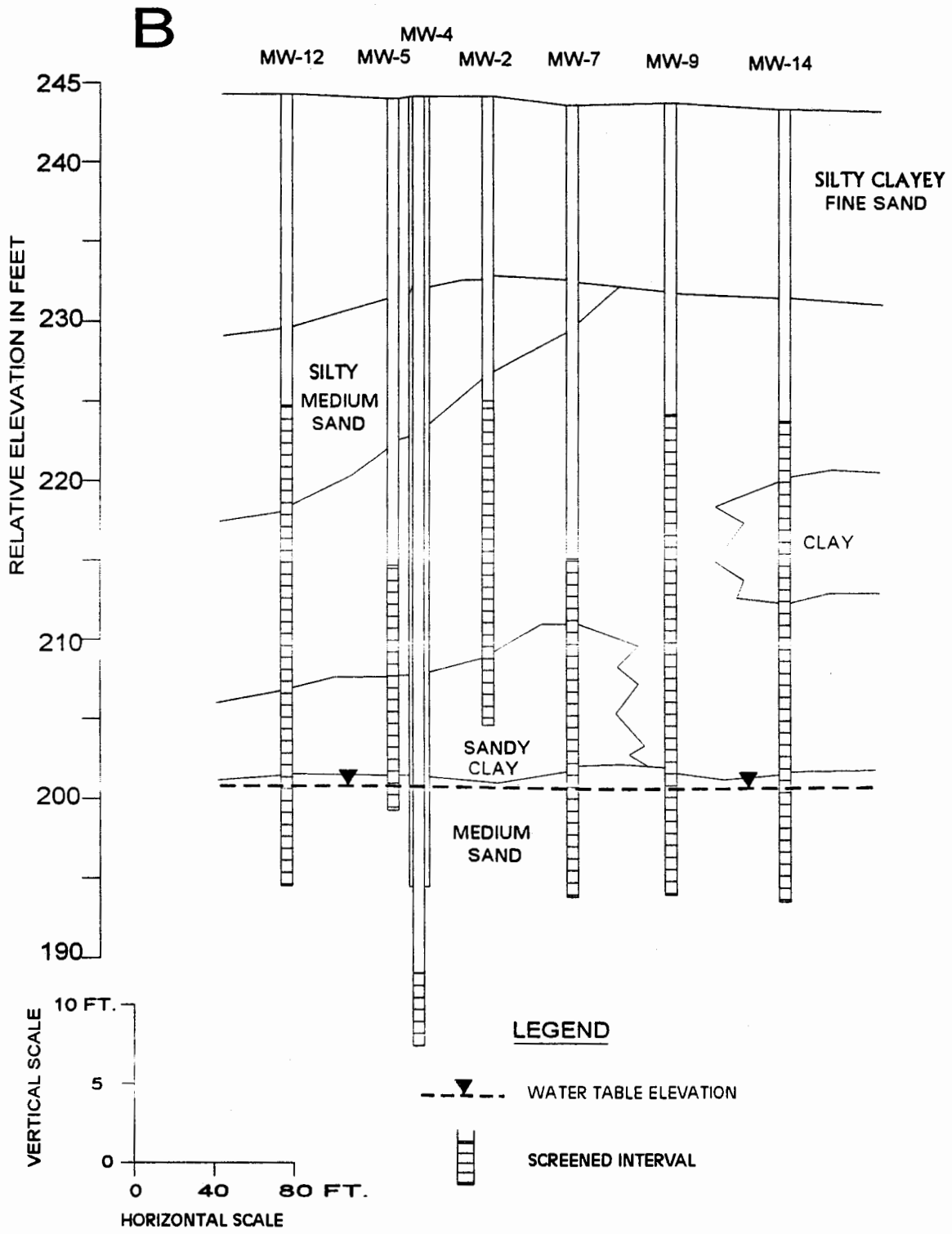
W.O. #: 597-986	DATE: 4/23/99
DWG #: PA09865C	DRAWN BY: JCJ



SEI Environmental, Inc.

FIGURE 14: GEOLOGIC CROSS-SECTION A-A'
THE PANTRY #456
8191 CLIFFDALE ROAD
FAYETTEVILLE, NC

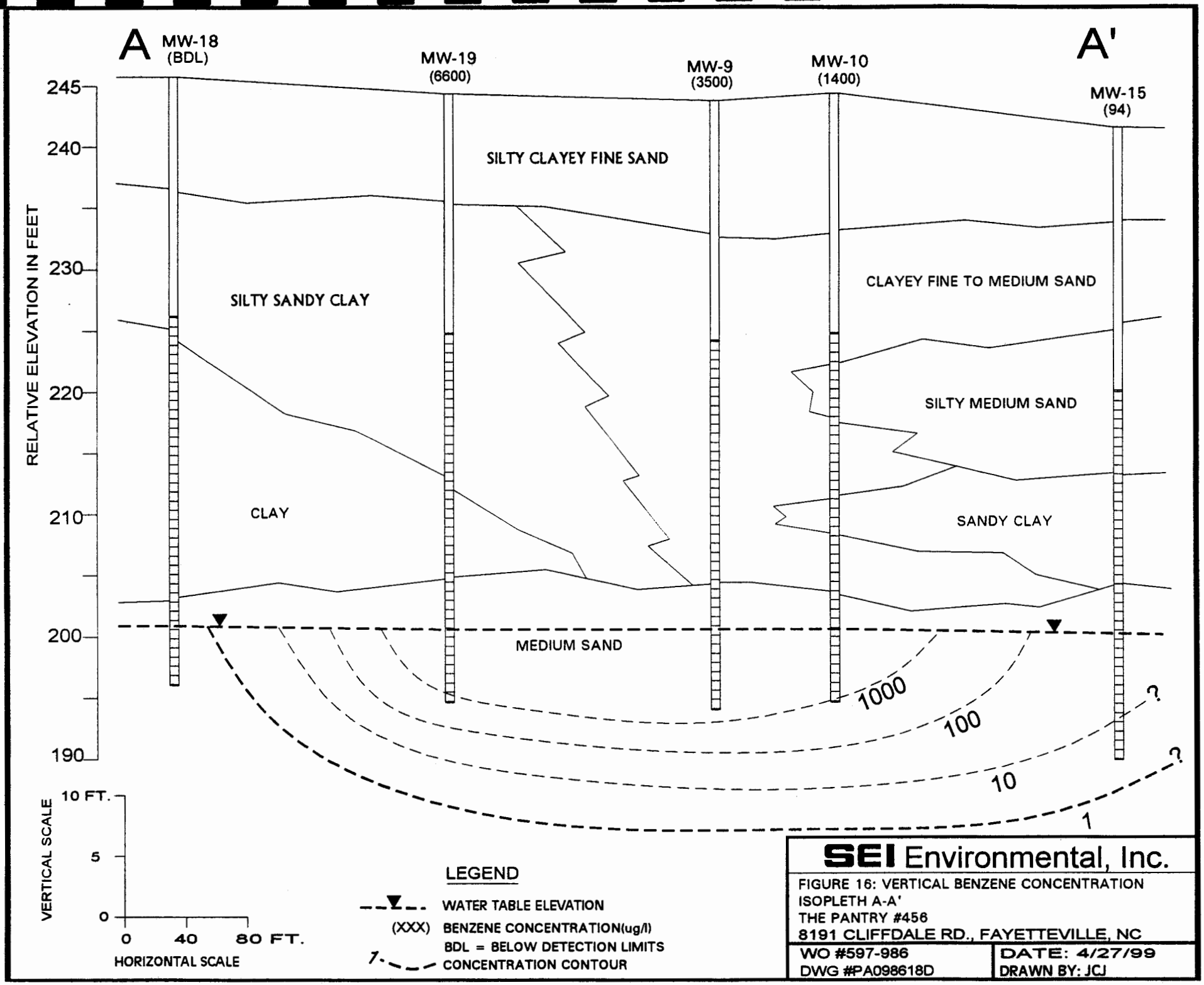
WO #597-986	DATE: 4/27/99
DWG #PA09866D	DRAWN BY: JCJ



SEI Environmental, Inc.

FIGURE 15: GEOLOGIC CROSS-SECTION B-B'
THE PANTRY #456
8191 CLIFFDALE ROAD
FAYETTEVILLE, NC

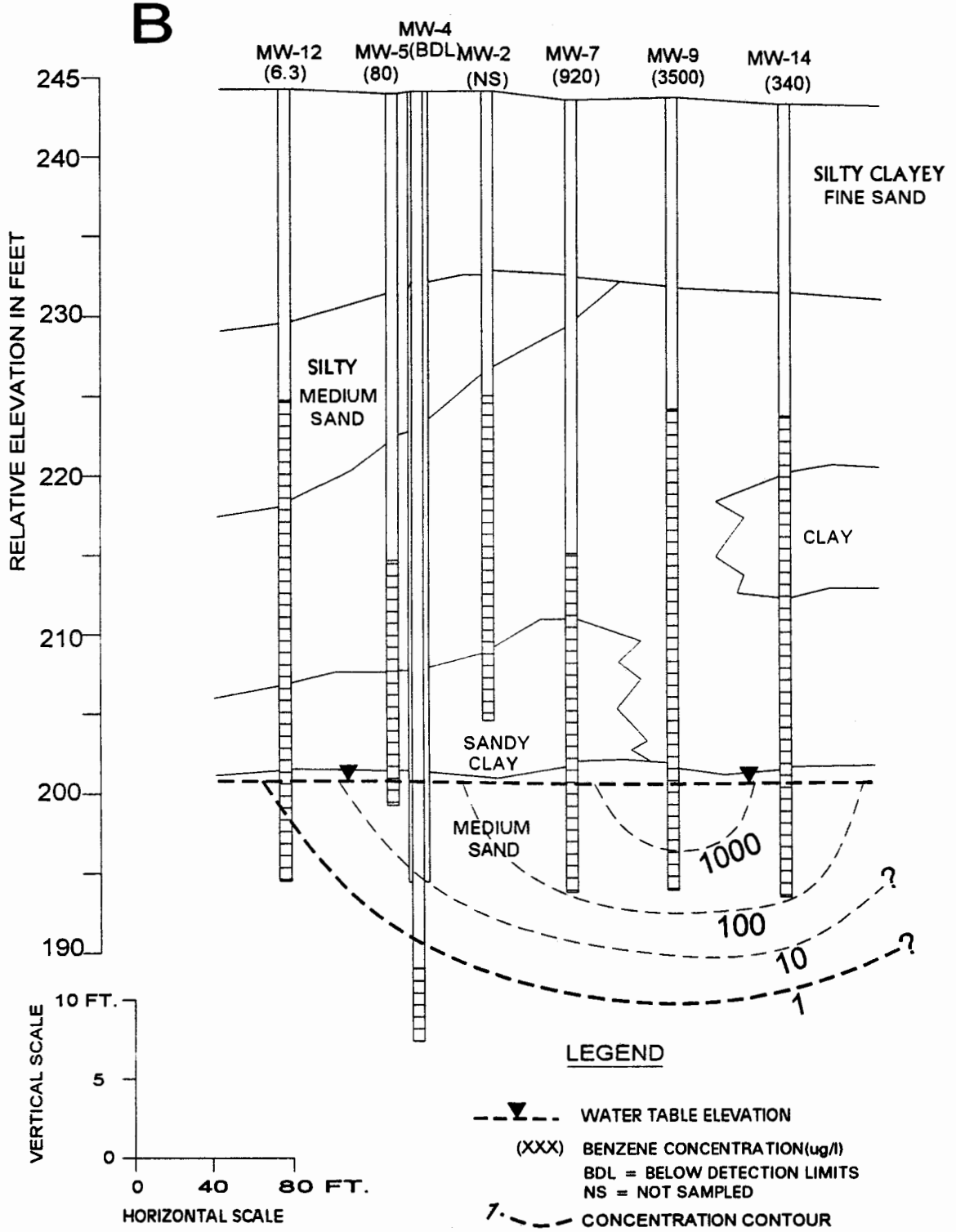
WO #597-986	DATE: 4/27/99
DWG #PA09867D	DRAWN BY: JCJ



SEI Environmental, Inc.

FIGURE 16: VERTICAL BENZENE CONCENTRATION ISOPLETH A-A'
THE PANTRY #456
8191 CLIFFDALE RD., FAYETTEVILLE, NC

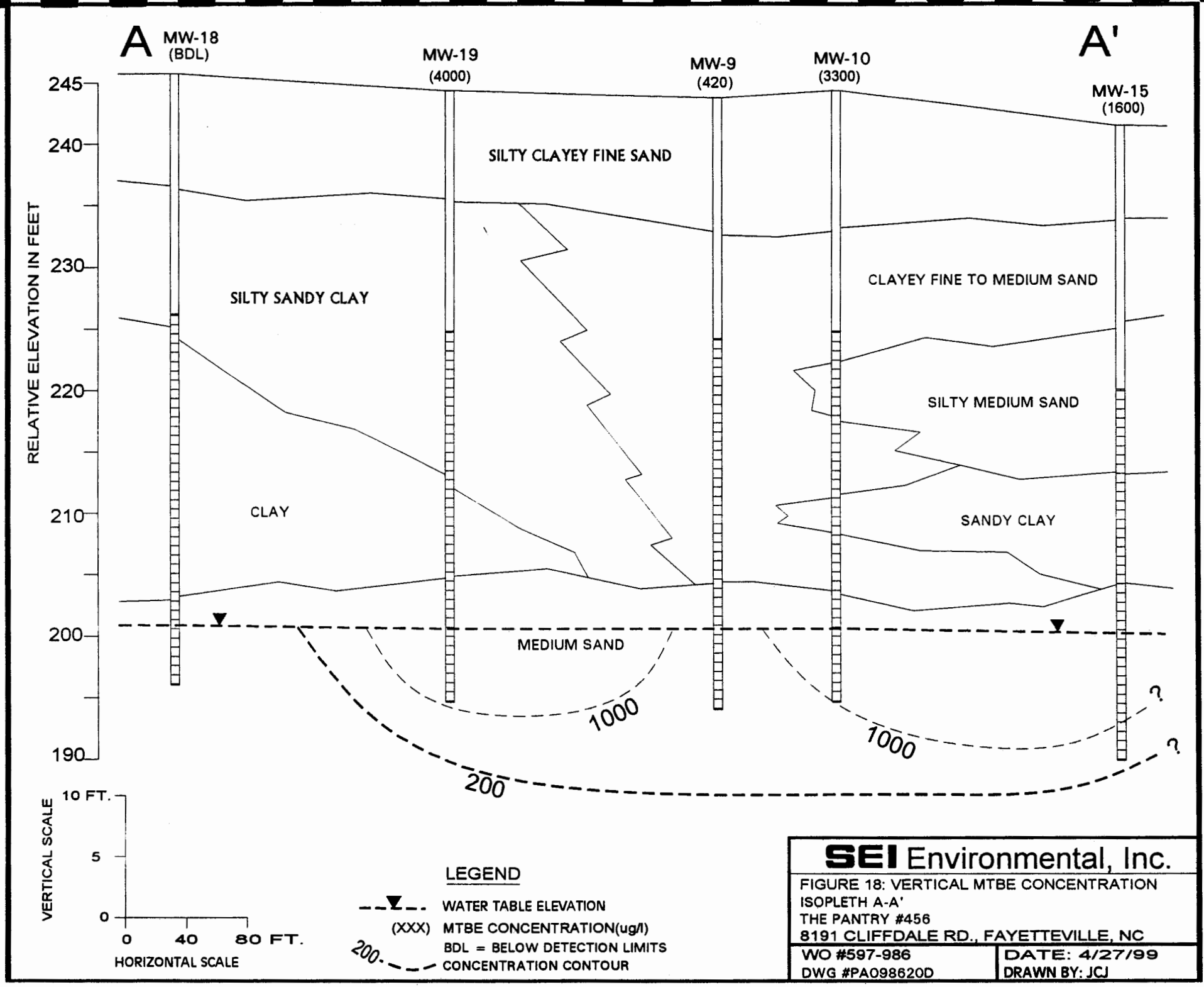
WO #597-986	DATE: 4/27/99
DWG #PA098618D	DRAWN BY: JCJ

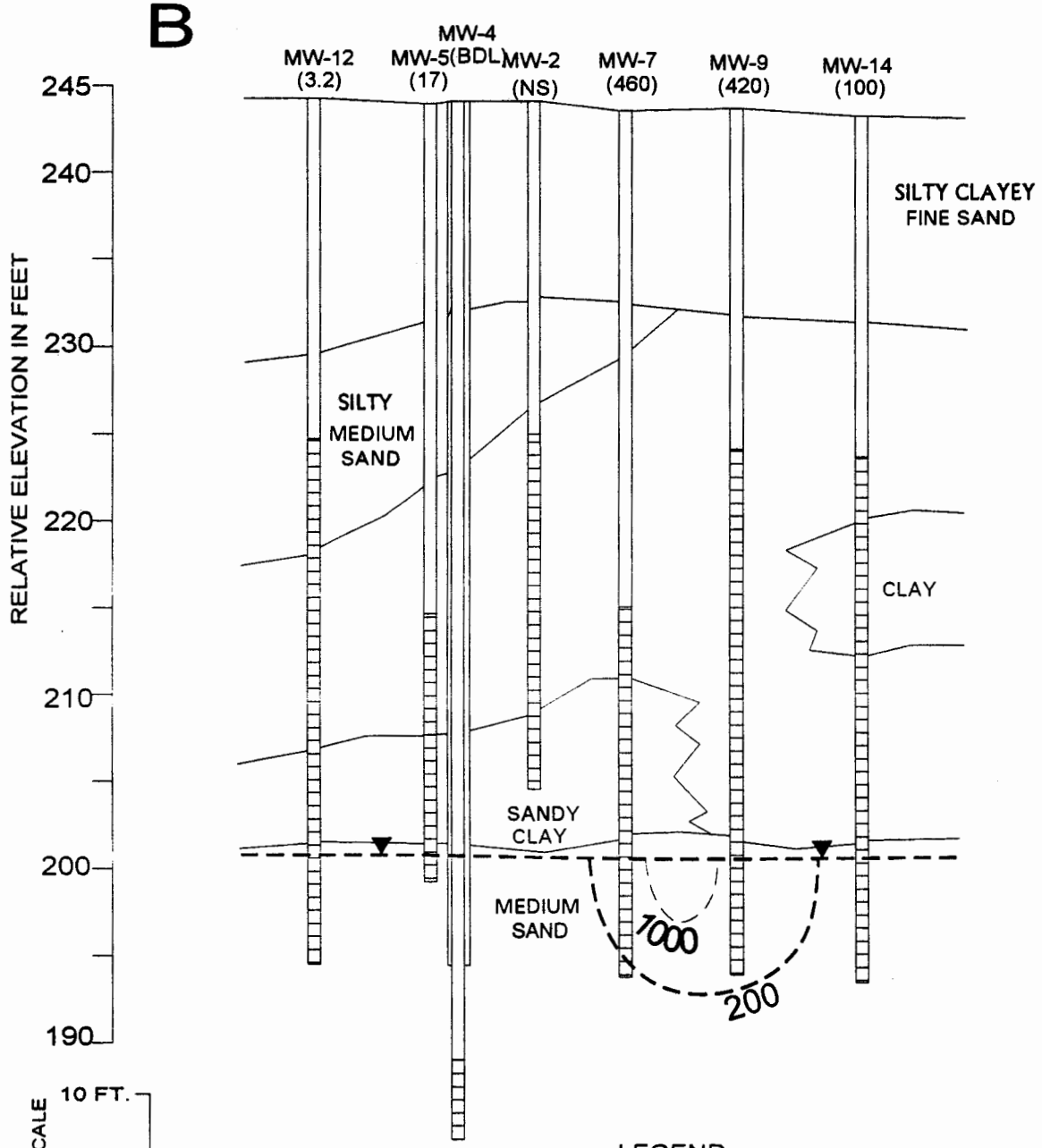


SEI Environmental, Inc.

FIGURE 17: VERTICAL BENZENE CONCENTRATION ISOPLETH B-B'
THE PANTRY #456
8191 CLIFFDALE RD., FAYETTEVILLE, NC

WO #597-986	DATE: 4/27/99
DWG #PA098619D	DRAWN BY: JCJ


A
A'
MW-18
(BDL)
MW-19
(4000)
MW-9
(420)
MW-10
(3300)
MW-15
(1600)
245
240
230
220
210
200
190
RELATIVE ELEVATION IN FEET
SILTY CLAYEY FINE SAND
SILTY SANDY CLAY
CLAYEY FINE TO MEDIUM SAND
SILTY MEDIUM SAND
CLAY
SANDY CLAY
MEDIUM SAND
1000
1000
200
?
?
VERTICAL SCALE
10 FT.
5
0
0
40
80 FT.
HORIZONTAL SCALE
LEGEND
WATER TABLE ELEVATION
(XXX) MTBE CONCENTRATION(ug/l)
BDL = BELOW DETECTION LIMITS
200 CONCENTRATION CONTOUR
SEI Environmental, Inc.
FIGURE 18: VERTICAL MTBE CONCENTRATION
ISOPLETH A-A'
THE PANTRY #456
8191 CLIFFDALE RD., FAYETTEVILLE, NC
WO #597-986
DWG #PA098620D
DATE: 4/27/99
DRAWN BY: JCJ



SEI Environmental, Inc.

FIGURE 19: VERTICAL MTBE CONCEN□200 ISOPLETH B-B'
THE PANTRY #456
8191 CLIFFDALE RD., FAYETTEVILLE, NC

WO #597-986	DATE: 4/27/99
DWG #PA098621D	DRAWN BY: JCJ

NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES & COMMUNITY DEVELOPMENT

WELL RECORD — DIVISION OF ENVIRONMENTAL MANAGEMENT, GROUNDWATER SECTION

P.O. BOX 27687 - RALEIGH, N.C. 27611

Well #1

DRILLING CONTRACTOR Bills Well Drilling Co. RIG NO. 106 WELL CONSTRUCTION PERMIT NO. 25 161 WC 02

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Fayetteville County: Cumberland

Well #1 Montibello Subd. off SR 1401 Quadrangle No.

(Road, Community or Subdivision and Lot No.)

2. OWNER: Montclair Water Co.

3. ADDRESS: P. O. Box 40707 Fayetteville, N. C.

4. TOPOGRAPHY: draw, valley, slope, hilltop, flat (circle one)

5. USE OF WELL: public DATE: 5-4-81

6. DOES THIS WELL REPLACE AN EXISTING WELL? no

7. TOTAL DEPTH: 98 RIG TYPE OR METHOD: rotary

8. FORMATION SAMPLES COLLECTED: YES ____ NO ____

9. CASING:

Depth	Inside Dia.	Wall thick. or weight/ft.	type
From 0 to 20 ft	8"	3/8"	steel
0 53	8"	29 lb	"
59 71	"	"	"
73 79	"	"	"
89 99	"	"	"

10. GROUT:

Depth	Material	Method
From 0 to 20 ft	cement	pouring

11. SCREEN:

Depth	Dia.	Type & Opening
From 53 to 59 ft	8"	#40 ss
71 75	8"	"
79 89	8"	"

12. GRAVEL:

Depth	Size	Material
From 0 to 100 ft	# 14	washed

13. WATER ZONES (depth): 53 - 89

14. STATIC WATER LEVEL: 38 ft. above / below top of casing

Casing is 2 ft. above land surface ELEV: ____

15. YIELD (gpm): 40 METHOD OF TESTING: pump

16. PUMPING WATER LEVEL: 84 ft.

after 24 hours at 40 gpm.

17. CHLORINATION: Type HTH Amount 1 lb

18. WATER QUALITY: ____ TEMPERATURE (°F) ____

19. PERMANENT PUMP: Date Installed ____

Type ____ Capacity ____ (gpm) HP ____

Make ____ Intake Depth ____

Airline Depth ____

20. HAS THE OWNER BEEN PROVIDED A COPY OF THIS RECORD AND INFORMED OF THE DEPARTMENTS REQUIREMENTS AND RECOMMENDATIONS? yes

21. REMARKS ____

I do hereby certify that this well was constructed in accordance with N.C. Well Construction Regulations and Standards and that this well record is true and exact.

SIGNATURE OF CONTRACTOR OF AGENT DATE

Form GW-1 Revised 11/3/77 Submit original to Groundwater Section and copy to well owner

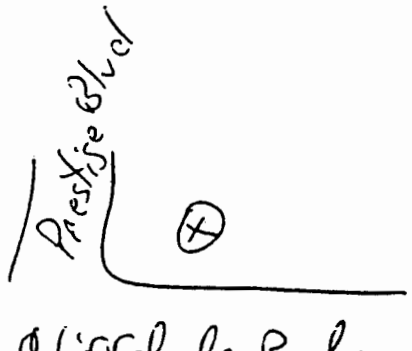
DRILLING LOG

DEPTH FROM	TO	FORMATION DESCRIPTION
0	1	top soil
1	30	orange sand & clay
30	35	orange clay
35	51	yellow sand
51	58	sand & gravel
58	61	white clay
61	88	yellow sand
88	98	gray clay

If additional space is needed, use back of form

LOCATION SKETCH

(Show distance to numbered roads, or other map reference points)



NORTH CAROLINA DEPARTMENT OF NATURAL AND ECONOMIC RESOURCES
DIVISION OF ENVIRONMENTAL MANAGEMENT
GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH, N.C. 27611

WELL RECORD

Well # 2

DRILLING CONTRACTOR Bill Well Drilling Co. REG. NO. 106 WELL CONSTRUCTION PERMIT NO.

1. WELL LOCATION: (Show sketch of the location below)
   Nearest Town: Fayetteville County: Cumberland
   Montibello, Well lot # 2 Quadrangle No.
   (Road, Community or Subdivision and Lot No.)
2. OWNER: Montclair Water Co.
3. ADDRESS: P. O. Box 40707, Fayetteville, N. C.
4. TOPOGRAPHY: draw, valley, slope, hilltop, flat (circle one)
5. USE OF WELL: public DATE: 11-4-82
6. DOES THIS WELL REPLACE AN EXISTING WELL? no
7. TOTAL DEPTH: 97 RIG TYPE OR METHOD: rotary
8. FORMATION SAMPLES COLLECTED: YES _____ NO _____
9. CASING:

	Depth		Inside Dia.	Wall thick. or weight/ft.	type
From 0	to 20	ft	18"	3/8"	steel
+2	46		8"	29 lb	"
61	73		"	sch 80	PVC
91	97		"	"	"

10. GROUT:

	Depth		Material	Method
From 0	to 20	ft	cement	pouring

11. SCREEN:

	Depth		Dia.	Type & Opening
From 46	to 61	ft	8"	sch 80 PVC
73	91		"	"

12. GRAVEL:

	Depth		Size	Material
From 0	to 100	ft	buchshot	

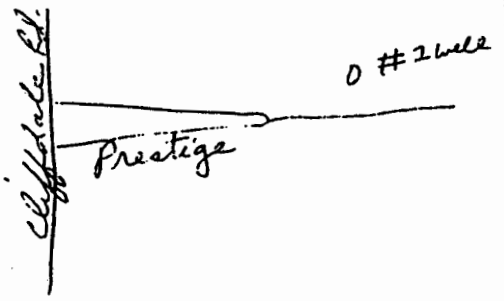
13. WATER ZONES (depth): 46-61 & 73-91
14. STATIC WATER LEVEL: 44 ft. above / below top of casing
    Casing is 2 ft. above land surface ELEV: _____
15. YIELD (gpm): 140 METHOD OF TESTING: pump
16. PUMPING WATER LEVEL: 73 ft after 24 hours
    at 140 gpm.
17. CHLORINATION: Type HTH Amount 2 lb
18. WATER QUALITY: _____ TEMPERATURE (°F) _____
19. PERMANENT PUMP: Date Installed 11-12-82
    Type Subm. Capacity 140 (gpm) HP 10
    Make Red Jacket Intake Depth 75
    Airline Depth _____

DRILLING LOG

DEPTH FROM	DEPTH TO	FORMATION DESCRIPTION
0	6	top soil & orange clay
6	21	white clay
21	34	white sand & clay
34	43	white sand
43	46	white sand & gravel
46	61	yellow sand
61	68	white clay
68	91	yellow sand
91	110	white clay

If additional space is needed, use back of form

LOCATION SKETCH
(Show distance to numbered roads, or other map reference points)



20. HAS THE OWNER BEEN PROVIDED A COPY OF THIS RECORD AND INFORMED OF THE DEPARTMENTS REQUIREMENTS AND RECOMMENDATIONS? yes
21. REMARKS _____

... was constructed in accordance with N.C. Well Construction

DIVISION OF ENVIRONMENTAL MANAGEMENT – GROUNDWATER SECTION
P.O. BOX 27687 – RALEIGH, N.C. 276[illegible] PHONE (919) 733-5083

#13

Well #13

Q[illegible] No. _____ Serial No. _____
Lat. _____ Long. _____ Po[illegible]
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR Bill's Well Drilling Co.

DRILLER REGISTRATION NUMBER 106

STATE WELL CONSTRUCTION PERMIT NUMBER: 25-0348-WS 0323

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Fayetteville

Middle Creek Subd. Well 13 Rim Rd.

(Road, Community, or Subdivision and Lot No.)

County: Cumberland

2. OWNER LaGrange Waterworks

ADDRESS P. O. Box 40707 (Street or Route No.)

Faye tteville N. C. 28309

City or Town State Zip Code

3. DATE DRILLED 9-9-87 USE OF WELL public

4. TOTAL DEPTH 91 CUTTINGS COLLECTED ☐ Yes ☒ No

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL: 44 FT. ☐ above ☒ below TOP OF CASING.

TOP OF CASING IS 2 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): 125 METHOD OF TEST pumping

8. WATER ZONES (depth): 40 - 85

9. CHLORINATION: Type HTH Amount 2 lb

10. CASING:

	Depth From	To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
	+2	45		8"	sch 40	PVC
	85	91		"	"	"

11. GROUT:

	Depth From	To	Ft.	Material	Method
	0	20		cement	pouring

12. SCREEN:

	Depth From	To	Ft.	Diameter	Slot Size	Material
	45	85		8" in.	30 in.	PVC
				in.	in.	
				in.	in.	

13. GRAVEL PACK:

	Depth From	To	Ft.	Size	Material
	32	91		buckshot	gravel

REMARKS: 10HP SP27-6 3ph Grundfos pump set 75' on 2" galv pipe & 8-3 cable.

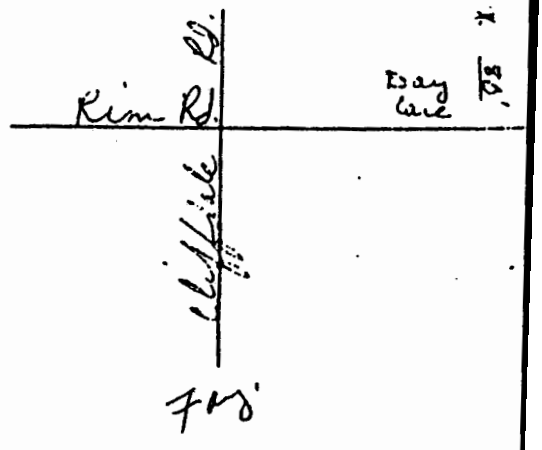
DRILLING LOG

Depth From	To	Formation Description
0	1	top soil
1	18	orange clay & yellow sa[illegible]
18	39	gray & white clay & sand
39	62	coarse white sand
62	65	gray clay
65	80	coarse yellow sand
80	85	red sand
85	91	gray clay

If additional space is needed use back of form.

LOCATION SKETCH

(Show direction and distance from at least two State Ro[illegible] or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCT[illegible] STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Mary F. Bill 9-24-87

SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 11/84

Submit original to Division of Environmental Management and copy to well ow[illegible]

North Carolina - Department of Environment, Health, and Natural Resources
Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

FOR OFFICE USE ONLY
QUAD. NO. _____ SERIAL NO. _____
Lat. _____ Long. _____ RO _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR: Bill's Well Drilling, Inc.

DRILLER REGISTRATION NUMBER: 106

STATE WELL CONSTRUCTION PERMIT NUMBER: 25-0348-WS-0470

1. WELL LOCATION: (Show sketch of the location below) Well #23
Nearest Town: Fayetteville, NC County: Cumberland.
SR 1402 Rim Rd next to EE Miller Elem School Well #23
(Road, Community, or Subdivision and Lot No.)

2. OWNER LaGrange Water Company
ADDRESS P. O. Box 40707
(Street or Route No.)
Fayetteville, NC 28309
City or Town State Zip Code

3. DATE DRILLED 8-21-92 USE OF WELL Community
4. TOTAL DEPTH 92 ft
5. CUTTINGS COLLECTED YES [x] NO [ ]
6. DOES WELL REPLACE EXISTING WELL? YES [ ] NO [x]
7. STATIC WATER LEVEL Below Top of Casing: 42 FT.
(Use "+" if Above Top of Casing)
8. TOP OF CASING IS 2 FT. Above Land Surface*
* Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118
9. YIELD (gpm): 90 METHOD OF TEST pumping
10. WATER ZONES (depth): 58 ft to 85 ft

DEPTH From	DEPTH To	DRILLING LOG Formation Description
0	2	Top soil
2	20	Red clay
20	28	Orange clay & sa
28	50	White & yellow sa
		gravel
50	58	Orange clay
58	85	Yellow & tan sand
85	90	Gray clay

If additional space is needed use back of form

11. CHLORINATION: Type HTH Amount 5 lbs
12. CASING:

	Depth From	Depth To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
From	+2	58	Ft.	8"	SDR26	PVC
From	85	90	Ft.	8"	SDR26	PVC
From			Ft.			

13. GROUT:

	Depth From	Depth To	Ft.	Material	Method
From	0	20	Ft.	cement	pouring
From			Ft.		

14. SCREEN:

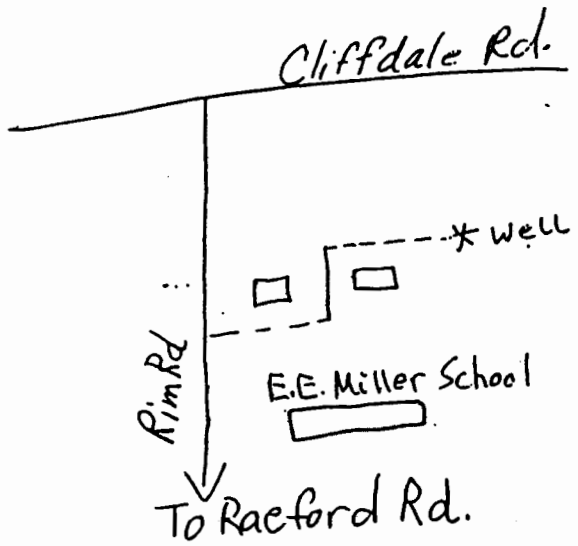
	Depth From	Depth To	Ft	Diameter	in.	Slot Size	in.	Material
From	58	85	Ft	8	in.	30	in.	PVC
From			Ft.		in.		in.	
From			Ft.		in.		in.	

15. SAND/GRAVEL PACK:

	Depth From	Depth To	Ft.	Size	Material
From	20	90	Ft.	buckshot	gravel
From			Ft.		

16. REMARKS:

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Thomas W. Bell 9-4-92
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91

Submit original to Division of Environmental Management and copy to well owner.

North Carolina - Department of Enviro , Health, and Natural Resources
Division of Environmental Management - Groundwater Section
P.O. Box 29535 - Raleigh, N.C. 27626-0535
Phone (919) 733-3221

FOR OFFICE USE ONLY
QUAD. NO. _____ SERIAL NO. _____
Lat. _____ Long. _____ RO. _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR: Bill's Well Drilling
STATE WELL CONSTRUCTION PERMIT NUMBER: 25-0348-WS-0498
DRILLER REGISTRATION NUMBER: 106

1. WELL LOCATION: (Show sketch of the location below)
Nearest Town: Fayetteville County: Cumberland well # 32
Brookrun Subd. (well #32) Shillinglaw ~~Rd.~~ Cir.
(Road, Community, or Subdivision and Lot No.)

2. OWNER LaGrange Waterworks Corp.
ADDRESS P.O. Box 58029
(Street or Route No.)
Fayetteville NC 28305
City or Town State Zip Code

3. DATE DRILLED 2-16-96 USE OF WELL commercial
4. TOTAL DEPTH 90'
5. CUTTINGS COLLECTED YES [X] NO [ ]
6. DOES WELL REPLACE EXISTING WELL? YES [ ] NO [X]
7. STATIC WATER LEVEL Below Top of Casing: 52 FT.
(Use "+" if Above Top of Casing)
8. TOP OF CASING IS 1 FT. Above Land Surface*
* Casing Terminated at/or below land surface is illegal unless a variance is issued in accordance with 15A NCAC 2C .0118
9. YIELD (gpm): 60 METHOD OF TEST bailing
10. WATER ZONES (depth): 54-84
11. CHLORINATION: Type HTH Amount 2 cups
12. CASING:

	Depth From	To	Ft.	Diameter	Wall Thickness or Weight/Ft.	Material
	+1	54		8"	sch 40	PVC
	84	89		8"	sch 40	PVC

13. GROUT:

	Depth From	To	Ft.	Material	Method
	0	20		cement	pouring

14. SCREEN:

	Depth From	To	Ft.	Diameter	in.	Slot Size	in.	Material
	54	84		8	in.	30	in.	PVC
					in.		in.	
					in.		in.	

15. SAND/GRAVEL PACK:

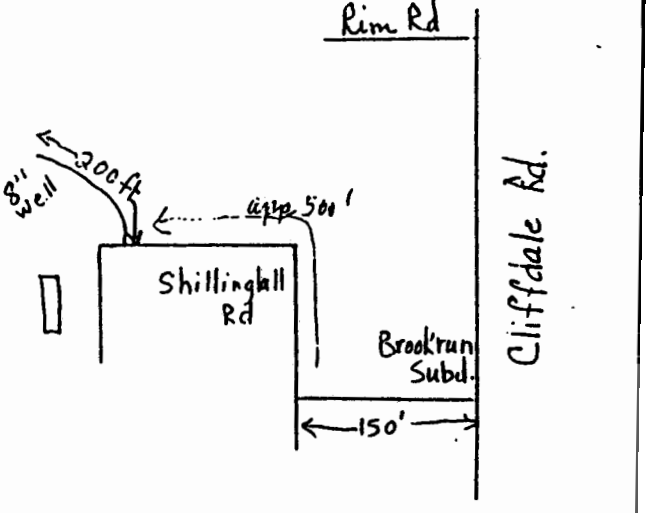
	Depth From	To	Ft.	Size	Material
	20	89		buckshot	gravel

16. REMARKS: _____

DEPTH From	To	DRILLING LOG Formation Description
0 -	1	topsoil
1 -	33	yellow & orang
		& clay mix
33 -	63	yellow course
63 -	67	orange & red c
67 -	84	yellow course
		& gravel
84 -	90	gray & white c

If additional space is needed use back of form

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points)



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15A NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Thomas W. Bill 3-12-96
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 REV. 9/91
Submit original to Division of Environmental Management and copy to well owner

FORD Laboratories Inc.

Analytical and Consulting Chemists
1316 South Fifth Street
Wilmington, N.C. 28401
(910) 763-9793
Fax (910) 343-9688

DATE RECEIVED 12-16-97
DATE REPORTED 12-23-97
97W1548

Sampled 12-15-97

ADDITIONAL COMMENTS

LAB ID#	CLIENT'S ID	ALSO DETECTED
97W1548.1	WELL #32 (After running a few minutes (was shut off 1week)	METHYL-TERT-BUTYL ETHER @ 5.71 PI DI-ISOPROPYL ETHER @ 5.67 PI
97W1548.2	WELL #23	METHYL-TERT-BUTYL ETHER @ 3.06 PI DI-ISOPROPYL ETHER @ 1.90 PI

Michelle -

I collected distribution samples from 6 sites around the area on 12-16-97. All these were negative.

After pumping well 32 for 1 hr. on open discharge the following results were found:

Benzene 1.09 ppb
DiIsopropylether 6.24 ppb
MTBE 15.9 ppb
Xylenes 1.04 ppb

This well (32) hasn't been sampled in 1998.

This well was taken off-line when Brookwood began operating this system in the Fall of 1997.

OXFORD Laboratories Inc.

VOLATILE ORGANIC CHEMICAL (VOCS)

LABORATORY ID#: 3 7 7 2 1

WATER SYSTEM ID#: 03-26-332

NAME OF SYSTEM: Cliffdale WES

SAMPLE TYPE: E (E=Entry Point; S=Special/Non-compliance)

COLLECTED ON: DATE 2/10/97 (MM/DD/YY)

LOCATION WHERE COLLECTED: WELL #32

LOCATION CODE: 032 COLLECTED BY: JESUS Villagomez

MAIL RESULTS TO:

La GRANGE WATER
PO-Box 58029
FAY, NC 28305

TELEPHONE # (910) 867-4126

TYPE OF SUPPLY:
(X) COMMUNITY ( ) ADJACENT
( ) NTNC ( ) CAMPGROUND
( ) NON-COMMUNITY
( ) PRIVATE

TYPE TREATMENT:
( ) NON-CHLORINATED
(X) CHLORINATED

CONTAM CODE	CONTAMINANT (mg/l)	METHOD CODE	REGULATORY DETECTION LIMITS	NOT DETECTED (X)	QUANTIFIED RESULTS	ALLOW. LIMITS	REG UNREG
2030	p-Isopropyltoluene	217	0.0005	X	_____	N/A	U
2210	Chloromethane	217	0.0005	X	_____	N/A	U
2212	Dichlorodifluoromethane	217	0.0005	X	_____	N/A	U
2214	Bromomethane	217	0.0005	X	_____	N/A	U
2216	Chloroethane	217	0.0005	X	_____	N/A	U
2218	Fluorotrichloromethane	217	0.0005	X	_____	N/A	U
2246	Hexachlorobutadiene	217	0.0005	X	_____	N/A	U
2248	Naphthalene	217	0.0005	X	_____	N/A	U
2378	1,2,4-Trichlorobenzene	217	0.0005	X	_____	0.07	R
2380	Cis-1,2-Dichloroethylene	217	0.0005	X	_____	0.07	R
2408	Dibromomethane	217	0.0005	X	_____	N/A	U
2410	1,1-Dichloropropene	217	0.0005	X	_____	N/A	U
2412	1,3-Dichloropropane	217	0.0005	X	_____	N/A	U
2413	1,3-Dichloropropene	217	0.0005	X	_____	N/A	U
2414	1,2,3-Trichloropropane	217	0.0005	X	_____	N/A	U
2416	2,2-Dichloropropane	217	0.0005	X	_____	N/A	U
2418	1,2,4-Trimethylbenzene	217	0.0005	X	_____	N/A	U
2420	1,2,3-Trichlorobenzene	217	0.0005	X	_____	N/A	U
2422	n-Butylbenzene	217	0.0005	X	_____	N/A	U
2424	1,3,5-Trimethylbenzene	217	0.0005	X	_____	N/A	U
2426	Tert-Butylbenzene	217	0.0005	X	_____	N/A	U
2428	Sec-Butylbenzene	217	0.0005	X	_____	N/A	U
2430	Bromochloromethane	217	0.0005	X	_____	N/A	U
2941	Chloroform	215	0.0005	X	_____	N/A	U
2942	Bromoform	215	0.0005	X	_____	N/A	U

01/97 Laboratory Log # 97W59014

OXFORD Laboratories Inc.

Analytical and Consulting Chem
1316 South Fifth S
Wilmington, N.C.
(910) 763
Fax (910) 343

VOLATILE ORGANIC CHEMICALS ANALYSIS (continued)

LABORATORY ID#: 3 7 7 2 1

WATER SYSTEM ID#: 03-26-35

COLLECTION DATE: 2/8/04/97 (MM/DD/YY)

LOCATION CODE: 032

CONTAM CODE	CONTAMINANT (mg/l)	METHOD CODE	REGULATORY DETECTION LIMITS	NOT DETECTED (X)	QUANTIFIED RESULTS	ALLOW. LIMITS	REG UNREG
2943	Bromodichloromethane	215	0.0005	X	-------	N/A	U
2944	Chlorodibromomethane	215	0.0005	X	-------	N/A	U
2955	Xylenes (Total)	217	0.0005		.00244	10	R
2964	Dichloromethane	217	0.0005	X	-------	0.005	R
2965	o-Chlorotoluene	217	0.0005	X	-------	N/A	U
2966	p-Chlorotoluene	217	0.0005	X	-------	N/A	U
2967	m-Dichlorobenzene	217	0.0005	X	-------	N/A	U
2968	o-Dichlorobenzene	217	0.0005	X	-------	0.6	R
2969	p-Dichlorobenzene	217	0.0005	X	-------	0.075	R
2976	Vinyl Chloride	217	0.0005	X	-------	0.002	R
2977	1,1,-Dichloroethylene	217	0.0005	X	-------	0.007	R
2978	1,1-Dichloroethane	217	0.0005	X	-------	N/A	U
	Trans-1,2,-Dichloroethylene	217	0.0005	X	-------	0.1	R
2980	1,2-Dichloroethane	217	0.0005	X	-------	0.005	R
2981	1,1,1-Trichloroethane	217	0.0005	X	-------	0.2	R
2982	Carbon Tetrachloride	217	0.0005	X	-------	0.005	R
2983	1,2-Dichloropropane	217	0.0005	X	-------	0.005	R
2984	Trichloroethylene	217	0.0005	X	-------	0.005	R
2985	1,1,2-Trichloroethane	217	0.0005	X	-------	0.005	R
2986	1,1,1,2-Tetrachloroethane	217	0.0005	X	-------	N/A	U
2987	Tetrachloroethylene	217	0.0005	X	-------	0.005	R
2988	1, 1,2,2-Tetrachloroethane	217	0.0005	X	-------	N/A	U
2989	Chlorobenzene	217	0.0005	X	-------	0.1	R
2990	Benzene	217	0.0005		.00756	0.005	R
2991	Toluene	217	0.0005	X	-------	1	R
2992	Ethylbenzene	217	0.0005	X	-------	0.7	R
2993	Bromobenzene	217	0.0005	X	-------	N/A	U
2994	Isopropylbenzene	217	0.0005	X	-------	N/A	U
2996	Styrene	217	0.0005	X	-------	0.1	R
2998	n-Propylbenzene	217	0.0005	X	-------	N/A	U

( ) SAMPLE UNSATISFACTORY

( ) RESAMPLE REQUESTED

Date Analyses Begun: 04/29/97

Time Analyses Begun: 09:46 PM

Date Analyses Completed: 05/02/97

Time Analyses Completed: 12:00 PM

Laboratory Log #: 97W5901-4

Certified By: Bryan Thompson

COMMENTS: Also Detected: Methyl-t-Butyl Ether @ 40.0 PPB
Di-Isopropyl Ether @ 11.1 PPB

Purchase Order # _____

01/97

OXFORD Laboratories Inc.

Analytical and Consulting Chem
1316 South Fifth S
Wilmington, N.C. 2
(910) 763
Fax (910) 343

VOLATILE ORGANIC CHEMICALS ANALYSIS (continued)

LABORATORY ID#: 37721

WATER SYSTEM ID#: 03-26-33

COLLECTION DATE: 2/8/04/97 (MM/DD/YY)

LOCATION CODE: 032

CONTAM CODE	CONTAMINANT (mg/l)	METHOD CODE	REGULATORY DETECTION LIMITS	NOT DETECTED (X)	QUANTIFIED RESULTS	ALLOW. LIMITS	REG UNREG
2943	Bromodichloromethane	215	0.0005	X	-------	N/A	U
2944	Chlorodibromomethane	215	0.0005	X	-------	N/A	U
2955	Xylenes (Total)	217	0.0005		.00244	10	R
2964	Dichloromethane	217	0.0005	X	-------	0.005	R
2965	o-Chlorotoluene	217	0.0005	X	-------	N/A	U
2966	p-Chlorotoluene	217	0.0005	X	-------	N/A	U
2967	m-Dichlorobenzene	217	0.0005	X	-------	N/A	U
2968	o-Dichlorobenzene	217	0.0005	X	-------	0.6	R
2969	p-Dichlorobenzene	217	0.0005	X	-------	0.075	R
2976	Vinyl Chloride	217	0.0005	X	-------	0.002	R
2977	1,1,-Dichloroethylene	217	0.0005	X	-------	0.007	R
2978	1,1-Dichloroethane	217	0.0005	X	-------	N/A	U
	Trans-1,2,-Dichloroethylene	217	0.0005	X	-------	0.1	R
2980	1,2-Dichloroethane	217	0.0005	X	-------	0.005	R
2981	1,1,1-Trichloroethane	217	0.0005	X	-------	0.2	R
2982	Carbon Tetrachloride	217	0.0005	X	-------	0.005	R
2983	1,2-Dichloropropane	217	0.0005	X	-------	0.005	R
2984	Trichloroethylene	217	0.0005	X	-------	0.005	R
2985	1,1,2-Trichloroethane	217	0.0005	X	-------	0.005	R
2986	1,1,1,2-Tetrachloroethane	217	0.0005	X	-------	N/A	U
2987	Tetrachloroethylene	217	0.0005	X	-------	0.005	R
2988	1, 1,2,2-Tetrachloroethane	217	0.0005	X	-------	N/A	U
2989	Chlorobenzene	217	0.0005	X	-------	0.1	R
2990	Benzene	217	0.0005		.00756	0.005	R
2991	Toluene	217	0.0005	X	-------	1	R
2992	Ethylbenzene	217	0.0005	X	-------	0.7	R
2993	Bromobenzene	217	0.0005	X	-------	N/A	U
2994	Isopropylbenzene	217	0.0005	X	-------	N/A	U
2996	Styrene	217	0.0005	X	-------	0.1	R
2998	n-Propylbenzene	217	0.0005	X	-------	N/A	U

( ) SAMPLE UNSATISFACTORY

( ) RESAMPLE REQUESTED

Date Analyses Begun: 04/29/97

Time Analyses Begun: 09:46 PM

Date Analyses Completed: 05/02/97

Time Analyses Completed: 12:00 PM

Laboratory Log #: 97W5901-4

Certified By: Bryan Thompson

COMMENTS: Also Detected: Methyl-t-Butyl Ether @ 40.0 PPB
Di-Isopropyl Ether @ 11.1 PPB

Purchase Order # _____

OXFORD Laboratories Inc.

Analytical and Consulting Chemi
1316 South Fifth Str
Wilmington, N.C. 284
(910) 763-97
Fax (910) 343-96

VOLATILE ORGANIC CHEMICALS
(VOCs)

LABORATORY ID#: 3 7 7 2 1
WATER SYSTEM ID#: 03-26-332 COUNTY: CUMBERLAND
NAME OF SYSTEM: CLIFFDALE - WEST
SAMPLE TYPE: E (E=Entry Point; S=Special; W=Source)
COLLECTED ON: DATE 10/29/96 (MM/DD/YY) TIME: 09:00 AM (HH:MM AM
LOCATION WHERE COLLECTED: WELL # 32
LOCATION/SOURCE CODE: 032 COLLECTED BY: JESUS VILLAGRAN

MAIL RESULTS TO:

LA GRANGE WATER
583 REILLY RD.
FAY, N.C. 28314

TELEPHONE # (910) 867-4126

TYPE OF SUPPLY:
(X) Community
( ) NTNC
( ) NON-COMMUNITY
( ) PRIVATE

TYPE TREATMENT:
( ) NON-CHLORINATED
(X) CHLORINATED

ITAM CODE	CONTAMINANT	METHOD CODE	DETECTION LIMITS	NOT DETECTED (X)	QUANTIFIED RESULTS	ALLOW. LIMITS	REGULATED UNREGULAT
2030	p-Isopropyltoluene, mg/l	216	0.0005	X	-------	N/A	U
2210	Chloromethane, mg/l	216	0.0005	X	-------	N/A	U
2212	Dichlorodifluoromethane, mg/l	216	0.0005	X	-------	N/A	U
2214	Bromomethane, mg/l	216	0.0005	X	-------	N/A	U
2216	Chloroethane, mg/l	216	0.0005	X	-------	N/A	U
2218	Fluorotrichloromethane, mg/l	216	0.0005	X	-------	N/A	U
2246	Hexachlorobutadiene, mg/l	216	0.0005	X	-------	N/A	U
2248	Naphthalene, mg/l	216	0.0005	X	-------	N/A	U
2378	1,2,4-Trichlorobenzene, mg/l	216	0.0005	X	-------	0.07	R
2380	Cis-1,2-Dichloroethylene, mg/l	216	0.0005	X	-------	0.07	R
2408	Dibromomethane, mg/l	216	0.0005	X	-------	N/A	U
2410	1,1-Dichloropropene, mg/l	216	0.0005	X	-------	N/A	U
2412	1,3-Dichloropropane, mg/l	216	0.0005	X	-------	N/A	U
2413	1,3-Dichloropropene, mg/l	216	0.0005	X	-------	N/A	U
2414	1,2,3-Trichloropropane, mg/l	216	0.0005	X	-------	N/A	U
2416	2,2-Dichloropropane, mg/l	216	0.0005	X	-------	N/A	U
2418	1,2,4-Trimethylbenzene, mg/l	216	0.0005	X	-------	N/A	U
2420	1,2,3-Trichlorobenzene, mg/l	216	0.0005	X	-------	N/A	U
2422	n-Butylbenzene, mg/l	216	0.0005	X	-------	N/A	U
2424	1,3,5-Trimethylbenzene, mg/l	216	0.0005	X	-------	N/A	U
2425	Tert-Butylbenzene, mg/l	216	0.0005	X	-------	N/A	U
8	Sec-Butylbenzene, mg/l	216	0.0005	X	-------	N/A	U
2-30	Bromochloromethane, mg/l	216	0.0005	X	-------	N/A	U
2941	Chloroform, mg/l	215	0.0005	X	-------	N/A	U
2942	Bromoform, mg/l	215	0.0005	X	-------	N/A	U

Laboratory Log #: 96W3004'2

OXFORD Laboratories Inc.

Analytical and Consulting Ch
1316 South Fifth
Wilmington, N.C.
(910) 76
Fax (910) 34

VOLATILE ORGANIC CHEMICALS (continued)

LABORATORY ID#: 37721

WATER SYSTEM ID#: 03-76

COLLECTION DATE: 10/29/96 (MM/DD/YY)

LOCATION/SOURCE CODE:

CONTAM CODE	CONTAMINANT	METHOD CODE	DETECTION LIMITS	NOT DETECTED (X)	QUANTIFIED RESULTS	ALLOW. LIMITS	REGUL UNREGU
2943	Bromodichloromethane, mg/l	215	0.0005	X	-------	N/A	
2944	Chlorodibromomethane, mg/l	215	0.0005	X	-------	N/A	
2955	Xylenes (Total), mg/l	216	0.0005		.00070	10	
2964	Dichloromethane, mg/l	216	0.0005	X	-------	0.005	
2965	o-Chlorotoluene, mg/l	216	0.0005	X	-------	N/A	
2966	p-Chlorotoluene, mg/l	216	0.0005	X	-------	N/A	
2967	m-Dichlorobenzene, mg/l	216	0.0005	X	-------	N/A	
2968	o-Dichlorobenzene, mg/l	216	0.0005	X	-------	0.6	
2969	p-Dichlorobenzene, mg/l	216	0.0005	X	-------	0.075	
2976	Vinyl Chloride, mg/l	216	0.0005	X	-------	0.002	
2977	1,1,-Dichloroethylene, mg/l	216	0.0005	X	-------	0.007	
2978	1,1-Dichloroethane, mg/l	216	0.0005	X	-------	N/A	
2979	Trans-1,2.-Dichloroethylene, mg/l	216	0.0005	X	-------	0.1	
2980	1,2-Dichloroethane, mg/l	216	0.0005	X	-------	0.005	
2981	1,1,1-Trichloroethane, mg/l	216	0.0005	X	-------	0.2	
2982	Carbon Tetrachloride, mg/l	216	0.0005	X	-------	0.005	
2983	1,2-Dichloropropane, mg/l	216	0.0005	X	-------	0.005	
2984	Trichloroethylene, mg/l	216	0.0005	X	-------	0.005	
2985	1,1,2-Trichloroethane, mg/l	216	0.0005	X	-------	0.005	
2986	1,1,1,2-Tetrachloroethane, mg/l	216	0.0005	X	-------	N/A	
2987	Tetrachloroethylene, mg/l	216	0.0005	X	-------	0.005	
2988	1,1,2,2-Tetrachloroethane, mg/l	216	0.0005	X	-------	N/A	
2989	Chlorobenzene, mg/l	216	0.0005	X	-------	0.1	
2990	Benzene, mg/l	216	0.0005		.00153	0.005	
2991	Toluene, mg/l	216	0.0005	X	-------	1	
2992	Ethylbenzene, mg/l	216	0.0005	X	-------	0.7	
2993	Bromobenzene, mg/l	216	0.0005	X	-------	N/A	
2994	Isopropylbenzene, mg/l	216	0.0005	X	-------	N/A	
2996	Styrene, mg/l	216	0.0005	X	-------	0.1	
2998	n-Propylbenzene, mg/l	216	0.0005	X	-------	N/A	

( ) SAMPLE UNSATISFACTORY ( ) RESAMPLE REQUESTED

Date Analyses Begun: 10/30/96

Time Analyses Begun: 07:18 PM

Date Analyses Completed: 11/01/96

Time Analyses Completed: 03:20 PM

Laboratory Log #: 96W2004*2

Certified By: Ann McMillan

COMMENTS: Also Detected: Methyl-t-Butyl Ether @ 37.3 PPB
Di-Isopropyl Ether @ 10.8 PPB

#7

OXFORD Laboratories Inc.

Analytical and Consulting Chem
1316 South Fifth S
Wilmington, N.C. 2
(910) 763-
Fax (910) 343-

VOLATILE ORGANIC CHEMICALS
(VOCs)

LABORATORY ID#: 37721
WATER SYSTEM ID#: 03-26-332 COUNTY: CUMBERLAND
NAME OF SYSTEM: Cliffdale West
SAMPLE TYPE: E (E=Entry Point; S=Special; W=Source)
COLLECTED ON: DATE 07/17/96 (MM/DD/YY) TIME: 10:00 AM (HH:MM AM
LOCATION WHERE COLLECTED: Well #32
LOCATION/SOURCE CODE: 032 COLLECTED BY: Billy McRaul
MAIL RESULTS TO:

LAGRANGE WATERWORKS CORP.
P O BOX 52029
FAYETTEVILLE, NC 28305-8029

TELEPHONE # (910) 867-4126

TYPE OF SUPPLY:
(X) Community
( ) NTNC
( ) NON-COMMUNITY
( ) PRIVATE

TYPE TREATMENT:
( ) NON-CHLORINATED
(X) CHLORINATED

ITAM CODE	CONTAMINANT	METHOD CODE	DETECTION LIMITS	NOT DETECTED (X)	QUANTIFIED RESULTS	ALLOW. LIMITS	REGULAT UNREGUL
2030	p-Isopropyltoluene, mg/l	216	0.0005	X	-------	N/A	U
2210	Chloromethane, mg/l	216	0.0005	X	-------	N/A	U
2212	Dichlorodifluoromethane, mg/l	216	0.0005	X	-------	N/A	U
2214	Bromomethane, mg/l	216	0.0005	X	-------	N/A	U
2216	Chloroethane, mg/l	216	0.0005	X	-------	N/A	U
2218	Fluorotrichloromethane, mg/l	216	0.0005	X	-------	N/A	U
2246	Hexachlorobutadiene, mg/l	216	0.0005	X	-------	N/A	U
2248	Naphthalene, mg/l	216	0.0005	X	-------	N/A	U
2378	1,2,4-Trichlorobenzene, mg/l	216	0.0005	X	-------	0.07	R
2380	Cis-1,2-Dichloroethylene, mg/l	216	0.0005	X	-------	0.07	R
2408	Dibromomethane, mg/l	216	0.0005	X	-------	N/A	U
2410	1,1-Dichloropropene, mg/l	216	0.0005	X	-------	N/A	U
2412	1,3-Dichloropropane, mg/l	216	0.0005	X	-------	N/A	U
2413	1,3-Dichloropropene, mg/l	216	0.0005	X	-------	N/A	U
2414	1,2,3-Trichloropropane, mg/l	216	0.0005	X	-------	N/A	U
2416	2,2-Dichloropropane, mg/l	216	0.0005	X	-------	N/A	U
2418	1,2,4-Trimethylbenzene, mg/l	216	0.0005	X	-------	N/A	U
2420	1,2,3-Trichlorobenzene, mg/l	216	0.0005	X	-------	N/A	U
2422	n-Butylbenzene, mg/l	216	0.0005	X	-------	N/A	U
2424	1,3,5-Trimethylbenzene, mg/l	216	0.0005	X	-------	N/A	U
2425	Tert-Butylbenzene, mg/l	216	0.0005	X	-------	N/A	U
2428	Sec-Butylbenzene, mg/l	216	0.0005	X	-------	N/A	U
30	Bromochloromethane, mg/l	216	0.0005	X	-------	N/A	U
2941	Chloroform, mg/l	215	0.0005	X	-------	N/A	U
2942	Bromoform, mg/l	215	0.0005	X	-------	N/A	U

#2

OXFORD Laboratories Inc.

Analytical and Consulting Chemis
1316 South Fifth Stre
Wilmington, N.C. 284
(910) 763-97
Fax (910) 343-96

VOLATILE ORGANIC CHEMICALS (continued)

LABORATORY ID#: 37721

WATER SYSTEM ID#: 03-26-3

COLLECTION DATE: 07/11/96 (MM/DD/YY)

LOCATION/SOURCE CODE: 0

CONTAM CODE	CONTAMINANT	METHOD CODE	DETECTION LIMITS	NOT DETECTED (X)	QUANTIFIED RESULTS	ALLOW. LIMITS	REGULATED UNREGULAT
2943	Bromodichloromethane, mg/l	215	0.0005	X		N/A	U
2944	Chlorodibromomethane, mg/l	215	0.0005	X		N/A	U
2955	Xylenes (Total), mg/l	216	0.0005	X		10	R
2964	Dichloromethane, mg/l	216	0.0005	X		0.005	R
2965	o-Chlorotoluene, mg/l	216	0.0005	X		N/A	U
2966	p-Chlorotoluene, mg/l	216	0.0005	X		N/A	U
2967	m-Dichlorobenzene, mg/l	216	0.0005	X		N/A	U
2968	o-Dichlorobenzene, mg/l	216	0.0005	X		0.6	R
2969	p-Dichlorobenzene, mg/l	216	0.0005	X		0.075	R
2976	Vinyl Chloride, mg/l	216	0.0005	X		0.002	R
2977	1,1,-Dichloroethylene, mg/l	216	0.0005	X		0.007	R
2978	1,1-Dichloroethane, mg/l	216	0.0005	X		N/A	U
2979	Trans-1,2,-Dichloroethylene, mg/l	216	0.0005	X		0.1	R
30	1,2-Dichloroethane, mg/l	216	0.0005	X		0.005	R
2981	1,1,1-Trichloroethane, mg/l	216	0.0005	X		0.2	R
2982	Carbon Tetrachloride, mg/l	216	0.0005	X		0.005	R
2983	1,2-Dichloropropane, mg/l	216	0.0005	X		0.005	R
2984	Trichloroethylene, mg/l	216	0.0005	X		0.005	R
2985	1,1,2-Trichloroethane, mg/l	216	0.0005	X		0.005	R
2986	1,1,1,2-Tetrachloroethane, mg/l	216	0.0005	X		N/A	U
2987	Tetrachloroethylene, mg/l	216	0.0005	X		0.005	R
2988	1,1,2,2-Tetrachloroethane, mg/l	216	0.0005	X		N/A	U
2989	Chlorobenzene, mg/l	216	0.0005	X		0.1	R
2990	Benzene, mg/l	216	0.0005	X		0.005	R
2991	Toluene, mg/l	216	0.0005	X		1	R
2992	Ethylbenzene, mg/l	216	0.0005	X		0.7	R
2993	Bromobenzene, mg/l	216	0.0005	X		N/A	U
2994	Isopropylbenzene, mg/l	216	0.0005	X		N/A	U
2996	Styrene, mg/l	216	0.0005	X		0.1	R
2998	n-Propylbenzene, mg/l	216	0.0005	X		N/A	U

( ) SAMPLE UNSATISFACTORY ( ) RESAMPLE REQUESTED

Date Analyses Begun: 07/18/96

Time Analyses Begun: 05:32 PM

Date Analyses Completed: 07/23/96

Time Analyses Completed: 04:40 PM

Laboratory Log #: 96W3726 #2

Certified By: Ann McMillan

COMMENTS: Also detected: Methyl-t-Butyl Ether @ 19.1 PPB ; Di-isopropyl Ether (@

PURCHASE ORDER # _____

Rev. 1/17/94

Bottle # 3

OXFORD Laboratories Inc.
Analytical and Consulting Che
1316 South Fifth
Wilmington, N.C.
(910) 76
Fax (910) 34

VOLATILE ORGANIC CHEMICALS ANALYSIS
(VOCS)

LABORATORY ID#: 3 7 7 2 1
WATER SYSTEM ID#: 03-26-332 COUNTY: CUMBERLA
NAME OF SYSTEM: Cliffdale West
SAMPLE TYPE: E (E=Entry Point; S=Special/Non-compliance)
COLLECTED ON: DATE 2/04/97 (MM/DD/YY) TIME: 08:30 AM (HH:MM
LOCATION WHERE COLLECTED: Well #23
LOCATION CODE: 023 COLLECTED BY: Jesus Villagomez
MAIL RESULTS TO:
La Grange Water
PO-Box 58029
Fay, N.C. 28305
TELEPHONE # (910) 867-4126

TYPE OF SUPPLY:
(X) COMMUNITY ( ) ADJACENT
( ) NTNC ( ) CAMPGROUND
( ) NON-COMMUNITY
( ) PRIVATE

TYPE TREATMENT:
( ) NON-CHLORINATED
(X) CHLORINATED

CONTAM CODE	CONTAMINANT (mg/l)	METHOD CODE	REGULATORY DETECTION LIMITS	NOT DETECTED (X)	QUANTIFIED RESULTS	ALLOW. LIMITS	R UN
2030	p-Isopropyltoluene	217	0.0005	X	_____	N/A	
2210	Chloromethane	217	0.0005	X	_____	N/A	
2212	Dichlorodifluoromethane	217	0.0005	X	_____	N/A	
2214	Bromomethane	217	0.0005	X	_____	N/A	
2216	Chloroethane	217	0.0005	X	_____	N/A	
2218	Fluorotrichloromethane	217	0.0005	X	_____	N/A	
2246	Hexachlorobutadiene	217	0.0005	X	_____	N/A	
2248	Naphthalene	217	0.0005	X	_____	N/A	
2378	1,2,4-Trichlorobenzene	217	0.0005	X	_____	0.07	
2380	Cis-1,2-Dichloroethylene	217	0.0005	X	_____	0.07	
2408	Dibromomethane	217	0.0005	X	_____	N/A	
2410	1,1-Dichloropropene	217	0.0005	X	_____	N/A	
2412	1,3-Dichloropropane	217	0.0005	X	_____	N/A	
2413	1,3-Dichloropropene	217	0.0005	X	_____	N/A	
2414	1,2,3-Trichloropropane	217	0.0005	X	_____	N/A	
2416	2,2-Dichloropropane	217	0.0005	X	_____	N/A	
2418	1,2,4-Trimethylbenzene	217	0.0005	X	_____	N/A	
2420	1,2,3-Trichlorobenzene	217	0.0005	X	_____	N/A	
2422	n-Butylbenzene	217	0.0005	X	_____	N/A	
2424	1,3,5-Trimethylbenzene	217	0.0005	X	_____	N/A	
2426	Tert-Butylbenzene	217	0.0005	X	_____	N/A	
2428	Sec-Butylbenzene	217	0.0005	X	_____	N/A	
2430	Bromochloromethane	217	0.0005	X	_____	N/A	
2941	Chloroform	215	0.0005	X	_____	N/A	
2942	Bromoform	215	0.0005	X	_____	N/A	

Laboratory Log # 97WS781*3

OXFORD Laboratories Inc.

Analytical and Consulting Che
1316 South Fifth
Wilmington, N.C.
(910) 76
Fax (910) 34

VOLATILE ORGANIC CHEMICALS ANALYSIS (continued)

LABORATORY ID#: 37721

WATER SYSTEM ID#: 03-26-33

COLLECTION DATE: 2/10/4/97 (MM/DD/YY)

LOCATION CODE: 023

CONTAM CODE	CONTAMINANT (mg/l)	METHOD CODE	REGULATORY DETECTION LIMITS	NOT DETECTED (X)	QUANTIFIED RESULTS	ALLOW. LIMITS	REC UNRE
2943	Bromodichloromethane	215	0.0005	X	-------	N/A	
2944	Chlorodibromomethane	215	0.0005	X	-------	N/A	
2955	Xylenes (Total)	217	0.0005	X	-------	10	
2964	Dichloromethane	217	0.0005	X	-------	0.005	
2965	o-Chlorotoluene	217	0.0005	X	-------	N/A	
2966	p-Chlorotoluene	217	0.0005	X	-------	N/A	
2967	m-Dichlorobenzene	217	0.0005	X	-------	N/A	
2968	o-Dichlorobenzene	217	0.0005	X	-------	0.6	
2969	p-Dichlorobenzene	217	0.0005	X	-------	0.075	
2976	Vinyl Chloride	217	0.0005	X	-------	0.002	
2977	1,1,-Dichloroethylene	217	0.0005	X	-------	0.007	
2978	1,1-Dichloroethane	217	0.0005	X	-------	N/A	
2979	Trans-1,2,-Dichloroethylene	217	0.0005	X	-------	0.1	
2980	1,2-Dichloroethane	217	0.0005	X	-------	0.005	
2981	1,1,1-Trichloroethane	217	0.0005	X	-------	0.2	
2982	Carbon Tetrachloride	217	0.0005	X	-------	0.005	
2983	1,2-Dichloropropane	217	0.0005	X	-------	0.005	
2984	Trichloroethylene	217	0.0005	X	-------	0.005	
2985	1,1,2-Trichloroethane	217	0.0005	X	-------	0.005	
2986	1,1,1,2-Tetrachloroethane	217	0.0005	X	-------	N/A	
2987	Tetrachloroethylene	217	0.0005	X	-------	0.005	
2988	1, 1,2,2-Tetrachloroethane	217	0.0005	X	-------	N/A	
2989	Chlorobenzene	217	0.0005	X	-------	0.1	
2990	Benzene	217	0.0005	X	-------	0.005	
2991	Toluene	217	0.0005	X	-------	1	
2992	Ethylbenzene	217	0.0005	X	-------	0.7	
2993	Bromobenzene	217	0.0005	X	-------	N/A	
2994	Isopropylbenzene	217	0.0005	X	-------	N/A	
2996	Styrene	217	0.0005	X	-------	0.1	
2998	n-Propylbenzene	217	0.0005	X	-------	N/A	

( ) SAMPLE UNSATISFACTORY ( ) RESAMPLE REQUESTED

Date Analyses Begun: 04/22/97
Time Analyses Begun: 07:18 PM

Date Analyses Completed: 04/25/97
Time Analyses Completed: 04:10 PM

Laboratory Log #: 97W5781 #3
Certified By: Bryan Thompson

COMMENTS:
Also detected: Methyl-t-butyl ether @ 1.77 PPB
Di Isopropyl Ether @ 2.68 PPB

OXFORD Laboratories Inc.

Sample #5

Analytical and Consulting Chem
1316 South Fifth
Wilmington, N.C.
(910) 763
Fax (910) 343

VOLATILE ORGANIC CHEMICALS ANALYSIS
(VOCS)

LABORATORY ID#: 3 7 7 2 1

WATER SYSTEM ID#: 03-26-332 COUNTY: Cumb

NAME OF SYSTEM: Cliffdale west

SAMPLE TYPE: E (E=Entry Point; S=Special/Non-compliance)

COLLECTED ON: DATE 05/11/98 (MM/DD/YY) TIME: 10:30A M (HH:MM A

LOCATION WHERE COLLECTED: well # 23 next to Colony Village - Rim Rd

LOCATION CODE: E23 COLLECTED BY: [illegible]

MAIL RESULTS TO:

LAGRANGE WATERWORKS
P.O. BOX 41739
FAYETTEVILLE, NC 28309-1739
(910) 867-4126

TELEPHONE # ( ) _____

TYPE OF SUPPLY:
(✓) COMMUNITY ( ) ADJACENT
( ) NTNC ( ) CAMPGROUND
( ) NON-COMMUNITY
( ) PRIVATE

TYPE TREATMENT:
( ) NON-CHLORINATED
(✓) CHLORINATED

CONTAM CODE	CONTAMINANT (mg/l)	METHOD CODE	REGULATORY DETECTION LIMITS	NOT DETECTED (X)	QUANTIFIED RESULTS	ALLOW. LIMITS	REC UNR
2030	p-Isopropyltoluene	217	0.0005	X	_____	N/A	
2210	Chloromethane	217	0.0005	X	_____	N/A	
2212	Dichlorodifluoromethane	217	0.0005	X	_____	N/A	
2214	Bromomethane	217	0.0005	X	_____	N/A	
2216	Chloroethane	217	0.0005	X	_____	N/A	
2218	Fluorotrichloromethane	217	0.0005	X	_____	N/A	
2246	Hexachlorobutadiene	217	0.0005	X	_____	N/A	
2248	Naphthalene	217	0.0005	X	_____	N/A	
2378	1,2,4-Trichlorobenzene	217	0.0005	X	_____	0.07	
2380	Cis-1,2-Dichloroethylene	217	0.0005	X	_____	0.07	
2408	Dibromomethane	217	0.0005	X	_____	N/A	
2410	1,1-Dichloropropene	217	0.0005	X	_____	N/A	
2412	1,3-Dichloropropane	217	0.0005	X	_____	N/A	
2413	1,3-Dichloropropene	217	0.0005	X	_____	N/A	
2414	1,2,3-Trichloropropane	217	0.0005	X	_____	N/A	
2416	2,2-Dichloropropane	217	0.0005	X	_____	N/A	
2418	1,2,4-Trimethylbenzene	217	0.0005	X	_____	N/A	
2420	1,2,3-Trichlorobenzene	217	0.0005	X	_____	N/A	
2422	n-Butylbenzene	217	0.0005	X	_____	N/A	
2424	1,3,5-Trimethylbenzene	217	0.0005	X	_____	N/A	
2426	Tert-Butylbenzene	217	0.0005	X	_____	N/A	
2428	Sec-Butylbenzene	217	0.0005	X	_____	N/A	
[illegible]0	Bromochloromethane	217	0.0005	X	_____	N/A	
2941	Chloroform	215	0.0005	X	_____	N/A	
2942	Bromoform	215	0.0005	X	_____	N/A	

01/97

Laboratory Log # 98W0340-4

OXFORD Laboratories Inc.

Analytical and Consulting Chem
1316 South Fifth S
Wilmington, N.C. 2
(910) 763-
Fax (910) 343-

VOLATILE ORGANIC CHEMICALS ANALYSIS (continued)

LABORATORY ID#: 37721

WATER SYSTEM ID#: 03-26-332

COLLECTION DATE: 05/11/98 (MM/DD/YY)

LOCATION CODE: E23

CONTAM CODE	CONTAMINANT (mg/l)	METHOD CODE	REGULATORY DETECTION LIMITS	NOT DETECTED (X)	QUANTIFIED RESULTS	ALLOW. LIMITS	REG (UNREG
2943	Bromodichloromethane	215	0.0005	X	_____	N/A	U
2944	Chlorodibromomethane	215	0.0005	X	_____	N/A	U
2955	Xylenes (Total)	217	0.0005	X	_____	10	R
2964	Dichloromethane	217	0.0005	X	_____	0.005	R
2965	o-Chlorotoluene	217	0.0005	X	_____	N/A	U
2966	p-Chlorotoluene	217	0.0005	X	_____	N/A	U
2967	m-Dichlorobenzene	217	0.0005	X	_____	N/A	U
2968	o-Dichlorobenzene	217	0.0005	X	_____	0.6	R
2969	p-Dichlorobenzene	217	0.0005	X	_____	0.075	R
2976	Vinyl Chloride	217	0.0005	X	_____	0.002	R
2977	1,1,-Dichloroethylene	217	0.0005	X	_____	0.007	R
2978	1,1-Dichloroethane	217	0.0005	X	_____	N/A	U
29[illegible]	Trans-1,2.-Dichloroethylene	217	0.0005	X	_____	0.1	R
2980	1,2-Dichloroethane	217	0.0005	X	_____	0.005	R
2981	1,1,1-Trichloroethane	217	0.0005	X	_____	0.2	R
2982	Carbon Tetrachloride	217	0.0005	X	_____	0.005	R
2983	1,2-Dichloropropane	217	0.0005	X	_____	0.005	R
2984	Trichloroethylene	217	0.0005	X	_____	0.005	R
2985	1,1,2-Trichloroethane	217	0.0005	X	_____	0.005	R
2986	1,1,1,2-Tetrachloroethane	217	0.0005	X	_____	N/A	U
2987	Tetrachloroethylene	217	0.0005	X	_____	0.005	R
2988	1, 1,2,2-Tetrachloroethane	217	0.0005	X	_____	N/A	U
2989	Chlorobenzene	217	0.0005	X	_____	0.1	R
2990	Benzene	217	0.0005	X	_____	0.005	R
2991	Toluene	217	0.0005	X	_____	1	R
2992	Ethylbenzene	217	0.0005	X	_____	0.7	R
2993	Bromobenzene	217	0.0005	X	_____	N/A	U
2994	Isopropylbenzene	217	0.0005	X	_____	N/A	U
2996	Styrene	217	0.0005	X	_____	0.1	R
2998	n-Propylbenzene	217	0.0005	X	_____	N/A	U

( ) SAMPLE UNSATISFACTORY ( ) RESAMPLE REQUESTED

Date Analyses Begun: 05/21/98
Time Analyses Begun: 08:00 AM

Date Analyses Completed: 05/31/98
Time Analyses Completed: 05:00 PM

Laboratory Log #: TW4346-4
Certified By: Bryan Thompson

COMMENTS: _____

Purchase Order # _____

NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27587 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR Environmental Hydrogeological Consultants, Inc.

DRILLER REGISTRATION NUMBER 1029

MW-2

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Pantry #456 8191 Cliffdale Road (Cliffdale & Rim)
Fayetteville, NC
(Road, Community, or Subdivision and Lot No.)

County: Cumberland

2. OWNER The Pantry, Incorporated

ADDRESS Post Office Box 1410
(Street or Route No.)

Sanford (City or Town) NC (State) 27331 (Zip Code)

3. DATE DRILLED 05/14/98 USE OF WELL Monitoring

4. TOTAL DEPTH 40' CUTTINGS COLLECTED ☐ Yes ☒ No

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 34 FT. ☐ above ☒ below TOP OF CASING.

TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): NA METHOD OF TEST NA

8. WATER ZONES (depth): NA

9. CHLORINATION: Type NA Amount NA

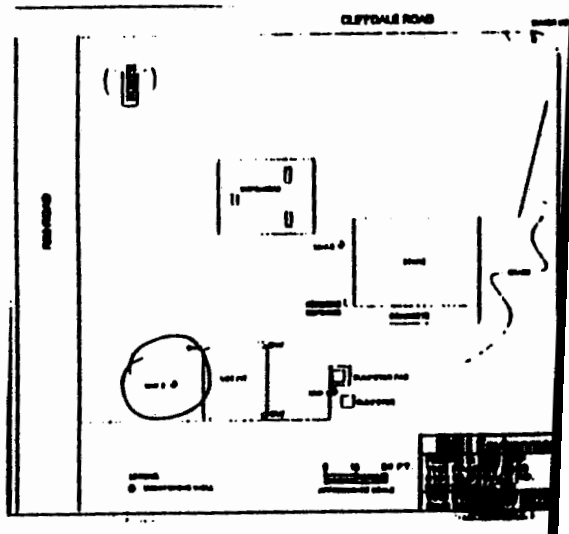
DRILLING LOG

Depth From	Depth To	Formation Description
0	8'	Brown Clay w\ Silt
8'	10'	Brown, Gray Silt w\ Clay
10'	15'	Brown & Red Silt w\ Clay
15'	25'	Tan & Gray Silt w\ Clay
25'	30'	Gray Silt w\ Clay
30'	40'	Gray & Tan Clay

If additional spaces is needed use back of form.

LOCATION SKETCH

(Show direction and distance from at least two State Roads, or o
map reference points).



10. CASING:

	Depth			Diameter	Wall Thickness or Weight/Ft.	Material
FROM	0	TO 20	FT	2"	Sch 40	PVC
FROM		TO	FT			
FROM		TO	FT			

11. GROUT:

	Depth			Material	Method
FROM	1	TO 16	FT	Portland	Slurry
FROM		TO	FT		

12. SCREEN:

	Depth			Diameter	Slot Size	Material
FROM	20	TO 40	FT	2"	in 0.01	in PVC
FROM		TO	FT		in	in
FROM		TO	FT		in	in

13. GRAVEL PACK:

	Depth			Size	Material
FROM	18	TO 40	FT	20/30	Silica Sand
FROM		TO	FT		

14. REMARKS: Bentonite seal from 16-18'

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTIO STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

[signature] 1.22.99

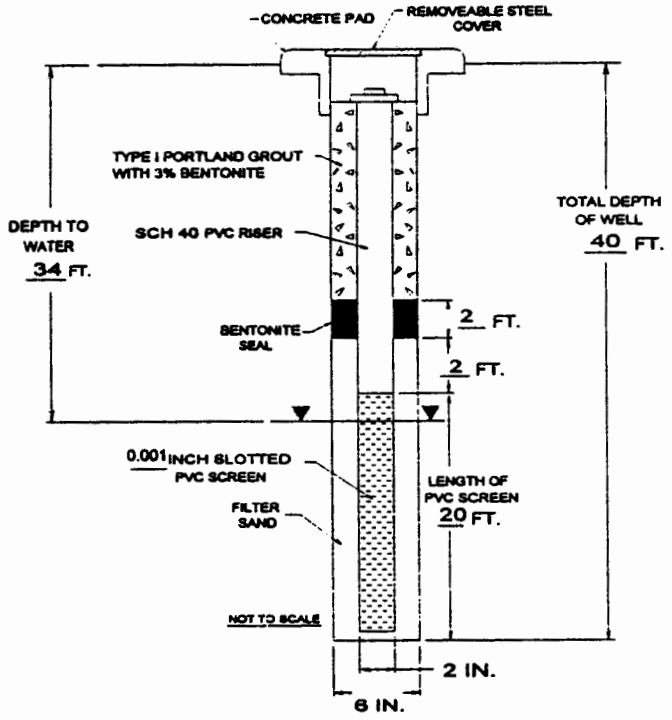
SIGNATURE OF CONTRACTOR OR AGENT DATE

Submit original to Division of Environmental Management and copy to well owne

GW-1 Revised 6/88

Boring Log and Type II Well Construction Details

WELL IDENTIFICATION: MW-2 DATE DRILLED: 5/14/98
STATE PERMIT #: _____ WORK ORDER #: 597-986
PROJECT NAME: THE PANTRY #456
SITE ADDRESS: 8191 CLIFFDALE RD., FAYETTEVILLE, NC
LATITUDE: N 35°3'25" LONGITUDE: W 79°3'15"
TOP OF CASING ELEV.: 100.00' LAND SURFACE ELEV.: N/D



DRILLING METHOD: AUGER
SAMPLING METHOD: SPLIT SPOON
GRAVEL PACK SIZE: 20/30 SILICA SAND
SLOT SIZE: 0.001 INCH
COMMENTS:

N/D = NOT DETERMINED

DEPTH	SAMPLE NUMBER	BLOW COUNT	OVA (ppm)	DESCRIPTIVE LOG
5				
	5-7'	2,1	42	BROWN CLAY WITH SILT
		2,2		
10				
	10-12'	4,8	6	BROWN AND GRAY SILT WITH CLAY
		7,7		RED AND BROWN SILT WITH CLAY
15				
	15-17'	7,10	38	TAN AND GRAY SILT WITH CLAY
		9,12		
20				
	20-22'	5,5	4	TAN SILT WITH CLAY
		6,6		
25				
	25-27'	5,11	98	GRAY SILT WITH CLAY
		15,22		
30				
	30-32	5,7	90	GRAY AND TAN CLAY
		8,11		
35				

NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27687 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ P
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR Environmental Hydrogeological Consultants, Inc.

DRILLER REGISTRATION NUMBER 1029

MW-3

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

1. WELL LOCATION: (Show sketch of the location below)

County: Cumberland

Nearest Town: Pantry #456 8191 Cliffdale Road (Cliffdale & Rim)
Fayetteville, NC
(Road, Community, or Subdivision and Lot No.)

2. OWNER The Pantry, Incorporated
ADDRESS Post Office Box 1410
(Street or Route No.)
Sanford (City or Town) NC (State) 27331 (Zip Code)

3. DATE DRILLED 05/15/98 USE OF WELL Monitoring

4. TOTAL DEPTH 50' CUTTINGS COLLECTED ☐ Yes ☒ No

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 34 FT. ☐ above ☒ below TOP OF CASING.
TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): NA METHOD OF TEST NA

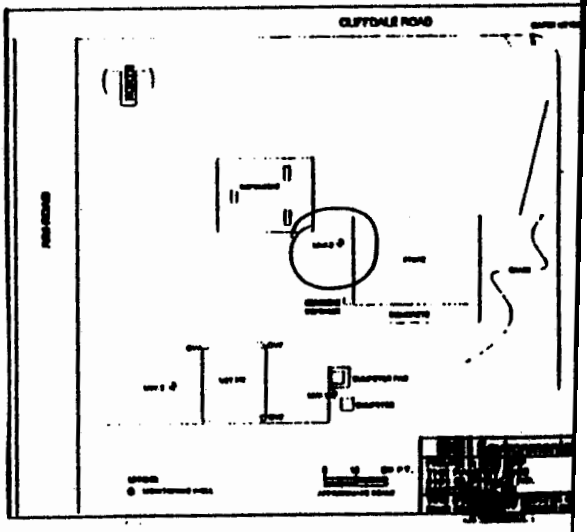
8. WATER ZONES (depth): NA

9. CHLORINATION: Type NA Amount NA

Depth From	Depth To	DRILLING LOG Formation Description
0	15'	Redish Brown Silt w\ Clay
15'	21'	Brown Clay w\ Silt & Sand
21'	25'	Brown & Red Clay w\ Silt
25'	32'	Red, Brown & Gray Silt w\ Clay & Sand

If additional spaces is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or ot
map reference points).



10. CASING:

	Depth			Diameter	Wall Thickness or Weight/Ft.	Material
FROM 0	TO 20	FT		2"	Sch 40	PVC
FROM	TO	FT				
FROM	TO	FT				

11. GROUT:

	Depth			Material	Method
FROM 1	TO 16	FT		Portland	Slurry
FROM	TO	FT			

12. SCREEN:

	Depth			Diameter	Slot Size	Material
FROM 20	TO 50	FT	2"	in	0.01 in	PVC
FROM	TO	FT		in	in	
FROM	TO	FT		in	in	

13. GRAVEL PACK:

	Depth			Size	Material
FROM 18	TO 50	FT		20/30	Silica Sand
FROM	TO	FT			

14. REMARKS: Bentonite seal from 16-18'

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

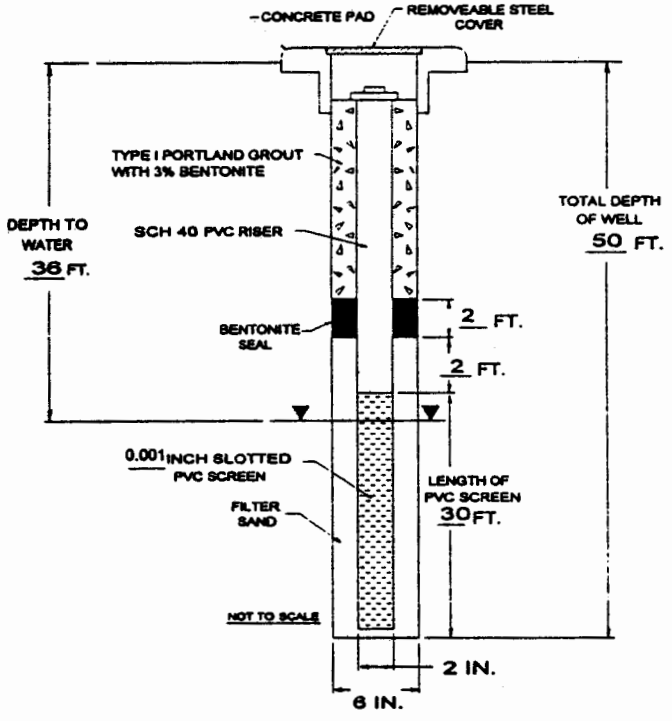
Michelle M. B. 7-22-98
SIGNATURE OF CONTRACTOR OR AGENT DATE

Submit original to Division of Environmental Management and copy to well owner.

GW-1 Revised 6/88

Boring Log and Type II Well Construction Details

WELL IDENTIFICATION: MW-3 DATE DRILLED: 5/15/98
STATE PERMIT #: _____ WORK ORDER #: 597-986
PROJECT NAME: THE PANTRY #456
SITE ADDRESS: 8191 CLIFFDALE RD., FAYETTEVILLE, NC
LATITUDE: N 35°3'25" LONGITUDE: W 79°3'15"
TOP OF CASING ELEV.: 102.00' LAND SURFACE ELEV.: N/D



DRILLING METHOD: AUGER
SAMPLING METHOD: SPLIT SPOON
GRAVEL PACK SIZE: 20/30 SILICA SAND
SLOT SIZE: 0.001 INCH
COMMENTS: _____

N/D = NOT DETERMINED

DEPTH	SAMPLE NUMBER	BLOW COUNT	OVA (ppm)	DESCRIPTIVE LOG
	5-7	2,4,4,5	6	REDDISH BROWN SILT WITH CLAY
10				
	10-12	4,6,7,7	0	REDDISH BROWN SILT WITH CLAY
	15-17	3,5,6,10	0	BROWN CLAY WITH SILT
20				
	20-22	11,11,7,7	4	BROWN SILT WITH SAND/BROWN AND RED CLAY WITH SILT
	25-27	7,11,17,17	16	BROWN, GRAY AND RED SILT
30				
	30-32	8,10,14,20	3	RED, BROWN AND GRAY SILT WITH CLAY AND SAND
40				
50				

4NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27587 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR ECS, Incorporated

DRILLER REGISTRATION NUMBER 1405

MW-4

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Fayetteville, North Carolina
8191 Cliffdale Road
(Road, Community, or Subdivision and Lot No.)

County: Cumberland

2. OWNER The Pantry, Inc. - Pantry # 456
ADDRESS P.O. Box 1410
(Street or Route No.)
Sanford NC 27331
City or Town State Zip Code

3. DATE DRILLED 9/8-9/98 USE OF WELL Monitoring

4. TOTAL DEPTH 60' CUTTINGS COLLECTED Yes ☐ No ☒

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 40 FT. ☐ above ☒ below TOP OF CASING.
TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): N/A METHOD OF TEST N/A

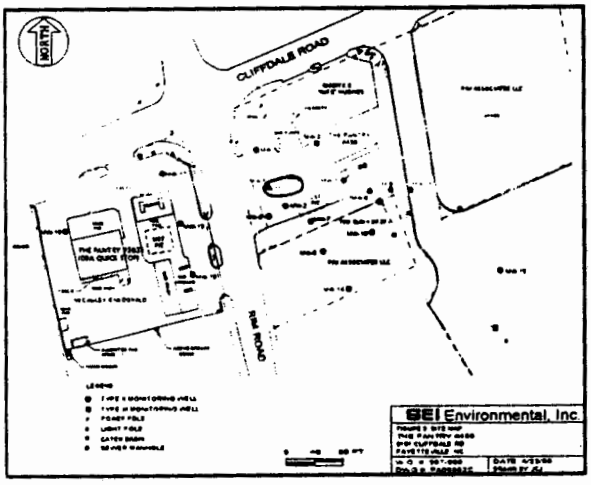
8. WATER ZONES (depth): N/A

9. CHLORINATION: Type N/A Amount N/A

Depth From	Depth To	DRILLING LOG Formation Description
0	10	Orangish-Brown Clayey Silt
10	14	Grayish-Brown Sandy Clay
14	20	Grayish-Brown Silty Medium Sand
20	22	Orange & Red Clayey Fine Sand
22	24	Gray Clayey Medium Sand
24	30	Red, Orange & Gray Mottled Silty Clay
30	34	Gray Silty Clay
34	40	Gray & Brown Mottled Sandy Clay
40	60	Brown Medium Sand

If additional spaces is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points).



10. CASING:

	Depth			Diameter	Wall Thickness or Weight/Ft.	Material
FROM 0	TO 50	FT	6"	Sch 40	PVC
FROM 0	TO 55	FT	2"	Sch 40	PVC
FROM	TO	FT			

11. GROUT:

	Depth			Material	Method
FROM 0	TO 50	FT	Portland	Tremmie
FROM 0	TO 49	FT	Portland	Tremmie

12. SCREEN:

	Depth			Diameter	Slot Size	Material
FROM 55	TO 60	FT	2 in	.010 in	PVC
FROM	TO	FT	in	in	
FROM	TO	FT	in	in	

13. GRAVEL PACK:

	Depth			Size	Material
FROM 53	TO 60	FT	20/30	Silica Sand
FROM	TO	FT		

14. REMARKS: Double cased well, Bentonite Seal from 49-53'

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

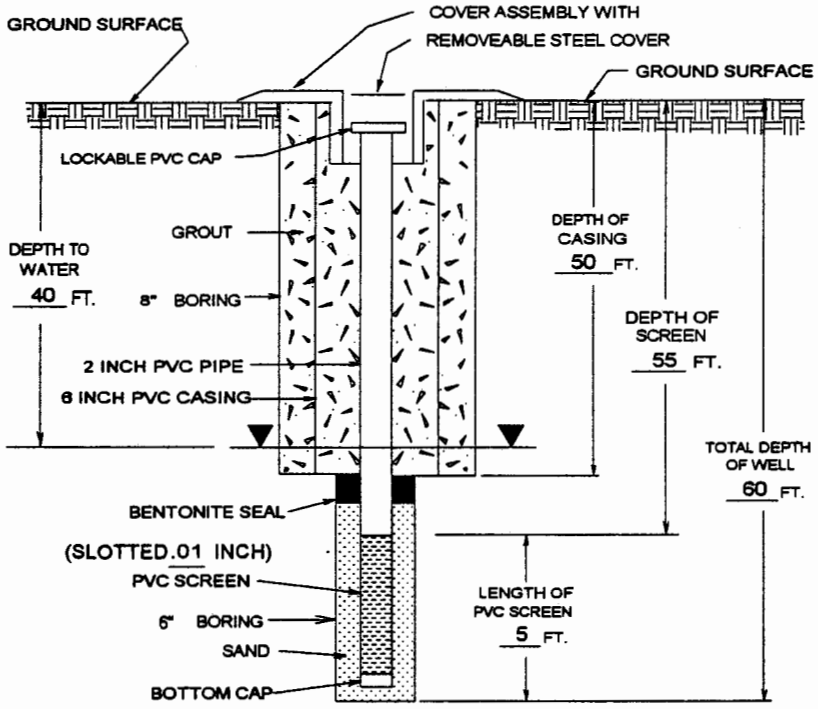
Gretchen J Miller 4/22/99
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 6/88

Submit original to Division of Environmental Management and copy to well owner.

Boring Log and Type III Well Construction Details

WELL IDENTIFICATION: MW-4 DATE DRILLED: 9/8-9/98
STATE PERMIT #: WORK ORDER #: 597986
PROJECT NAME: Pantry #456
SITE ADDRESS: 8191 Cliffdale Road, Fayetteville, N.C.
LATITUDE: N/D LONGITUDE: N/D
TOP OF CASING ELEV.: N/D LAND SURFACE ELEV.: N/D



DRILLING METHOD: Hollow Stem Auger / Mud Rotary
SAMPLING METHOD:
GRAVEL PACK SIZE: 20/30
SLOT SIZE: 0.010"
COMMENTS:

DEPTH	SAMPLE NUMBER	BLOW COUNT	RECOVERY	OVA (ppm)	UNIFIED METHOD	DESCRIPTIVE LOG
						Orangish-Brown Clayey Silt
10						
						Grayish-Brown Sandy Clay
						Grayish-Brown Silty Medium Sand
20						
						Orange & Red Clayey Fine Sand
						Gray Clayey Medium Sand
						Red, Orange & Gray Mottled Silty Clay
30						
						Gray Silty Clay
						Gray & Brown Mottled Sandy Clay
40						
						Brown Medium Sand
50						
60						
						Bottom of Boring

4NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27587 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR ECS, Incorporated

DRILLER REGISTRATION NUMBER 1405

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

MW-5

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Fayetteville, North Carolina
8191 Cliffdale Road
(Road, Community, or Subdivision and Lot No.)

County: Cumberland

2. OWNER The Pantry, Inc. - Pantry # 456
ADDRESS P.O. Box 1410 (Street or Route No.)
Sanford NC 27331
City or Town State Zip Code

3. DATE DRILLED 9/8/98 USE OF WELL Monitoring

4. TOTAL DEPTH 45' CUTTINGS COLLECTED Yes ☐ No ☒

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 40 FT. ☐ above ☒ below TOP OF CASING.
TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): N/A METHOD OF TEST N/A

8. WATER ZONES (depth): N/A

9. CHLORINATION: Type N/A Amount N/A

10. CASING:

	Depth			Diameter	Wall Thickness or Weight/Ft.	Material
FROM	0	TO 25	FT	2"	Sch 40	PVC
FROM		TO	FT			
FROM		TO	FT			

11. GROUT:

	Depth			Material	Method
FROM	0	TO 21	FT	Portland	Slurry
FROM		TO	FT		

12. SCREEN:

	Depth			Diameter		Slot Size		Material
FROM	25	TO 45	FT	2	in	.010	in	PVC
FROM		TO	FT		in		in	
FROM		TO	FT		in		in	

13. GRAVEL PACK:

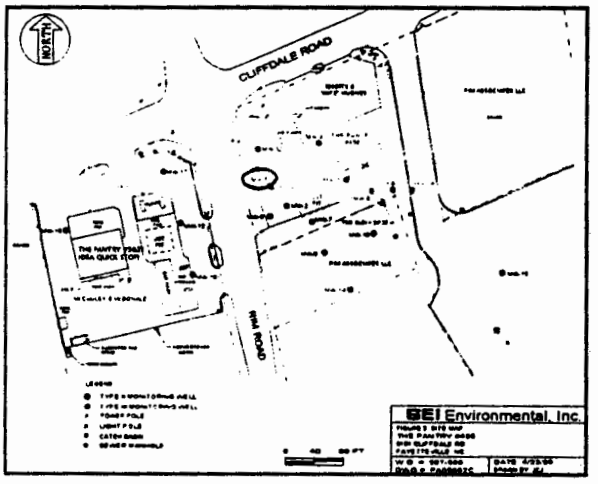
	Depth			Size	Material
FROM	23	TO 45	FT	20/30	Silica Sand
FROM		TO	FT		

14. REMARKS: Bentonite Seal from 21-23'

Depth From	Depth To	DRILLING LOG Formation Description
0	10	Orangish-Brown Clayey Silt
10	14	Grayish-Brown Sandy Clay
14	20	Grayish-Brown Silty Medium Sand
20	22	Orange & Red Clayey Fine Sand
22	24	Gray Clayey Medium Sand
24	30	Red, Orange & Gray Mottled Silty Clay
30	34	Gray Silty Clay
34	40	Gray & Brown Mottled Sandy Clay
40	45	Brown Medium Sand

If additional spaces is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points).



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

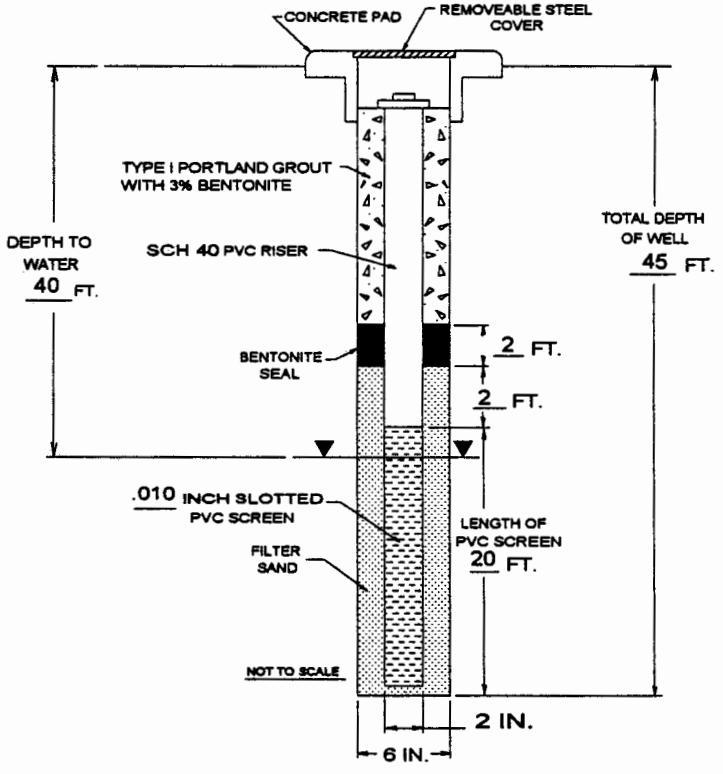
Heather Z Miller 4/22/99
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 6/88

Submit original to Division of Environmental Management and copy to well owner.

Boring Log and Type II Well Construction Details

WELL IDENTIFICATION: MW-5 DATE DRILLED: 9/8/98
STATE PERMIT #: WORK ORDER #: 597986
PROJECT NAME: Pantry #456
SITE ADDRESS: 8191 Cliffdale Road, Fayetteville, N.C.
LATITUDE: LONGITUDE:
TOP OF CASING ELEV.: LAND SURFACE ELEV.:

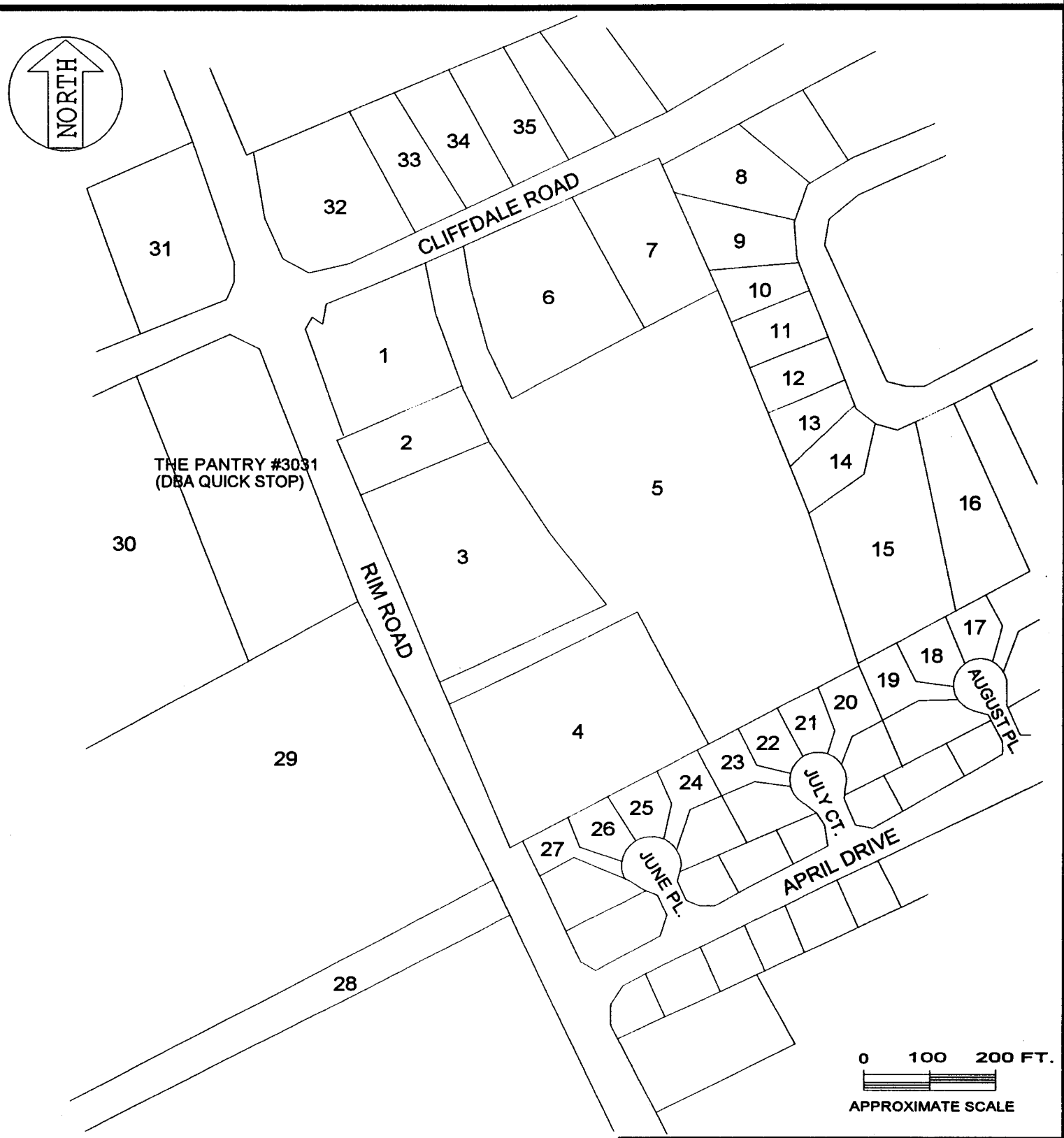


DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Split Spoon
GRAVEL PACK SIZE: 20/30
SLOT SIZE: .010
COMMENTS:

DEPTH	SAMPLE NUMBER	BLOW COUNT	RECOVERY	OVA (ppm)	UNIFIED METHOD	DESCRIPTIVE LOG
	5-7	2,2		44		Orangish-Brown Clayey Silt
		2,3				
10						
	10-12	3,5,7,9		30		Grayish-Brown Sandy Clay
	15-17	4,5		4		Grayish-Brown Silty Medium Sand
		9,10				
20						
	20-22	5,6,6,7		34		Orange & Red Clayey Fine Sand
						Gray Clayey Medium Sand
	25-27	5,6		30		Red, Orange & Gray Mottled Silty Clay
		9,10				
30						
	30-32	4,5,7,10		20		Gray Silty Clay
	35-37	2,3		18		Gray & Brown Mottled Sandy Clay
		5,8				
40						
						Brown Medium Sand
45						
						Bottom of Boring

SEI
Environmental, Inc.

Surrounding Property Owners The Pantry #3031, DBA Quick Stop 8215 Cliffdale Road Fayetteville, North Carolina SEI Project 597986		
Map #	**Property Owner**	**Address**
1	Robert K. & Barbara J. Hughes	1201 Radcliffe Dr., Sanford, NC 27330
2	Rim Associates, LLC	C/o Greg Parker & Co., 1401 Johnson Ferry Rd., Marietta, GA 30062
3	Rim Associates, LLC	C/o Greg Parker & Co., 1401 Johnson Ferry Rd., Marietta, GA 30062
4	Rim Associates, LLC	C/o Greg Parker & Co., 1401 Johnson Ferry Rd., Marietta, GA 30062
5	Rim Associates, LLC	C/o Greg Parker & Co., 1401 Johnson Ferry Rd., Marietta, GA 30062
6	Rim Associates, LLC	C/o Greg Parker & Co., 1401 Johnson Ferry Rd., Marietta, GA 30062
7	Faye M. Harmon	PO Box 451, Long Beach, NC 28465-9820
8	Tanya D. Perry	7328 Shillinglaw Cir., Fayetteville, NC, 28314
9	Terry W. & Wilma R. Johnson	7332 Shillinglaw Cir., Fayetteville, NC, 28314
10	Jose Antonio Marquez	7336 Shillinglaw Cir., Fayetteville, NC, 28314
11	Rosa A. Colon	7340 Shillinglaw Cir., Fayetteville, NC, 28314
12	Frederick L. & Vickie Faye Gates	7404 Shillinglaw Cir., Fayetteville, NC, 28314
13	Darryl H. & Delina L. Jenkins	7408 Shillinglaw Cir., Fayetteville, NC, 28314
14	Ronald J. &Zelma R. McDonald	7412 Shillinglaw Cir., Fayetteville, NC, 28314
15	LaGrange Waterworks Corp.	583 S. Reilly Rd., Fayetteville, NC, 28314
16	Morris & Beverly M. Cooper	7420 Shillinglaw Cir., Fayetteville, NC, 28314
17	Adline E. Taylor & Anjou G. Bice	1205 August Pl., Fayetteville, NC, 28314
18	Golden Street Homes, Inc.	5657 Bragg Blvd., Fayetteville, NC 28303
19	Clarence M. & Laura C. Heyward	1210 August Pl., Fayetteville, NC, 28314
20	William J. Bellomy	1209 July Ct., Fayetteville, NC, 28314
21	Mary Ann Easley	1205 July Ct., Fayetteville, NC, 28314
22	Yolanda Y. Bright	1204 July Ct., Fayetteville, NC, 28314
23	Mildred A. & Charles G. Eugene	1208 July Ct., Fayetteville, NC, 28314
24	Daniel P. Huffman	1209 June Pl., Fayetteville, NC, 28314
25	Kevin & Cynthia D. Johnson	1205 June Pl., Fayetteville, NC, 28314
26	Anita L. Lopez	1204 June Pl., Fayetteville, NC, 28314
27	Golden Street Homes, Inc.	5657 Bragg Blvd., Fayetteville, NC 28303
28	John Davis Gillis, II	2701 Gillis Hill Rd., Fayetteville, NC 28306
29	Linda Faye Ray & Willie L. Wright	33310 Somerset Dr., Leesburg, FL 34788
30	Ruth Pate Bunn	PO Box 707, Clarksville, GA 30523-0707
31	Montibello Associates	PO Box 53336, Fayetteville, NC 28305
32	Montibello Associates	PO Box 53336, Fayetteville, NC 28305
33	Montibello Associates	PO Box 53336, Fayetteville, NC 28305
34	Montibello Associates	PO Box 53336, Fayetteville, NC 28305
35	Yong Jin Yu	6005 Ruggles Ct., Fayetteville, NC 28314



SEI Environmental, Inc.

PROPERTY MAP
THE PANTRY #456
8191 CLIFFDALE RD.
FAYETTEVILLE, NC

WO #597-986	DATE: 4/27/99
DWG #PA09861C	DRAWN BY: JCJ

NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27587 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR Environmental Hydrogeological Consultants, Inc.

DRILLER REGISTRATION NUMBER 1029 MW-1

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

1. WELL LOCATION: (Show sketch of the location below)

County: Cumberland

Nearest Town: Pantry #456 8191 Cliffdale Road (Cliffdale & Rim)
Fayetteville, NC
(Road, Community, or Subdivision and Lot No.)

2. OWNER The Pantry, Incorporated
ADDRESS Post Office Box 1410
(Street or Route No.)
Sanford (City or Town) NC (State) 27331 (Zip Code)

3. DATE DRILLED 05/14/98 USE OF WELL Monitoring

4. TOTAL DEPTH 40' CUTTINGS COLLECTED ☐ Yes ☒ No

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 35 FT. ☐ above ☒ below TOP OF CASING.
TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): NA METHOD OF TEST NA

8. WATER ZONES (depth): NA

9. CHLORINATION: Type NA Amount NA

10. CASING:

	Depth				Diameter	Wall Thickness or Weight/Ft.	Material
FROM	0	TO	20	FT	2"	Sch 40	PVC
FROM		TO		FT			
FROM		TO		FT			

11. GROUT:

	Depth				Material	Method
FROM	1	TO	16	FT	Portland	Slurry
FROM		TO		FT		

12. SCREEN:

	Depth				Diameter		Slot Size		Material
FROM	20	TO	40	FT	2"	in	0.01	in	PVC
FROM		TO		FT		in		in	
FROM		TO		FT		in		in	

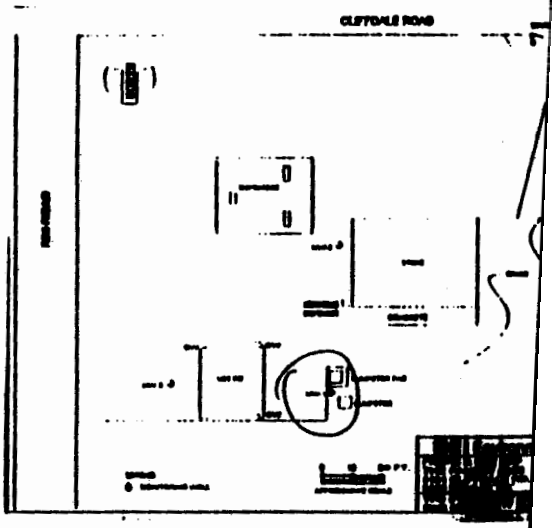
13. GRAVEL PACK:

	Depth				Size	Material
FROM	18	TO	40	FT	20/30	Silica Sand
FROM		TO		FT		

Depth From	Depth To	DRILLING L Formation Desc
0	10'	Brown Silt w/ Clay
10'	15'	Red, Brown, & Gray Silt & San
15'	40'	Gray Clay

If additional spaces is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, o map reference points).



14. REMARKS: Bentonite seal from 16-18'

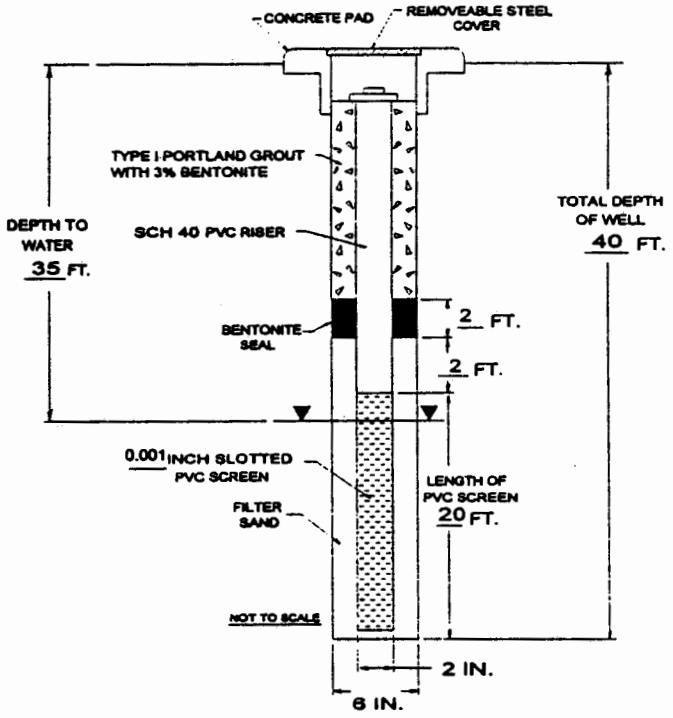
I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCT STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

Michelle [signature] 7-22-98
SIGNATURE OF CONTRACTOR OR AGENT DAT
Submit original to Division of Environmental Management and copy to well ow

GW-1 Revised 6/88

Boring Log and Type II Well Construction Details

WELL IDENTIFICATION: MW-1 DATE DRILLED: 5/14/98
STATE PERMIT #: _____ WORK ORDER #: 597-986
PROJECT NAME: THE PANTRY #456
SITE ADDRESS: 8191 CLIFFDALE RD., FAYETTEVILLE, NC
LATITUDE: N 35°3'25" LONGITUDE: W 79°3'15"
TOP OF CASING ELEV.: 101.43' LAND SURFACE ELEV.: N/D



DRILLING METHOD: AUGER
SAMPLING METHOD: SPLIT SPOON
GRAVEL PACK SIZE: 20/30 SILICA SAND
SLOT SIZE: 0.001 INCH
COMMENTS: _____

DEPTH	SAMPLE NUMBER	BLOW COUNT	OVA (ppm)	DESCRIPTIVE LOG
5				
	5-7'	4,4	0	BROWN CLAY WITH SILT
		5,3		
10				
	10-12'	4,5	0	RED, BROWN AND GRAY SILT WITH SAND AND CLAY
		7,7		
15				
	15-17'	6,10	5	GRAY CLAY
		10,14		
20				
	20-22'	5,7	0	GRAY CLAY
		7,10		
25				
	25-27'	6,8	0	GRAY CLAY
		11,13		
30				
	30-30.5'	8,8	0	GRAY CLAY
		9		
35				

4NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27587 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR ECS, Incorporated

DRILLER REGISTRATION NUMBER 1405

MW-6

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Fayetteville, North Carolina
8191 Cliffdale Road
(Road, Community, or Subdivision and Lot No.)

County: Cumberland

2. OWNER The Pantry, Inc. - Pantry # 456
ADDRESS P.O. Box 1410
(Street or Route No.)
Sanford NC 27331
City or Town State Zip Code

3. DATE DRILLED 9/9/98 USE OF WELL Monitoring

4. TOTAL DEPTH 50' CUTTINGS COLLECTED Yes ☐ No ☒

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 40 FT. ☐ above ☒ below TOP OF CASING.
TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): N/A METHOD OF TEST N/A

8. WATER ZONES (depth): N/A

9. CHLORINATION: Type N/A Amount N/A

10. CASING:

	Depth			Diameter	Wall Thickness or Weight/Ft.	Material
FROM	0	TO 30	FT	2"	Sch 40	PVC
FROM		TO	FT			
FROM		TO	FT			

11. GROUT:

	Depth			Material	Method
FROM	0	TO 25	FT	Portland	Slurry
FROM		TO	FT		

12. SCREEN:

	Depth			Diameter		Slot Size		Material
FROM	30	TO 50	FT	2	in	.010	in	PVC
FROM		TO	FT		in		in	
FROM		TO	FT		in		in	

13. GRAVEL PACK:

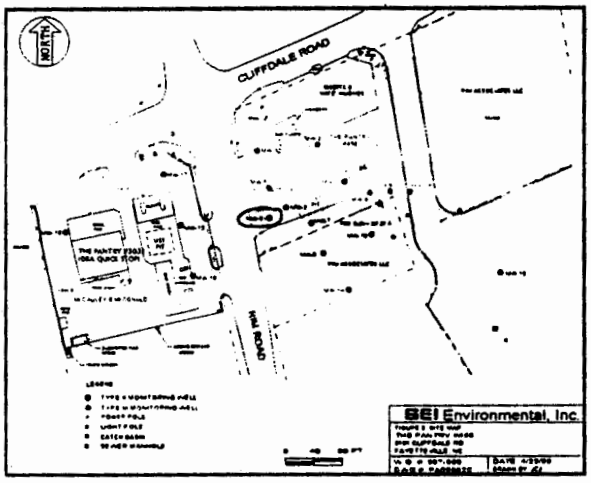
	Depth			Size	Material
FROM	27	TO 50	FT	20/30	Silica Sand
FROM		TO	FT		

14. REMARKS: Bentonite Seal from 25-27'

Depth From	Depth To	DRILLING LOG Formation Description
0	15	Brown Silt with Clay
15	20	Brown Silty Fine Sand
20	25	Red Clayey Silt
25	26	Gray Silty Clay
26	30	Gray Clayey Sand
30	31	Red Micaceous Silty Clay
31	33	Brown Fine to Medium Sand
33	36	Brown Clayey Sandy Silt
36	40	Gray Sandy Clay
40	50	Brown Medium Sand

If additional spaces is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points).



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

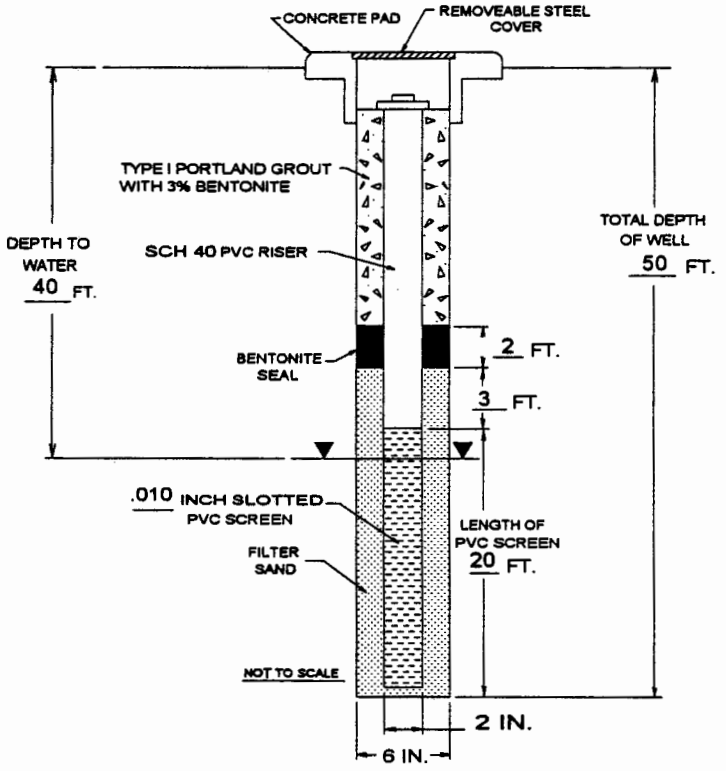
Kristeben Z Miller 4/29/99
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 6/88

Submit original to Division of Environmental Management and copy to well owner.

Boring Log and Type II Well Construction Details

WELL IDENTIFICATION: MW-6 DATE DRILLED: 9/9/98
STATE PERMIT #: _____ WORK ORDER #: 597986
PROJECT NAME: Pantry #456
SITE ADDRESS: 8191 Cliffdale Road, Fayetteville, N.C.
LATITUDE: _____ LONGITUDE: _____
TOP OF CASING ELEV.: _____ LAND SURFACE ELEV.: _____



DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Split Spoon
GRAVEL PACK SIZE: 20/30
SLOT SIZE: .010
COMMENTS: _____

DEPTH	SAMPLE NUMBER	BLOW COUNT	RECOVERY	OVA (ppm)	UNIFIED METHOD	DESCRIPTIVE LOG
	5-7	2,5		4		Brown Silt with Clay
		6,7				
10						
	10-12	4,5,5,6		4		
	15-17	5,11		26		
		12,12				Brown Silty Fine Sand
20						
	20-22	5,5,6,7		5		Red Clayey Silt
	25-27	6,8		21		Gray Silty Clay
		13,15				Gray Clayey Sand
30						
	30-32	5,13,21,24		6		Red Micaceous Silty Clay
						Brown Fine to Medium Sand
	35-37	7,11		7		Brown Clayey Sandy Silt
		13,13				Gray Sandy Clay
40						
						Brown Medium Sand
50						
						Bottom of Boring

4NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27587 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR ECS, Incorporated

DRILLER REGISTRATION NUMBER 1405

MW-7

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Fayetteville, North Carolina
8191 Cliffdale Road
(Road, Community, or Subdivision and Lot No.)

County: Cumberland

2. OWNER The Pantry, Inc. - Pantry # 456
ADDRESS P.O. Box 1410
(Street or Route No.)
Sanford NC 27331
City or Town State Zip Code

3. DATE DRILLED 9/9/98 USE OF WELL Monitoring

4. TOTAL DEPTH 50' CUTTINGS COLLECTED Yes ☐ No ☒

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 40 FT. ☐ above ☒ below TOP OF CASING.
TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): N/A METHOD OF TEST N/A

8. WATER ZONES (depth): N/A

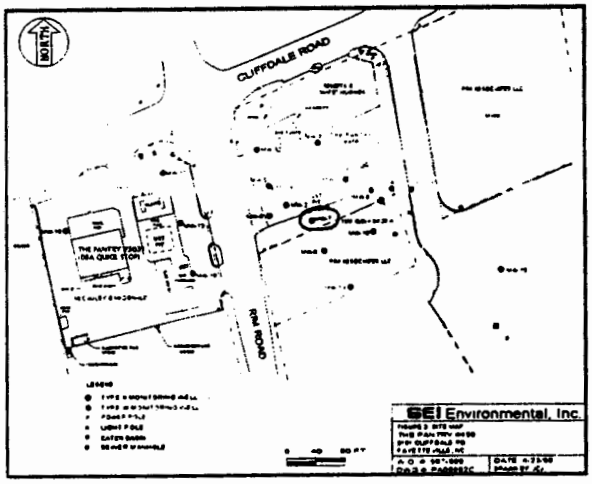
9. CHLORINATION: Type N/A Amount N/A

DRILLING LOG

Depth From	Depth To	Formation Description
0	10	Orange Sandy Silt
10	11	Orange Clayey Silt
11	13	Orange Sandy Clay
13	16	Brown Clayey Silt
16	20	Red Silty Fine Sand
20	25	Red Clayey Silt
25	26	Red & Gray Silty Clay
26	30	Brown Silty Fine Sand
30	35	Red, Gray & Brown Sandy Clay
35	40	Brown & Gray Sandy Clay
40	50	Brown Medium Sand

If additional spaces is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points).



10. CASING:

	Depth			Diameter	Wall Thickness or Weight/Ft.	Material
FROM	0	TO 30	FT	2"	Sch 40	PVC
FROM		TO	FT			
FROM		TO	FT			

11. GROUT:

	Depth			Material	Method
FROM	0	TO 26	FT	Portland	Slurry
FROM		TO	FT		

12. SCREEN:

	Depth			Diameter		Slot Size		Material
FROM	30	TO 50	FT	2	in	.010	in	PVC
FROM		TO	FT		in		in	
FROM		TO	FT		in		in	

13. GRAVEL PACK:

	Depth			Size	Material
FROM	28	TO 50	FT	20/30	Silica Sand
FROM		TO	FT		

14. REMARKS: Bentonite Seal from 26-28'

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

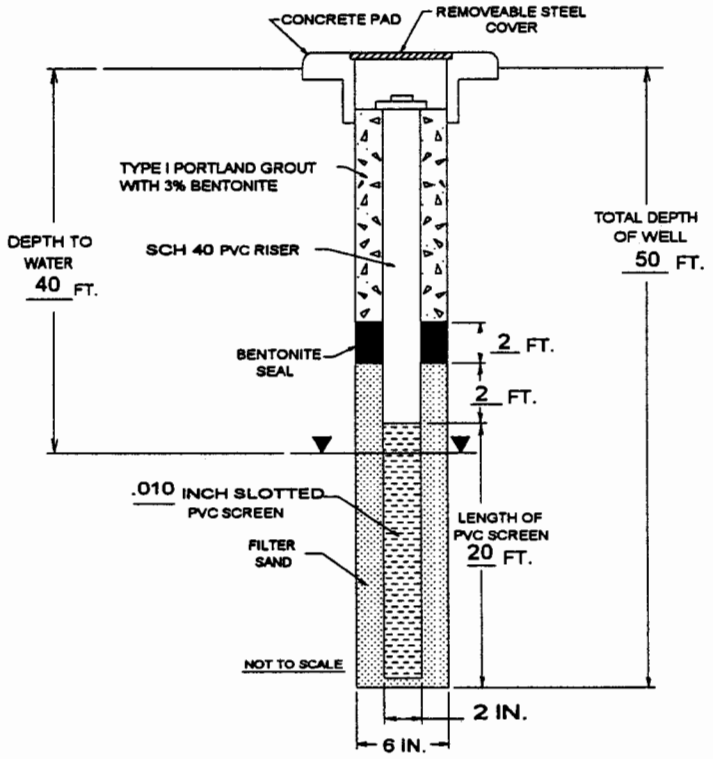
Kathleen L Miller 4/22/99
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 6/88

Submit original to Division of Environmental Management and copy to well owner.

Boring Log and Type II Well Construction Details

WELL IDENTIFICATION: MW-7 DATE DRILLED: 9/9/98
STATE PERMIT #: _____ WORK ORDER #: 597986
PROJECT NAME: Pantry #456
SITE ADDRESS: 8191 Cliffdale Road, Fayetteville, N.C.
LATITUDE: _____ LONGITUDE: _____
TOP OF CASING ELEV.: _____ LAND SURFACE ELEV.: _____



DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Split Spoon
GRAVEL PACK SIZE: 20/30
SLOT SIZE: .010
COMMENTS: _____

DEPTH	SAMPLE NUMBER	BLOW COUNT	RECOVERY	OVA (ppm)	UNIFIED METHOD	DESCRIPTIVE LOG
	5-7	3,3		<1		Orange Sandy Silt
		5,4				
10						
	10-12	6,6,7,8		<1		Orange Clayey Silt
						Orange Sandy Clay
	15-17	2,4		<1		Brown Clayey Silty
		7,10				Red Silty Fine Sand
20						
	20-22	5,5,7,9		<1		Red Clayey Silt
	25-27	4,6		10		Red & Gray Silty Clay
		8,13				Brown Silty Fine Sand
30						
	30-32	5,5,8,9		16		Red, Gray, & Brown Sandy Clay
	35-37	5,8		8		Brown & Gray Sandy Clay
		10,12				
40						
						Brown Medium Sand
50						
						Bottom of Boring

4NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27587 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR ECS, Incorporated

DRILLER REGISTRATION NUMBER 1405

MW-8

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Fayetteville, North Carolina
8191 Cliffdale Road
(Road, Community, or Subdivision and Lot No.)

County: Cumberland

2. OWNER The Pantry, Inc. - Pantry # 456
ADDRESS P.O. Box 1410
(Street or Route No.)
Sanford NC 27331
City or Town State Zip Code

3. DATE DRILLED 9/9/98 USE OF WELL Monitoring

4. TOTAL DEPTH 45' CUTTINGS COLLECTED Yes ☐ No ☒

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 40 FT. ☐ above ☒ below TOP OF CASING.
TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): N/A METHOD OF TEST N/A

8. WATER ZONES (depth): N/A

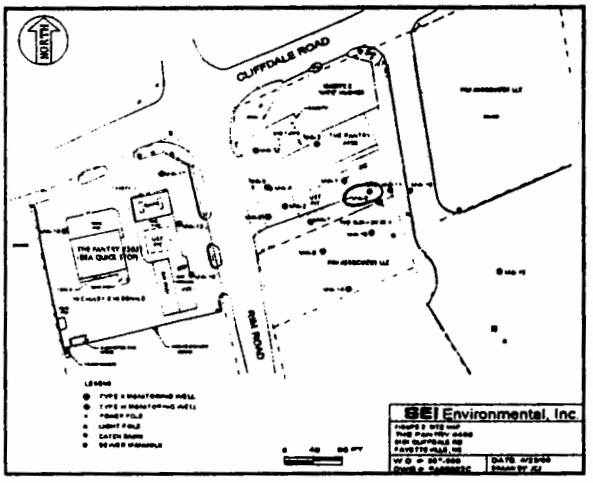
9. CHLORINATION: Type N/A Amount N/A

DRILLING LOG

Depth From	Depth To	Formation Description
0	12	Red Clayey Silt
12	15	Orangish-Brown Silt
15	16	Red & Gray Silty Clay
16	20	Red & Tan Fine to Medium Sand
20	24	Red & Gray Silty Clay
24	26	Red Clayey Silt
26	30	Gray & Brown Clayey Fine Sand
30	40	Gray & Brown Sandy Clay
40	45	Brown Medium Sand

If additional spaces is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points).



10. CASING:

	Depth			Diameter	Wall Thickness or Weight/Ft.	Material
FROM	0	TO 25	FT	2"	Sch 40	PVC
FROM		TO	FT			
FROM		TO	FT			

11. GROUT:

	Depth			Material	Method
FROM	0	TO 21	FT	Portland	Slurry
FROM		TO	FT		

12. SCREEN:

	Depth			Diameter		Slot Size		Material
FROM	25	TO 45	FT	2	in	.010	in	PVC
FROM		TO	FT		in		in	
FROM		TO	FT		in		in	

13. GRAVEL PACK:

	Depth			Size	Material
FROM	23	TO 45	FT	20/30	Silica Sand
FROM		TO	FT		

14. REMARKS: Bentonite Seal from 21-23'

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

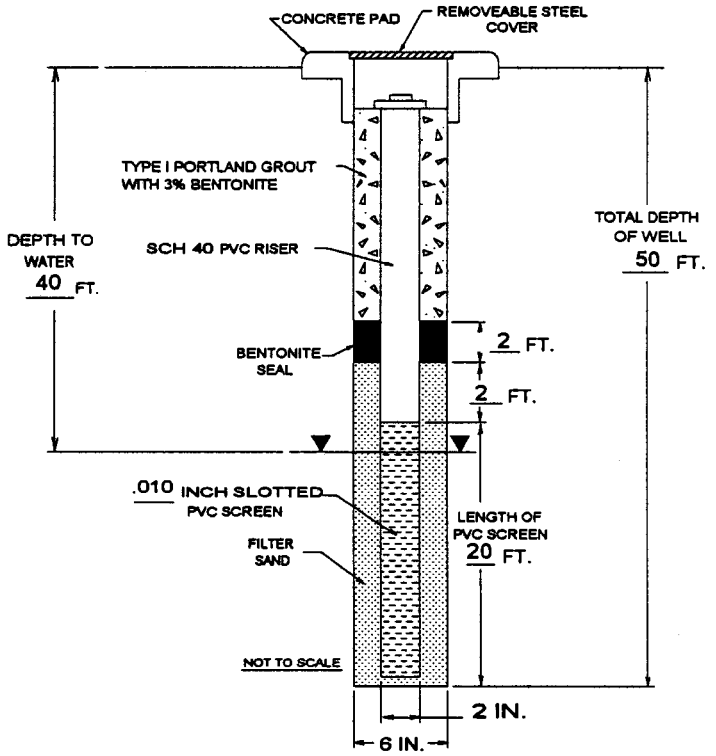
Gretchen L Miller 4/27/99
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 6/88

Submit original to Division of Environmental Management and copy to well owner.

Boring Log and Type II Well Construction Details

WELL IDENTIFICATION: MW-8 DATE DRILLED: 9/9/98
STATE PERMIT #: _____ WORK ORDER #: 597986
PROJECT NAME: Pantry #456
SITE ADDRESS: 8191 Cliffdale Road, Fayetteville, N.C.
LATITUDE: _____ LONGITUDE: _____
TOP OF CASING ELEV.: _____ LAND SURFACE ELEV.: _____



DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Split Spoon
GRAVEL PACK SIZE: 20/30
SLOT SIZE: .010
COMMENTS: _____

DEPTH	SAMPLE NUMBER	BLOW COUNT	RECOVERY	OVA (ppm)	UNIFIED METHOD	DESCRIPTIVE LOG
	5-7	5,6		<1		Red Clayey silt
		8,9				
10						
	10-12	10,7,9,11		<1		
						Orangish-Brown Silt
	15-17	11,8		<1		Red & Gray Silty Clay
		10,15				Red & Tan Fine to Medium Sand
20						
	20-22	7,6,7,10		<1		Red & Gray Silty Clay
	25-27	2,5		<1		Red Clayey Silt
		5,6				Gray & Brown Clayey Fine Sand
30						
	30-32	4,5,8,10		<1		Gray & Brown Sandy Clay
	35-37	4,6		<1		
		10,13				
40						
						Brown Medium Sand
45						
						Bottom of Boring

NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27587 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc ____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR ECS, Incorporated

DRILLER REGISTRATION NUMBER 1405

MW-9

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Fayetteville, North Carolina
8191 Cliffdale Road
(Road, Community, or Subdivision and Lot No.)

County: Cumberland

2. OWNER The Pantry, Inc. - Pantry # 456
ADDRESS P.O. Box 1410
(Street or Route No.)
Sanford NC 27331
City or Town State Zip Code

3. DATE DRILLED 1/21/99 USE OF WELL Monitoring

4. TOTAL DEPTH 50' CUTTINGS COLLECTED Yes ☐ No ☒

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 40 FT. ☐ above ☒ below TOP OF CASING.
TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): N/A METHOD OF TEST N/A

8. WATER ZONES (depth): N/A

9. CHLORINATION: Type N/A Amount N/A

10. CASING:

	Depth			Diameter	Wall Thickness or Weight/Ft.	Material
FROM	0	TO 20	FT	2"	Sch 40	PVC
FROM		TO	FT			
FROM		TO	FT			

11. GROUT:

	Depth			Material	Method
FROM	0	TO 16	FT	Portland	Slurry
FROM		TO	FT		

12. SCREEN:

	Depth			Diameter		Slot Size		Material
FROM	20	TO 50	FT	2	in	.010	in	PVC
FROM		TO	FT		in		in	
FROM		TO	FT		in		in	

13. GRAVEL PACK:

	Depth			Size	Material
FROM	18	TO 50	FT	20/30	Silica Sand
FROM		TO	FT		

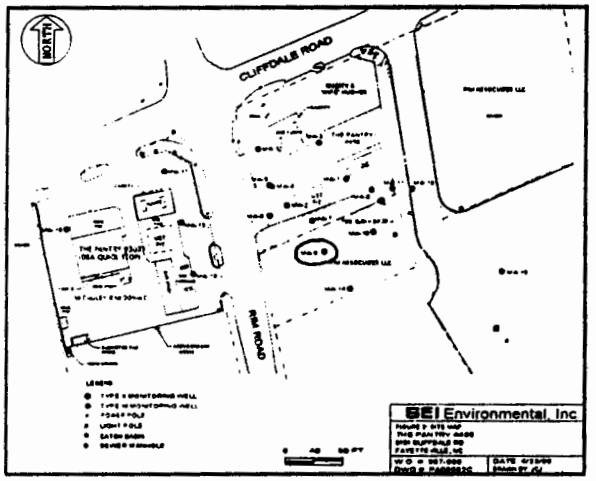
14. REMARKS: Bentonite Seal from 16-18'

DRILLING LOG

Depth From	Depth To	Formation Description
0	15	Orangish-Brown Silty Fine to Medium Sand
15	17	Orange & Red Fine to Medium Sand with Clay
17	23	Red Fine Sand
23	35	Pinkish-Gray Medium Sand with a trace of Clay
35	40	Dense Tan & Gray Medium Sand with Clay
40	50	Brown Medium Sand

If additional spaces is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points).



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

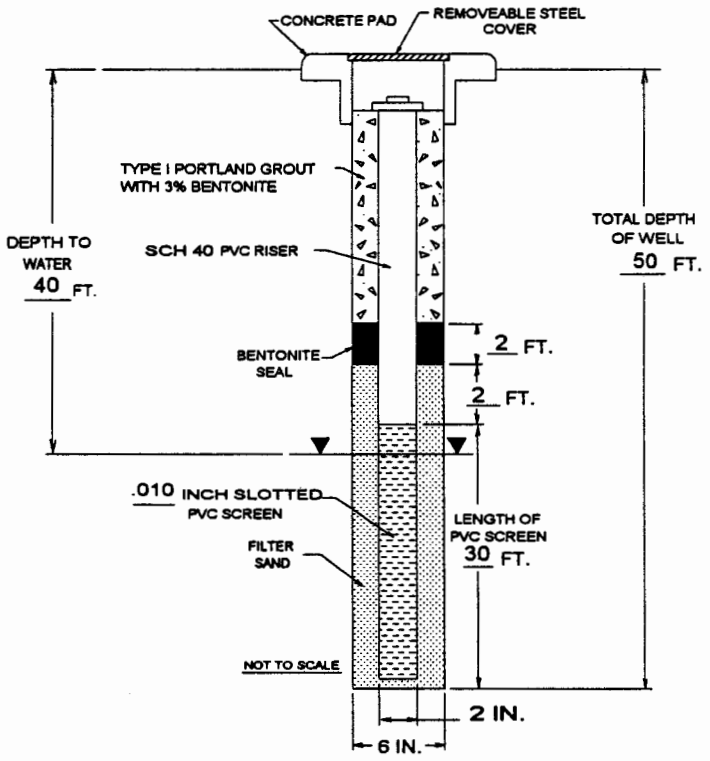
Heather L Miller 4/22/99
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 6/88

Submit original to Division of Environmental Management and copy to well owner.

Boring Log and Type II Well Construction Details

WELL IDENTIFICATION: MW-9 DATE DRILLED: 1/21/99
STATE PERMIT #: _____ WORK ORDER #: 597986
PROJECT NAME: Pantry #456
SITE ADDRESS: 8191 Cliffdale Road, Fayetteville, N.C.
LATITUDE: _____ LONGITUDE: _____
TOP OF CASING ELEV.: _____ LAND SURFACE ELEV.: _____



DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Split Spoon
GRAVEL PACK SIZE: 20/30
SLOT SIZE: .010
COMMENTS: _____

DEPTH	SAMPLE NUMBER	BLOW COUNT	RECOVERY	OVA (ppm)	UNIFIED METHOD	DESCRIPTIVE LOG
	5-7	2,3		0		Orangish-Brown Silty Fine to Medium Sand
		4,4				
10						
	15-17	4,9		<10		Orange & Red Fine to Medium Sand with Clay
		18,25				Red Fine Sand
20						
	25-27	8,12		0		Pinkish-Gray Medium Sand with Trace Clay
		13,8				
30						
	35-37	3,8		0		Dense Tan & Gray Medium Sand with Clay
		12,16				
40						
						Brown Medium Sand
50						
						Bottom of Boring

NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27587 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR ECS, Incorporated

DRILLER REGISTRATION NUMBER 1405

MW-10

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Fayetteville, North Carolina
8191 Cliffdale Road
(Road, Community, or Subdivision and Lot No.)

County: Cumberland

2. OWNER The Pantry, Inc. - Pantry # 456
ADDRESS P.O. Box 1410
(Street or Route No.)
Sanford NC 27331
City or Town State Zip Code

3. DATE DRILLED 1/21/99 USE OF WELL Monitoring

4. TOTAL DEPTH 50' CUTTINGS COLLECTED Yes ☐ No ☒

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 40 FT. ☐ above ☒ below TOP OF CASING.
TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): N/A METHOD OF TEST N/A

8. WATER ZONES (depth): N/A

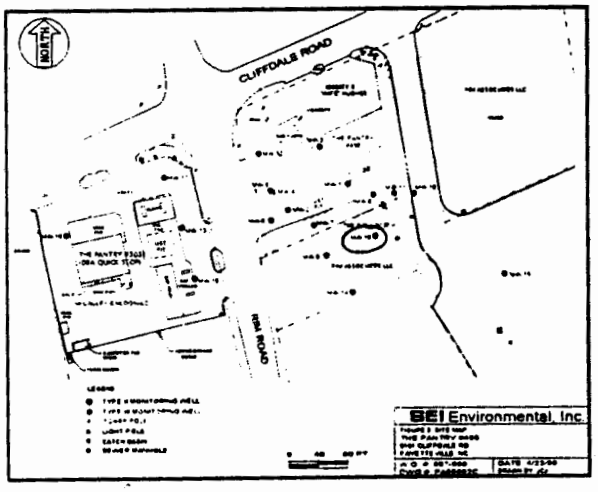
9. CHLORINATION: Type N/A Amount N/A

DRILLING LOG

Depth From	Depth To	Formation Description
0	15	Orangish-Brown Silty Fine to Medium Sand with Trace of Clay
15	25	Red, Orange & Gray Silty Fine to Med. Sand with Some Clay
25	35	Pinkish-Gray & Orangish-Brown Silty Medium Sand
35	37	Red, Orange & Gray Clay with Sand
37	40	Orange & Gray Clayey Fine to Medium Sand
40	50	Light Brown Medium to Coarse Sand

If additional spaces is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points).



10. CASING:

	Depth			Diameter	Wall Thickness or Weight/Ft.	Material
FROM	0	TO 20	FT	2"	Sch 40	PVC
FROM		TO	FT			
FROM		TO	FT			

11. GROUT:

	Depth			Material	Method
FROM	0	TO 16	FT	Portland	Slurry
FROM		TO	FT		

12. SCREEN:

	Depth			Diameter		Slot Size		Material
FROM	20	TO 50	FT	2	in	.010	in	PVC
FROM		TO	FT		in		in	
FROM		TO	FT		in		in	

13. GRAVEL PACK:

	Depth			Size	Material
FROM	18	TO 50	FT	20/30	Silica Sand
FROM		TO	FT		

14. REMARKS: Bentonite Seal from 16-18'

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

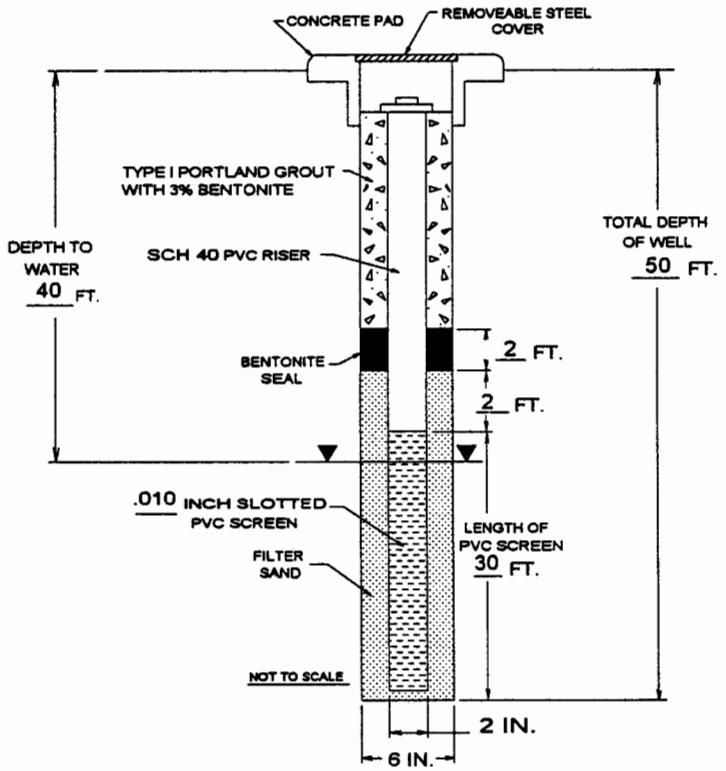
Gretchen L Miller 4/22/99
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 6/88

Submit original to Division of Environmental Management and copy to well owner.

Boring Log and Type II Well Construction Details

WELL IDENTIFICATION: MW-10 DATE DRILLED: 1/21/99
STATE PERMIT #: _____ WORK ORDER #: 597986
PROJECT NAME: Pantry #456
SITE ADDRESS: 8191 Cliffdale Road, Fayetteville, N.C.
LATITUDE: _____ LONGITUDE: _____
TOP OF CASING ELEV.: _____ LAND SURFACE ELEV.: _____



DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Split Spoon
GRAVEL PACK SIZE: 20/30
SLOT SIZE: .010
COMMENTS: _____

DEPTH	SAMPLE NUMBER	BLOW COUNT	RECOVERY	OVA (ppm)	UNIFIED METHOD	DESCRIPTIVE LOG
	5-7	3,3		0		Orangish-Brown Silty Fine to Medium Sand w/ Trace Clay
		5,5				
10						
	15-17	8,11		<10		Red, Orange & Gray Silty Fine to Medium Sand w/ Some Clay
		10,9				
20						
	25-27	11,14		0		Pinkish-Gray & Orange-Brown Silty Medium Sand
		12,7				
30						
	35-37	2,4		0		Red, Orange & Gray Clay with Sand
		6,8				Orange & Gray Clayey Fine to Medium Sand
40						
						Light Brown Medium to Coarse Sand
50						
						Bottom of Boring

4NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27587 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR ECS, Incorporated

DRILLER REGISTRATION NUMBER 1405

MW-11

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Fayetteville, North Carolina
8191 Cliffdale Road
(Road, Community, or Subdivision and Lot No.)

County: Cumberland

2. OWNER The Pantry, Inc. - Pantry # 456
ADDRESS P.O. Box 1410
(Street or Route No.)
Sanford NC 27331
City or Town State Zip Code

3. DATE DRILLED 1/21/99 USE OF WELL Monitoring

4. TOTAL DEPTH 50' CUTTINGS COLLECTED Yes ☐ No ☒

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 40 FT. ☐ above ☒ below TOP OF CASING.
TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): N/A METHOD OF TEST N/A

8. WATER ZONES (depth): N/A

9. CHLORINATION: Type N/A Amount N/A

10. CASING:

	Depth			Diameter	Wall Thickness or Weight/Ft.	Material
FROM	0	TO 20	FT	2"	Sch 40	PVC
FROM		TO	FT			
FROM		TO	FT			

11. GROUT:

	Depth			Material	Method
FROM	0	TO 16	FT	Portland	Slurry
FROM		TO	FT		

12. SCREEN:

	Depth			Diameter	Slot Size	Material
FROM	20	TO 50	FT	2 in	.010 in	PVC
FROM		TO	FT	in	in	
FROM		TO	FT	in	in	

13. GRAVEL PACK:

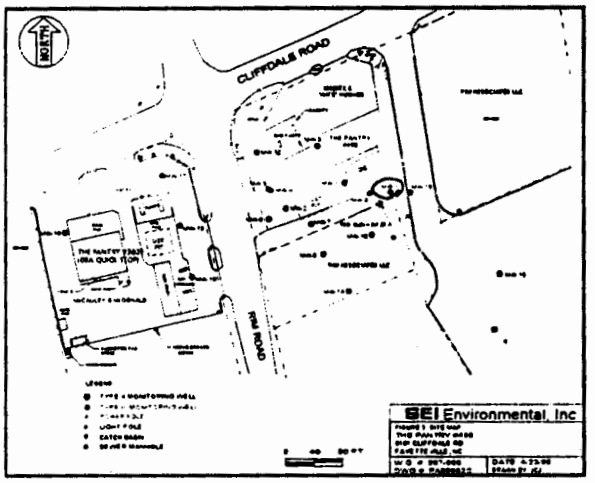
	Depth			Size	Material
FROM	18	TO 50	FT	20/30	Silica Sand
FROM		TO	FT		

14. REMARKS: Bentonite Seal from 16-18'

Depth From	Depth To	DRILLING LOG Formation Description
0	15	Red Silty Fine Sand
15	25	Light Gray & Brown Silty Sand
25	35	Brown & Gray Silty Medium Sand
35	37	Gray Sandy Clay
37	40	Brown Medium Sand with Clay
40	50	Light Brown Medium to Coarse Sand

If additional spaces is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points).



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

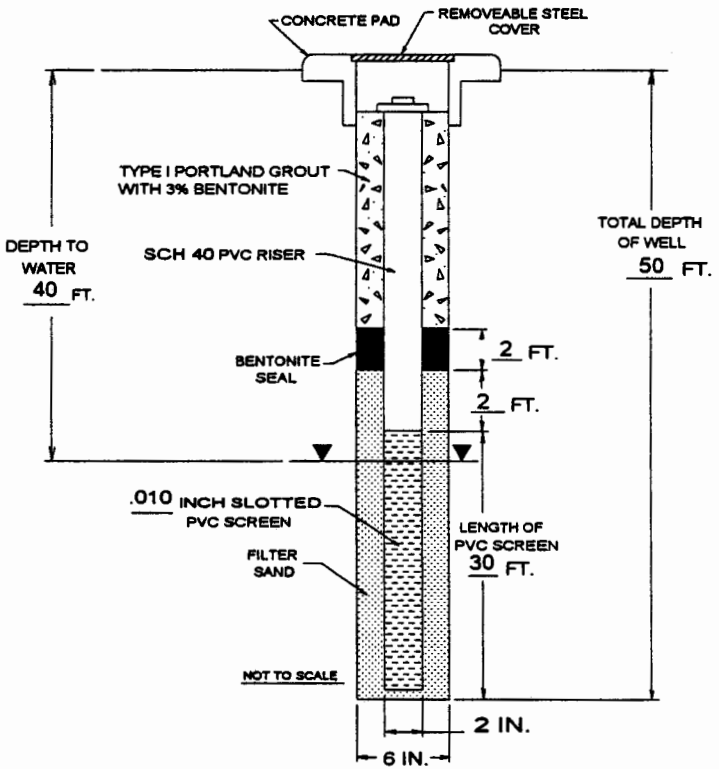
Gretchen 2 Mellen 4/27/99
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 6/88

Submit original to Division of Environmental Management and copy to well owner.

Boring Log and Type II Well Construction Details

WELL IDENTIFICATION: MW-11 DATE DRILLED: 1/21/99
STATE PERMIT #: _____ WORK ORDER #: 597986
PROJECT NAME: Pantry #456
SITE ADDRESS: 8191 Cliffdale Road, Fayetteville, N.C.
LATITUDE: _____ LONGITUDE: _____
TOP OF CASING ELEV.: _____ LAND SURFACE ELEV.: _____



DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Split Spoon
GRAVEL PACK SIZE: 20/30
SLOT SIZE: .010
COMMENTS: _____

DEPTH	SAMPLE NUMBER	BLOW COUNT	RECOVERY	OVA (ppm)	UNIFIED METHOD	DESCRIPTIVE LOG
	5-7	3,4		0		Red Silty Fine Sand
		5,7				
10						
	15-17	4,8		0		Light Gray & Brown Silty Sand
		10,10				
20						
	25-27	4,8		0		Brown & Gray Silty Medium Sand
		7,7				
30						
	35-37	3,6		0		Gray Sandy Clay
		8,10				Brown Medium Sand with Clay
40						
						Light Brown Medium to Coarse Sand
50						
						Bottom of Boring

NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27587 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR ECS, Incorporated

DRILLER REGISTRATION NUMBER 1405

MW-12

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Fayetteville, North Carolina

8191 Cliffdale Road
(Road, Community, or Subdivision and Lot No.)

County: Cumberland

2. OWNER The Pantry, Inc. - Pantry # 456

ADDRESS P.O. Box 1410
(Street or Route No.)

Sanford NC 27331
City or Town State Zip Code

3. DATE DRILLED 1/22/99 USE OF WELL Monitoring

4. TOTAL DEPTH 50' CUTTINGS COLLECTED Yes ☐ No ☒

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 40 FT. ☐ above ☒ below TOP OF CASING.

TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): N/A METHOD OF TEST N/A

8. WATER ZONES (depth): N/A

9. CHLORINATION: Type N/A Amount N/A

10. CASING:

	Depth			Diameter	Wall Thickness or Weight/Ft.	Material
FROM	0	TO 20	FT	2"	Sch 40	PVC
FROM		TO	FT			
FROM		TO	FT			

11. GROUT:

	Depth			Material	Method
FROM	0	TO 16	FT	Portland	Slurry
FROM		TO	FT		

12. SCREEN:

	Depth			Diameter		Slot Size		Material
FROM	20	TO 50	FT	2	in	.010	in	PVC
FROM		TO	FT		in		in	
FROM		TO	FT		in		in	

13. GRAVEL PACK:

	Depth			Size	Material
FROM	18	TO 50	FT	20/30	Silica Sand
FROM		TO	FT		

14. REMARKS: Bentonite Seal from 16-18'

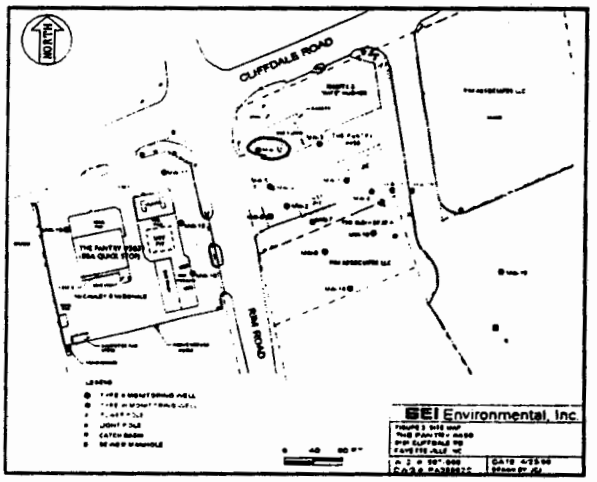
DRILLING LOG

Depth From	Depth To	Formation Description
0	15	Orange Silty Fine Sand with Clay
15	17	Red Silty Fine to Medium Sand
17	25	Tan & Gray Silty Fine to Medium Sand
25	35	Red & Gray Clayey Fine to Med. Sand
35	40	Gray Sandy Clay
40	50	Light Brown Medium to Coarse Sand

If additional spaces is needed use back of form.

LOCATION SKETCH

(Show direction and distance from at least two State Roads, or other map reference points).



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

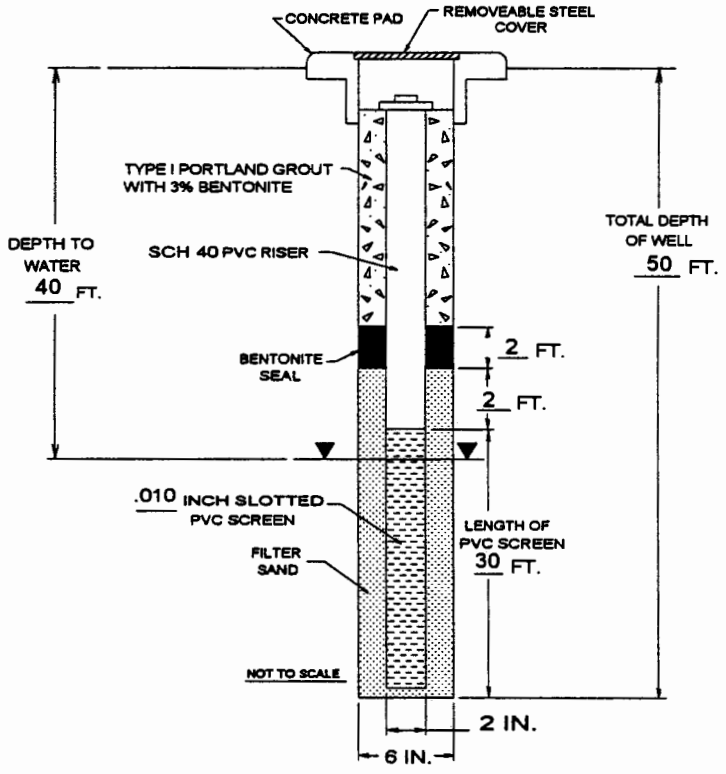
Kristeben J Miller 4/22/99
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 6/88

Submit original to Division of Environmental Management and copy to well owner.

Boring Log and Type II Well Construction Details

WELL IDENTIFICATION: MW-12 DATE DRILLED: 1/22/99
STATE PERMIT #: _____ WORK ORDER #: 597986
PROJECT NAME: Pantry #456
SITE ADDRESS: 8191 Cliffdale Road, Fayetteville, N.C.
LATITUDE: _____ LONGITUDE: _____
TOP OF CASING ELEV.: _____ LAND SURFACE ELEV.: _____



DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Split Spoon
GRAVEL PACK SIZE: 20/30
SLOT SIZE: .010
COMMENTS: _____

DEPTH	SAMPLE NUMBER	BLOW COUNT	RECOVERY	OVA (ppm)	UNIFIED METHOD	DESCRIPTIVE LOG
	5-7	3,3		10		Orange Silty Fine Sand with Clay
		3,4				
10						
	15-17	6,7		10		Red Silty Fine to Medium Sand
		9,11				Tan & Gray Silty Fine to Medium Sand
20						
	25-27	5,7		<10		Red & Gray Clayey Fine to Medium Sand
		11,13				
30						
	35-37	3,7		<10		Gray Sandy Clay
		9,12				
40						
						Light Brown Medium to Coarse Sand
50						
						Bottom of Boring

4NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27587 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR ECS, Incorporated

DRILLER REGISTRATION NUMBER 1405

MW-13

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Fayetteville, North Carolina
8191 Cliffdale Road
(Road, Community, or Subdivision and Lot No.)

County: Cumberland

2. OWNER The Pantry, Inc. - Pantry # 456
ADDRESS P.O. Box 1410
(Street or Route No.)
Sanford NC 27331
City or Town State Zip Code

3. DATE DRILLED 1/22/99 USE OF WELL Monitoring

4. TOTAL DEPTH 50' CUTTINGS COLLECTED Yes ☐ No ☒

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 40 FT. ☐ above ☒ below TOP OF CASING.
TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): N/A METHOD OF TEST N/A

8. WATER ZONES (depth): N/A

9. CHLORINATION: Type N/A Amount N/A

10. CASING:

	Depth			Diameter	Wall Thickness or Weight/Ft.	Material
FROM	0	TO 20	FT	2"	Sch 40	PVC
FROM		TO	FT			
FROM		TO	FT			

11. GROUT:

	Depth			Material	Method
FROM	0	TO 16	FT	Portland	Slurry
FROM		TO	FT		

12. SCREEN:

	Depth			Diameter		Slot Size		Material
FROM	20	TO 50	FT	2	in	.010	in	PVC
FROM		TO	FT		in		in	
FROM		TO	FT		in		in	

13. GRAVEL PACK:

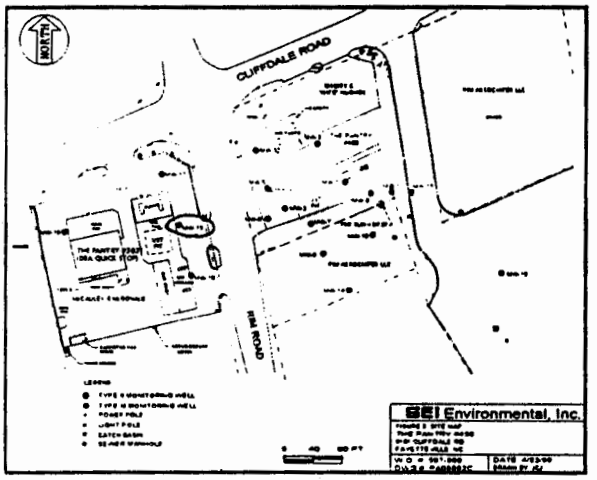
	Depth			Size	Material
FROM	18	TO 50	FT	20/30	Silica Sand
FROM		TO	FT		

14. REMARKS: Bentonite Seal from 16-18'

Depth From	Depth To	DRILLING LOG Formation Description
0	10	Brown Silty Fine Sand with Some Med. Sand
10	15	Tan Silty Fine to Medium Sand with Some Clay
15	20	Red, Orange & Tan Silty Medium Sand
20	35	Gray Sandy Clay
35	40	Red, Orange & Gray Sandy Clay
40	50	Light Brown Medium to Coarse Sand

If additional spaces is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points).



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

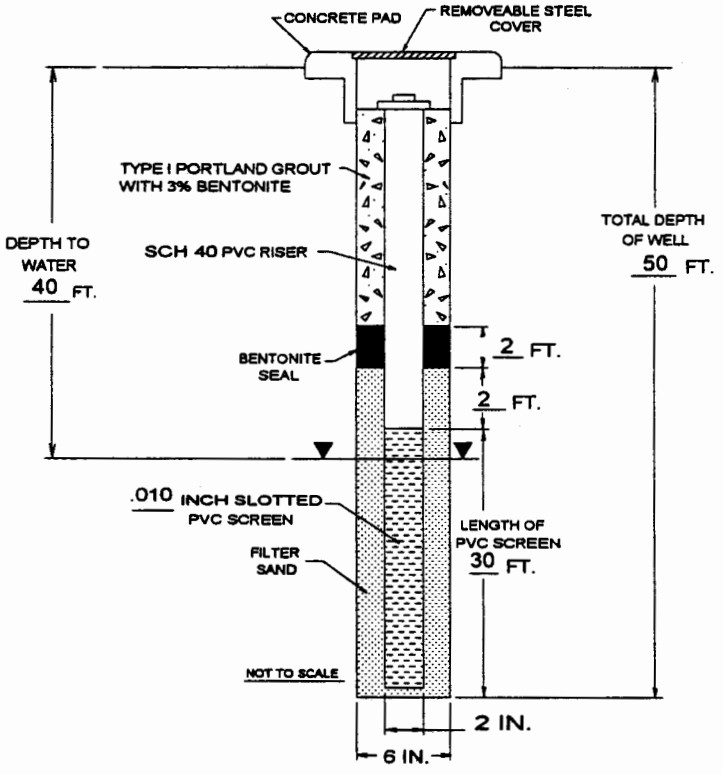
Gretchen Miller 4/22/99
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 6/88

Submit original to Division of Environmental Management and copy to well owner.

Boring Log and Type II Well Construction Details

WELL IDENTIFICATION: MW-13 DATE DRILLED: 1/22/99
STATE PERMIT #: _____ WORK ORDER #: 597986
PROJECT NAME: Pantry #456
SITE ADDRESS: 8191 Cliffdale Road, Fayetteville, N.C.
LATITUDE: _____ LONGITUDE: _____
TOP OF CASING ELEV.: _____ LAND SURFACE ELEV.: _____



DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Split Spoon
GRAVEL PACK SIZE: 20/30
SLOT SIZE: .010
COMMENTS: _____

DEPTH	SAMPLE NUMBER	BLOW COUNT	RECOVERY	OVA (ppm)	UNIFIED METHOD	DESCRIPTIVE LOG
	5-7	2,3		0		Brown Silty Fine Sand with Some Medium Sand
		3,2				
10						
	10-12	3,4,5,6		0		Tan Silty Fine to Medium Sand with Some Clay
	15-17	5,11		5		Red, Orange & Tan Silty Medium Sand
		12,11				
20						
	20-22	2,4,5,7		30		Gray Sandy Clay
	25-27	4,6		58		Gray Medium Sandy Clay
		9,13				
30						
	30-32	4,6,8,9		44		Gray Medium Sandy Clay
	35-37	3,4		100		Red, Orange & Gray Sandy Clay
		5,6				
40						
						Light Brown Medium to Coarse Sand
50						
						Bottom of Boring

4NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27587 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR ECS, Incorporated

DRILLER REGISTRATION NUMBER 1405

MW-14

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Fayetteville, North Carolina

8191 Cliffdale Road
(Road, Community, or Subdivision and Lot No.)

County: Cumberland

2. OWNER The Pantry, Inc. - Pantry # 456

ADDRESS P.O. Box 1410
(Street or Route No.)

Sanford (City or Town) NC (State) 27331 (Zip Code)

3. DATE DRILLED 3/10/99 USE OF WELL Monitoring

4. TOTAL DEPTH 50' CUTTINGS COLLECTED Yes ☐ No ☒

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 40 FT. ☐ above ☒ below TOP OF CASING.

TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): N/A METHOD OF TEST N/A

8. WATER ZONES (depth): N/A

9. CHLORINATION: Type N/A Amount N/A

DRILLING LOG Depth From	To	Formation Description
0	10	Gray to Brown Sandy, Clayey Silt
10	20	Red, Brown & Gray Sandy Clay
20	30	Red & Gray Clay
30	40	Brown to Gray Silty, Clayey Fine to Medium Sand
40	42	Orange Fine to Medium Sand
42	50	Light Brown Medium Sand

If additional spaces is needed use back of form.

10. CASING:

	Depth			Diameter	Wall Thickness or Weight/Ft.	Material
FROM	0	TO 20	FT	2"	Sch 40	PVC
FROM		TO	FT			
FROM		TO	FT			

11. GROUT:

	Depth			Material	Method
FROM	0	TO 16	FT	Portland	Slurry
FROM		TO	FT		

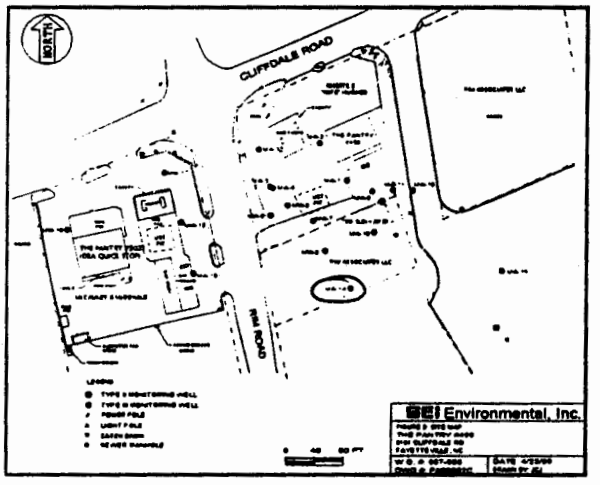
12. SCREEN:

	Depth			Diameter	Slot Size	Material
FROM	20	TO 50	FT	2 in	.010 in	PVC
FROM		TO	FT	in	in	
FROM		TO	FT	in	in	

13. GRAVEL PACK:

	Depth			Size	Material
FROM	18	TO 50	FT	20/30	Silica Sand
FROM		TO	FT		

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points).



14. REMARKS: Bentonite Seal from 16-18'

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

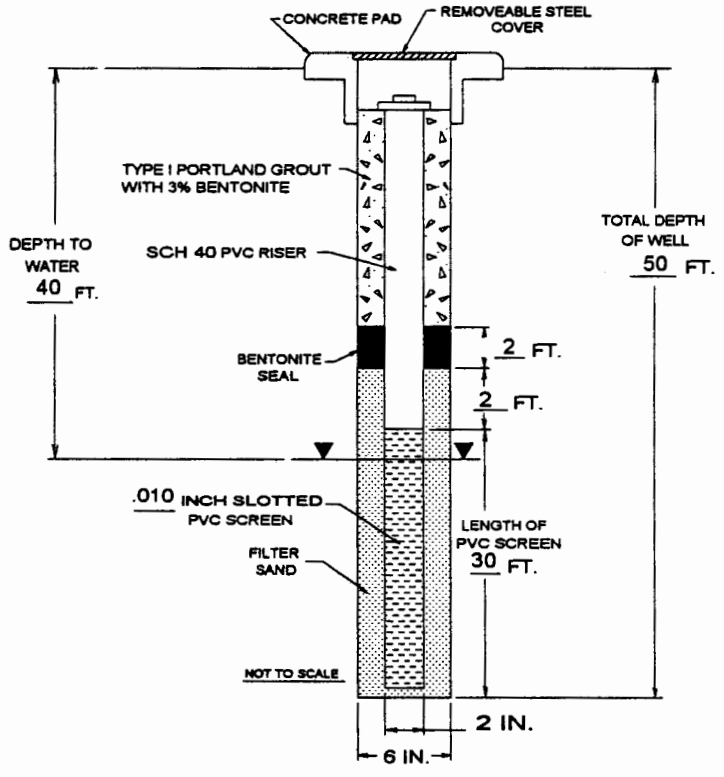
Gretchen L Miller 4/23/99
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 6/88

Submit original to Division of Environmental Management and copy to well owner.

Boring Log and Type II Well Construction Details

WELL IDENTIFICATION: MW-14 DATE DRILLED: 3/10/99
STATE PERMIT #: _____ WORK ORDER #: 597986
PROJECT NAME: Pantry #456
SITE ADDRESS: 8191 Cliffdale Road, Fayetteville, N.C.
LATITUDE: _____ LONGITUDE: _____
TOP OF CASING ELEV.: _____ LAND SURFACE ELEV.: _____



DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Split Spoon
GRAVEL PACK SIZE: 20/30 Silica Sand
SLOT SIZE: .010
COMMENTS: _____

DEPTH	SAMPLE NUMBER	BLOW COUNT	RECOVERY	OVA (ppm)	UNIFIED METHOD	DESCRIPTIVE LOG
						Gray to Brown Sandy, Clayey Silt
10						
	10-12	4,6,10,9		0		Red, Brown & Gray Sandy Clay
20						
	20-22	1,5,7,8		0		Red & Gray Clay
30						
	30-32	3,6,10,8		0		Brown to Gray Silty, Clayey Fine to Medium Sand
40						
	40-42	3,10,21,25		0		Orange Fine to Medium Sand
						Light Brown Medium Sand
50						
						Bottom of Boring

NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27587 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR ECS, Incorporated

DRILLER REGISTRATION NUMBER 1405

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

MW-15

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Fayetteville, North Carolina

8191 Cliffdale Road
(Road, Community, or Subdivision and Lot No.)

County: Cumberland

2. OWNER The Pantry, Inc. - Pantry # 456

ADDRESS P.O. Box 1410
(Street or Route No.)

Sanford NC 27331
City or Town State Zip Code

3. DATE DRILLED 3/10/99 USE OF WELL Monitoring

4. TOTAL DEPTH 52' CUTTINGS COLLECTED Yes ☐ No ☒

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 40 FT. ☐ above ☒ below TOP OF CASING.

TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): N/A METHOD OF TEST N/A

8. WATER ZONES (depth): N/A

9. CHLORINATION: Type N/A Amount N/A

10. CASING:

	Depth			Diameter	Wall Thickness or Weight/Ft.	Material
FROM	0	TO 22	FT	2"	Sch 40	PVC
FROM		TO	FT			
FROM		TO	FT			

11. GROUT:

	Depth			Material	Method
FROM	0	TO 18	FT	Portland	Slurry
FROM		TO	FT		

12. SCREEN:

	Depth			Diameter		Slot Size		Material
FROM	22	TO 52	FT	2	in	.010	in	PVC
FROM		TO	FT		in		in	
FROM		TO	FT		in		in	

13. GRAVEL PACK:

	Depth			Size	Material
FROM	20	TO 52	FT	20/30	Silica Sand
FROM		TO	FT		

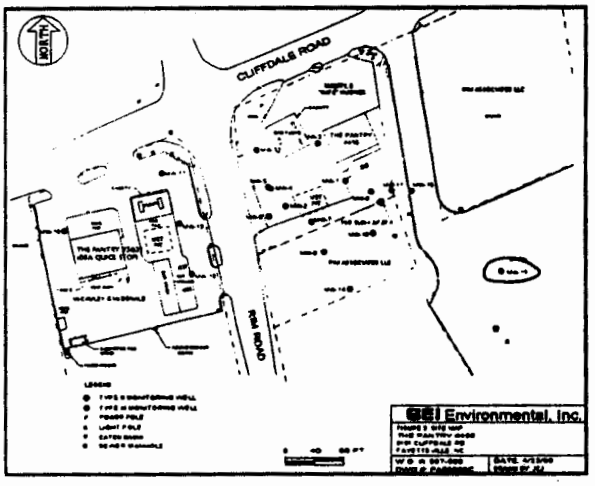
14. REMARKS: Bentonite Seal from 18-20'

DRILLING LOG

Depth From	Depth To	Formation Description
0	10	Brown Silty Fine Sand
10	20	Brown & Gray Clayey Fine to Medium Sand
20	30	Pinkish Gray Silty Fine to Coarse Sand
30	40	Red & Gray Sandy Clay
40	50	Light Brown Medium Sand

If additional spaces is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points).



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

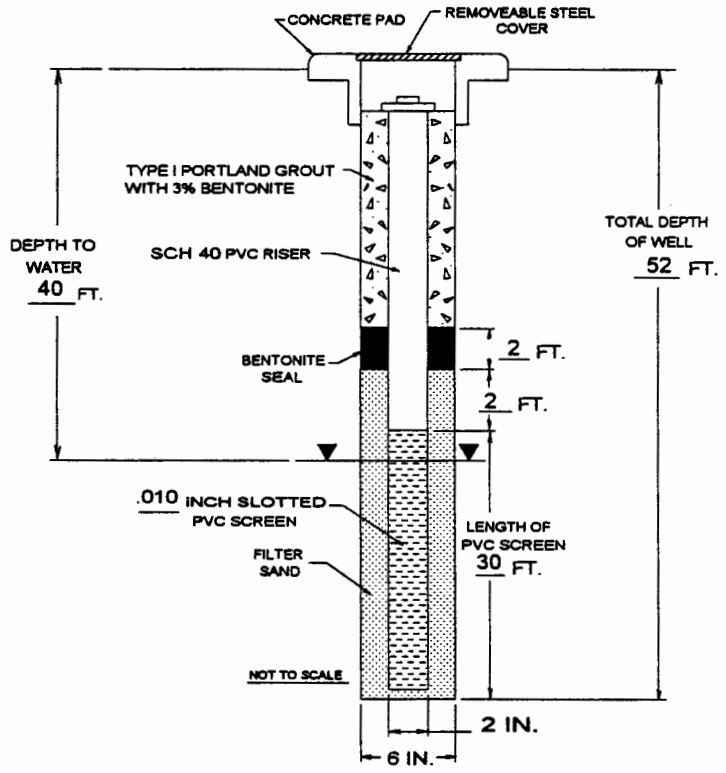
Gretchen L Miller 4/22/99
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 6/88

Submit original to Division of Environmental Management and copy to well owner.

Boring Log and Type II Well Construction Details

WELL IDENTIFICATION: MW-15 DATE DRILLED: 3/10/99
STATE PERMIT #: _____ WORK ORDER #: 597986
PROJECT NAME: Pantry #456
SITE ADDRESS: 8191 Cliffdale Road, Fayetteville, N.C.
LATITUDE: _____ LONGITUDE: _____
TOP OF CASING ELEV.: _____ LAND SURFACE ELEV.: _____



DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Split Spoon
GRAVEL PACK SIZE: 20/30 Silica Sand
SLOT SIZE: .010
COMMENTS: _____

DEPTH	SAMPLE NUMBER	BLOW COUNT	RECOVERY	OVA (ppm)	UNIFIED METHOD	DESCRIPTIVE LOG
						Brown Silty Fine Sand
10						
	10-12	5,8,9,13		0		Brown & Gray Clayey Fine to Medium Sand
20						
	20-22	5,10,12,16		0		Pinkish Gray Silty Fine to Coarse Sand
30						
	30-32	3,4,6,10		<10		Red & Gray Sandy Clay
40						
	40-42	4,10,16,20		<10		Light Brown Medium Sand
50						
55						
						Bottom of Boring

4NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27587 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR ECS, Incorporated

DRILLER REGISTRATION NUMBER 1405

MW-16

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Fayetteville, North Carolina

8191 Cliffdale Road
(Road, Community, or Subdivision and Lot No.)

County: Cumberland

2. OWNER The Pantry, Inc. - Pantry # 456

ADDRESS P.O. Box 1410
(Street or Route No.)

Sanford NC 27331
City or Town State Zip Code

3. DATE DRILLED 3/1199 USE OF WELL Monitoring

4. TOTAL DEPTH 50' CUTTINGS COLLECTED Yes ☐ No ☒

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 40 FT. ☐ above ☒ below TOP OF CASING.

TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): N/A METHOD OF TEST N/A

8. WATER ZONES (depth): N/A

9. CHLORINATION: Type N/A Amount N/A

10. CASING:

	Depth			Diameter	Wall Thickness or Weight/Ft.	Material
FROM	0	TO 20	FT	2"	Sch 40	PVC
FROM		TO	FT			
FROM		TO	FT			

11. GROUT:

	Depth			Material	Method
FROM	0	TO 16	FT	Portland	Slurry
FROM		TO	FT		

12. SCREEN:

	Depth			Diameter	Slot Size	Material
FROM	20	TO 50	FT	2 in	.010 in	PVC
FROM		TO	FT	in	in	
FROM		TO	FT	in	in	

13. GRAVEL PACK:

	Depth			Size	Material
FROM	18	TO 50	FT	20/30	Silica Sand
FROM		TO	FT		

14. REMARKS: Bentonite Seal from 16-18'

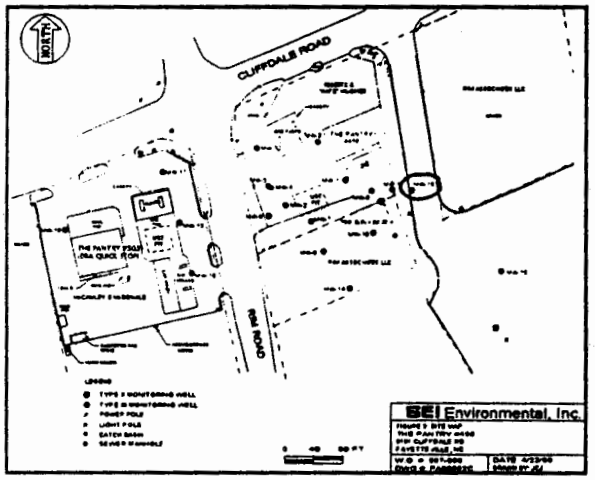
DRILLING LOG

Depth From	Depth To	Formation Description
0	10	Brown Silty Fine Sand
10	20	Gray & Red Silty, Sandy Clay
20	30	Red & Gray Silty Clay
30	40	Tan to Grayish-Brown Fine to Med. Sand
40	42	Light Brown Fine to Medium Sand
42	50	Light Brown Medium Sand

If additional spaces is needed use back of form.

LOCATION SKETCH

(Show direction and distance from at least two State Roads, or other map reference points).



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

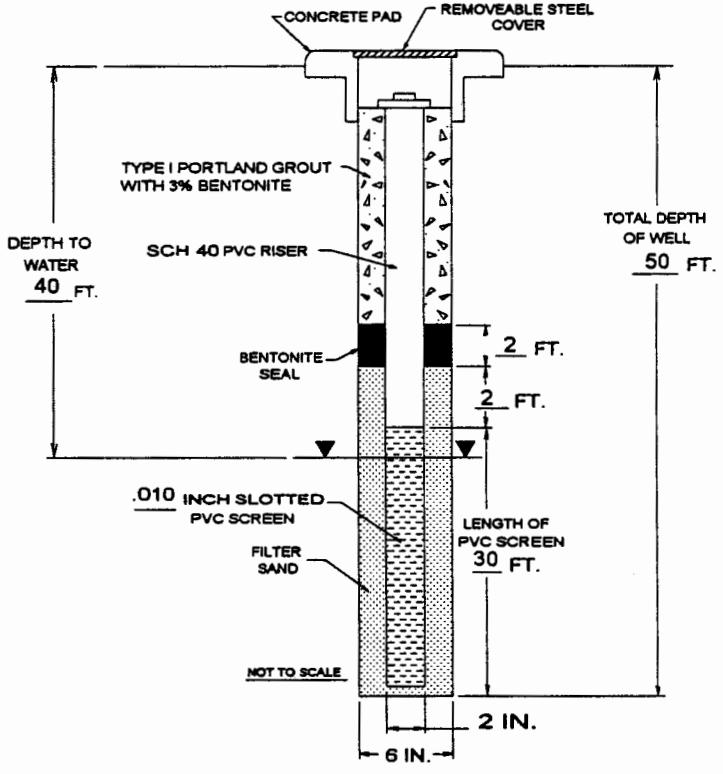
Gretchen L Miller 4/22/99
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 6/88

Submit original to Division of Environmental Management and copy to well owner.

Boring Log and Type II Well Construction Details

WELL IDENTIFICATION: MW-16 DATE DRILLED: 3/11/99
STATE PERMIT #: _____ WORK ORDER #: 597986
PROJECT NAME: Pantry #456
SITE ADDRESS: 8191 Cliffdale Road, Fayetteville, N.C.
LATITUDE: _____ LONGITUDE: _____
TOP OF CASING ELEV.: _____ LAND SURFACE ELEV.: _____



DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Split Spoon
GRAVEL PACK SIZE: 20/30 Silica Sand
SLOT SIZE: .010
COMMENTS: _____

DEPTH	SAMPLE NUMBER	BLOW COUNT	RECOVERY	OVA (ppm)	UNIFIED METHOD	DESCRIPTIVE LOG
						Brown Silty Fine Sand
10						
	10-12	5,5,8,12		0		Gray & Red Silty, Sandy Clay
20						
	20-22	4,6,6,6		0		Red & Gray Silty Clay
30						
	30-32	10,16,24,16		0		Tan to Grayish-Brown Fine to Medium Sand
40						
	40-42	5,18,27,29		<10		Light Brown Fine to Medium Sand
						Light Brown Medium Sand
50						
						Bottom of Boring

4NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27587 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR ECS, Incorporated

DRILLER REGISTRATION NUMBER 1405

MW-17

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Fayetteville, North Carolina

8191 Cliffdale Road
(Road, Community, or Subdivision and Lot No.)

County: Cumberland

2. OWNER The Pantry, Inc. - Pantry # 456

ADDRESS P.O. Box 1410
(Street or Route No.)

Sanford NC 27331
City or Town State Zip Code

3. DATE DRILLED 3/1199 USE OF WELL Monitoring

4. TOTAL DEPTH 50' CUTTINGS COLLECTED Yes ☐ No ☒

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 40 FT. ☐ above ☒ below TOP OF CASING.

TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): N/A METHOD OF TEST N/A

8. WATER ZONES (depth): N/A

9. CHLORINATION: Type N/A Amount N/A

10. CASING:

	Depth			Diameter	Wall Thickness or Weight/Ft.	Material
FROM	0	TO 20	FT	2"	Sch 40	PVC
FROM		TO	FT			
FROM		TO	FT			

11. GROUT:

	Depth			Material	Method
FROM	0	TO 16	FT	Portland	Slurry
FROM		TO	FT		

12. SCREEN:

	Depth			Diameter	Slot Size	Material
FROM	20	TO 50	FT	2 in	.010 in	PVC
FROM		TO	FT	in	in	
FROM		TO	FT	in	in	

13. GRAVEL PACK:

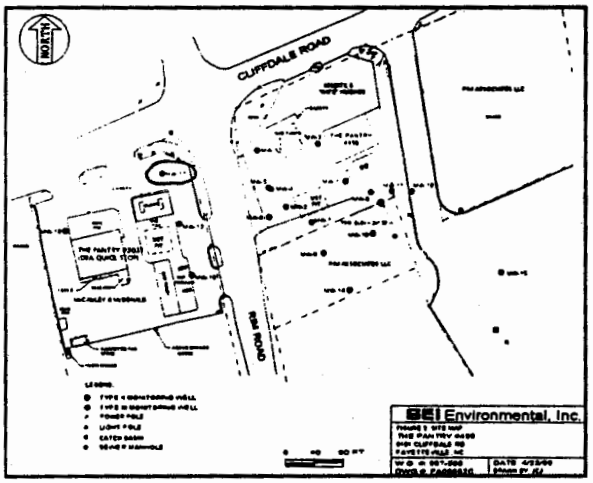
	Depth			Size	Material
FROM	18	TO 50	FT	20/30	Silica Sand
FROM		TO	FT		

14. REMARKS: Bentonite Seal from 16-18'

Depth From	Depth To	DRILLING LOG Formation Description
0	10	Red & Brown Silty Clayey Fine Sand
10	20	Red & Gray Clayey Fine Sand
20	30	Gray Clay
30	32	Red & Gray Clay
32	40	Red & Gray Sandy Clay
40	50	Light Brown Medium Sand

If additional spaces is needed use back of form.

LOCATION SKETCH
(Show direction and distance from at least two State Roads, or other map reference points).



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

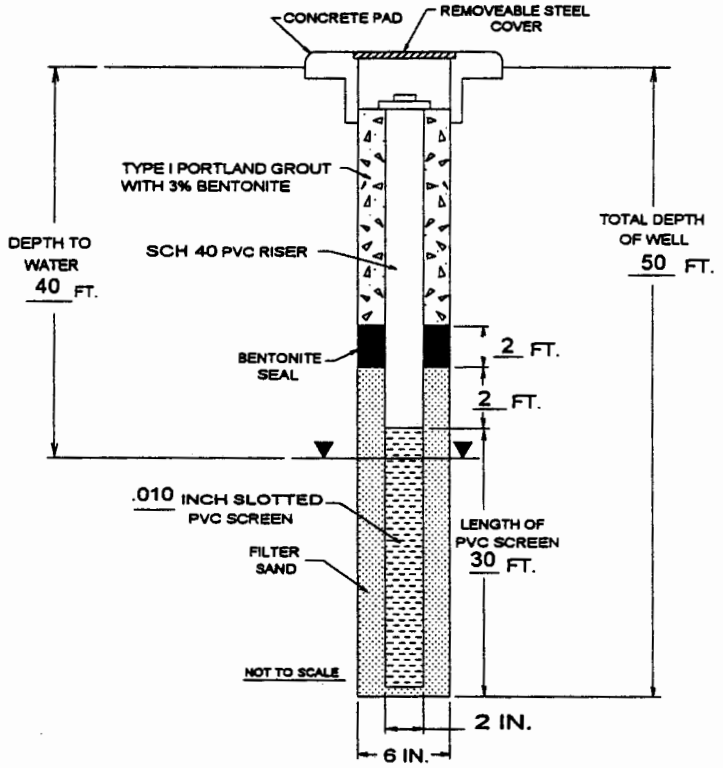
Stephen Z Wilder 4/22/99
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 6/88

Submit original to Division of Environmental Management and copy to well owner.

Boring Log and Type II Well Construction Details

WELL IDENTIFICATION: MW-17 DATE DRILLED: 3/11/99
STATE PERMIT #: _____ WORK ORDER #: 597986
PROJECT NAME: Pantry #456
SITE ADDRESS: 8191 Cliffdale Road, Fayetteville, N.C.
LATITUDE: _____ LONGITUDE: _____
TOP OF CASING ELEV.: _____ LAND SURFACE ELEV.: _____



DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Split Spoon
GRAVEL PACK SIZE: 20/30 Silica Sand
SLOT SIZE: .010
COMMENTS: _____

DEPTH	SAMPLE NUMBER	BLOW COUNT	RECOVERY	OVA (ppm)	UNIFIED METHOD	DESCRIPTIVE LOG
						Red & Brown Silty, Clayey Fine Sand
10						
	10-12	5,6,7,10		0		Red & Gray Clayey Fine Sand
20						
	20-22	3,6,8,9		32		Gray Clay
30						
	30-32	4,5,8,10		200		Red & Gray Clay
						Red & Gray Sandy Clay
40						
	40-42	6,11,9,11		30		Light Brown Medium Sand
50						
						Bottom of Boring

4NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27587 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR ECS, Incorporated

DRILLER REGISTRATION NUMBER 1405

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

MW-18

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Fayetteville, North Carolina
8191 Cliffdale Road
(Road, Community, or Subdivision and Lot No.)

County: Cumberland

2. OWNER The Pantry, Inc. - Pantry # 456
ADDRESS P.O. Box 1410
(Street or Route No.)
Sanford NC 27331
City or Town State Zip Code

3. DATE DRILLED 3/1199 USE OF WELL Monitoring

4. TOTAL DEPTH 50' CUTTINGS COLLECTED Yes ☐ No ☒

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 40 FT. ☐ above ☒ below TOP OF CASING.
TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): N/A METHOD OF TEST N/A

8. WATER ZONES (depth): N/A

9. CHLORINATION: Type N/A Amount N/A

10. CASING:

	Depth			Diameter	Wall Thickness or Weight/Ft.	Material
FROM	0	TO 20	FT	2"	Sch 40	PVC
FROM		TO	FT			
FROM		TO	FT			

11. GROUT:

	Depth			Material	Method
FROM	0	TO 16	FT	Portland	Slurry
FROM		TO	FT		

12. SCREEN:

	Depth			Diameter		Slot Size		Material
FROM	20	TO 50	FT	2	in	.010	in	PVC
FROM		TO	FT		in		in	
FROM		TO	FT		in		in	

13. GRAVEL PACK:

	Depth			Size	Material
FROM	18	TO 50	FT	20/30	Silica Sand
FROM		TO	FT		

14. REMARKS: Bentonite Seal from 16-18'

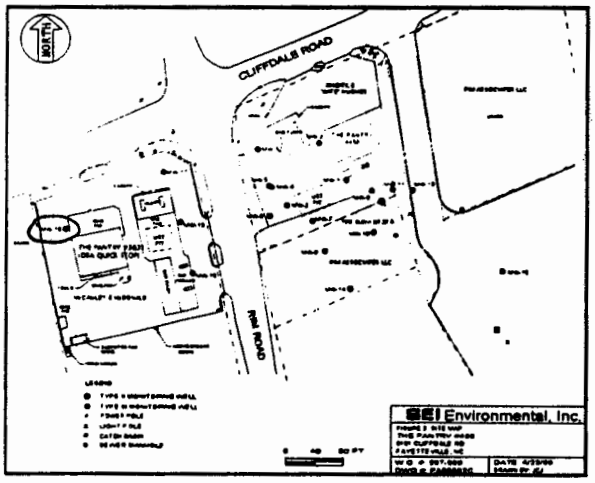
DRILLING LOG

Depth From	Depth To	Formation Description
0	10	Brown Silty Clayey Fine Sand
10	20	Gray & Brown Sandy Clay
20	30	Gray Clay
30	40	Gray, Red & Brown Clay
40	41	Orangish-Brown Clayey Fine to Medium Sand
41	43	White & Tan Medium Sand
43	50	Light Brown Medium Sand

If additional spaces is needed use back of form.

LOCATION SKETCH

(Show direction and distance from at least two State Roads, or other map reference points).



I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

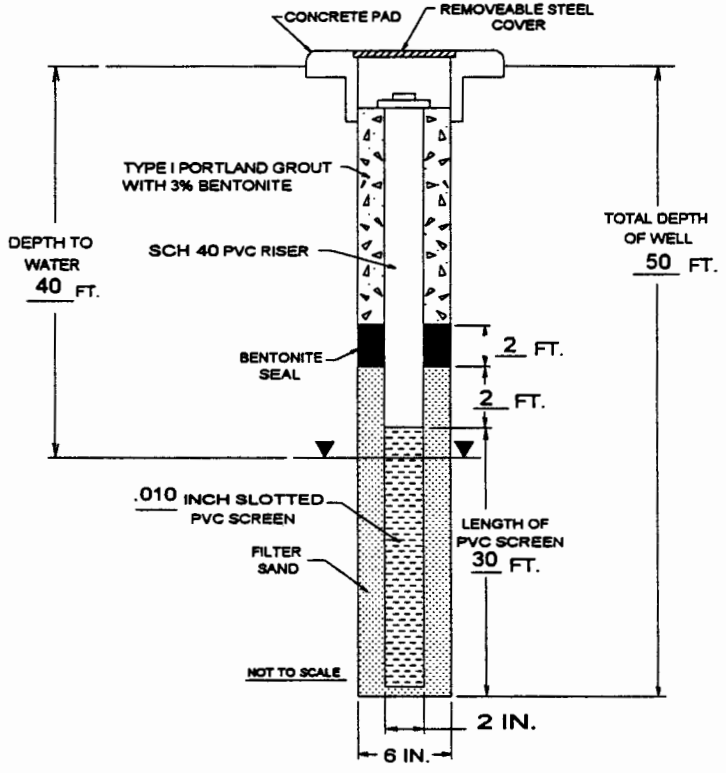
Kathleen Z Miller 4/22/99
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 6/88

Submit original to Division of Environmental Management and copy to well owner.

Boring Log and Type II Well Construction Details

WELL IDENTIFICATION: MW-18 DATE DRILLED: 3/11/99
STATE PERMIT #: _____ WORK ORDER #: 597986
PROJECT NAME: Pantry #456
SITE ADDRESS: 8191 Cliffdale Road, Fayetteville, N.C.
LATITUDE: _____ LONGITUDE: _____
TOP OF CASING ELEV.: _____ LAND SURFACE ELEV.: _____



DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Split Spoon
GRAVEL PACK SIZE: 20/30 Silica Sand
SLOT SIZE: .010
COMMENTS: _____

DEPTH	SAMPLE NUMBER	BLOW COUNT	RECOVERY	OVA (ppm)	UNIFIED METHOD	DESCRIPTIVE LOG
						Brown Silty, Clayey Fine Sand
10						
	10-12	6,8,9,12		0		Gray & Brown Sandy Clay
20						
	20-22	2,4,6,7		0		Gray Clay
30						
	30-32	3,5,7,9		0		Gray, Red & Brown Clay
40						
	40-42	10,12,23,29		0		Orangish-Brown Clayey Fine to Medium Sand
						White & Tan Medium Sand
						Light Brown Medium Sand
50						
						Bottom of Boring

4NORTH CAROLINA DEPARTMENT OF NATURAL RESOURCES AND COMMUNITY DEVELOPMENT
DIVISION OF ENVIRONMENTAL MANAGEMENT - GROUNDWATER SECTION
P.O. BOX 27587 - RALEIGH, N.C. 27611, PHONE (919) 733-3221

FOR OFFICE USE ONLY
Quad. No. _____ Serial No. _____
Lat. _____ Long. _____ Pc____
Minor Basin _____
Basin Code _____
Header Ent. _____ GW-1 Ent. _____

WELL CONSTRUCTION RECORD

DRILLING CONTRACTOR ECS, Incorporated

DRILLER REGISTRATION NUMBER 1405

MW-19

STATE WELL CONSTRUCTION PERMIT NUMBER: _____

1. WELL LOCATION: (Show sketch of the location below)

Nearest Town: Fayetteville, North Carolina

8191 Cliffdale Road
(Road, Community, or Subdivision and Lot No.)

County: Cumberland

2. OWNER The Pantry, Inc. - Pantry # 456

ADDRESS P.O. Box 1410
(Street or Route No.)

Sanford NC 27331
City or Town State Zip Code

3. DATE DRILLED 3/1199 USE OF WELL Monitoring

4. TOTAL DEPTH 50' CUTTINGS COLLECTED Yes ☐ No ☒

5. DOES WELL REPLACE EXISTING WELL? ☐ Yes ☒ No

6. STATIC WATER LEVEL 40 FT. ☐ above ☒ below TOP OF CASING.

TOP OF CASING IS 0 FT. ABOVE LAND SURFACE.

7. YIELD (gpm): N/A METHOD OF TEST N/A

8. WATER ZONES (depth): N/A

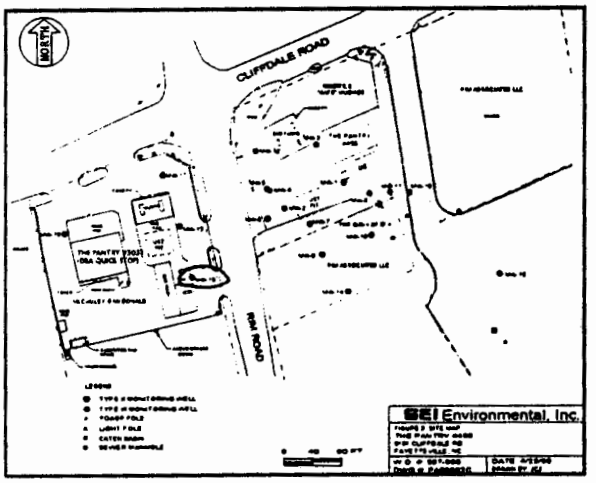
9. CHLORINATION: Type N/A Amount N/A

Depth From	Depth To	DRILLING LOG Formation Description
0	10	Brown Clayey, Silty Fine Sand
10	20	Brown Silty, Sandy Clay
20	30	Gray, Brown & Red Clay with Some Fine Sand & Silt
30	40	Brown & Gray Clay with Some Sand
40	42	Brown fine to Medium Sand
42	50	Light Brown Medium Sand

If additional spaces is needed use back of form.

LOCATION SKETCH

(Show direction and distance from at least two State Roads, or other map reference points).



10. CASING:

	Depth			Diameter	Wall Thickness or Weight/Ft.	Material
FROM	0	TO 20	FT	2"	Sch 40	PVC
FROM		TO	FT			
FROM		TO	FT			

11. GROUT:

	Depth			Material	Method
FROM	0	TO 16	FT	Portland	Slurry
FROM		TO	FT		

12. SCREEN:

	Depth			Diameter	Slot Size	Material
FROM	20	TO 50	FT	2 in	.010 in	PVC
FROM		TO	FT	in	in	
FROM		TO	FT	in	in	

13. GRAVEL PACK:

	Depth			Size	Material
FROM	18	TO 50	FT	20/30	Silica Sand
FROM		TO	FT		

14. REMARKS: Bentonite Seal from 16-18'

I DO HEREBY CERTIFY THAT THIS WELL WAS CONSTRUCTED IN ACCORDANCE WITH 15 NCAC 2C, WELL CONSTRUCTION STANDARDS, AND THAT A COPY OF THIS RECORD HAS BEEN PROVIDED TO THE WELL OWNER.

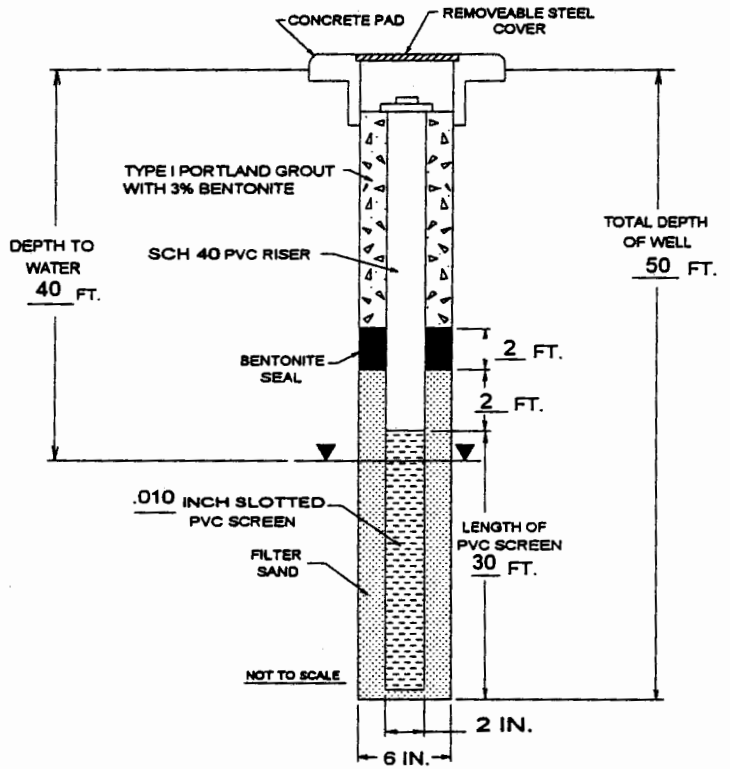
Victoria L Miller 4/22/99
SIGNATURE OF CONTRACTOR OR AGENT DATE

GW-1 Revised 6/88

Submit original to Division of Environmental Management and copy to well owner.

Boring Log and Type II Well Construction Details

WELL IDENTIFICATION: MW-19 DATE DRILLED: 3/11/99
STATE PERMIT #: _____ WORK ORDER #: 597986
PROJECT NAME: Pantry #456
SITE ADDRESS: 8191 Cliffdale Road, Fayetteville, N.C.
LATITUDE: _____ LONGITUDE: _____
TOP OF CASING ELEV.: _____ LAND SURFACE ELEV.: _____



DRILLING METHOD: Hollow Stem Auger
SAMPLING METHOD: Split Spoon
GRAVEL PACK SIZE: 20/30 Silica Sand
SLOT SIZE: .010
COMMENTS: _____

DEPTH	SAMPLE NUMBER	BLOW COUNT	RECOVERY	OVA (ppm)	UNIFIED METHOD	DESCRIPTIVE LOG
						Brown Clayey, Silty Fine Sand
10						
	10-12	4,4,6,8		0		Brown Silty, Sandy Clay
20						
	20-22	3,4,5,7		<10		Gray, Brown & Red Clay with Some Fine Sand & Silt
30						
	30-32	5,6,8,10		10		Brown & Gray Clay with Some Sand
40						
	40-42	7,10,16,19		10		Brown Fine to Medium Sand
						Light Brown Medium Sand
50						
						Bottom of Boring

NCDENR

JAMES B. HUNT JR.
GOVERNOR

BILL HOLMAN
SECRETARY

WILLIAM L. MEYER
DIRECTOR

NORTH CAROLINA DEPARTMENT OF
ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT
FAYETTEVILLE REGIONAL OFFICE

UNDERGROUND STORAGE TANK SECTION

August 10, 2000

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Gretchen Miller
SEI Environmental, Inc.
130 Penmarc Drive
Suite 108
Raleigh, North Carolina 27603

Subject: Incident Numbers for Pantry 456 and Pantry 3031

Dear Ms Miller:

In the past there has been some confusion about the incident numbers for the above referenced sites. I wanted to end the confusion since one incident will be closed under the risk-based rules and the other will begin a corrective action plan.

According to our database the incident number for Pantry #456 is **19702**. Pantry #3031 has not been assigned an incident number at this time. I recently sent the information for Pantry #3031 to our central office in Raleigh. It should have an incident number within the next four to six weeks.

I have enclosed a copy of the CAP approval for Pantry #3031. I will be sending a closure letter for Pantry #456 within the next few weeks.

Again, I apologize for any past confusion. Please call me if you have any questions. Thank you.

Sincerely,

Jennifer Phillips
Hydrogeologist

Enclosure

UST SECTION
225 GREEN STREET, SUITE 714 / SYSTEL BLD. FAYETTEVILLE, NORTH CAROLINA 28301-5043
PHONE: 910-486-1541 FAX: 910-486-0707
AN EQUAL OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER - 50% RECYCLED / 10% POST-CONSUMER PAPER
DENR TOLL FREE HOTLINE: 1-877-623-6748

ACTIVE REMEDIATION MONITORING REPORT
January 2015 to June 2015

PANTRY #3031
8215 Cliffdale Road
Fayetteville, Cumberland County, North Carolina
Incident Number: 22150
Facility I.D. Number: 0-028888

Risk Classification: High
Ranking: H160D
Land Use Category: Residential

Responsible Party:
The Pantry, Inc.
305 Gregson Drive
Cary, North Carolina 27511

Current Property Owner:
McCauley & McDonald Investments, Inc.
Post Office Box 361
Fayetteville, North Carolina 28302

Report Prepared By:
Withers & Ravenel, Inc.
115 MacKenan Drive
Cary, North Carolina 27511
(919) 469-3340
W&R Project #02070860.0

Release Discovered:	May 14, 1999
Release Quantity:	Unknown
Cause/Source of Release:	Apparent UST System

UST System: 3 - 12,000 Gallon Gasoline USTs

Latitude:	N 35° 03' 30"
Longitude:	W 79° 02' 57"

C. Chan Bryant, P.E.

July 27, 2015

Section A. Site Identification

1. **Site Identification**

DATE OF REPORT: July 27, 2015
Facility I.D.: 0-028888 UST Incident No.: 22150
Site Risk: High Site Rank: 160D Land Use Category: Residential
Site Name: Pantry #3031
Site Location: 8215 Cliffdale Road
Nearest City/Town: Fayetteville County: Cumberland
Description of Geographical Data Point: Close to Source
Location Method: Topographical Map
Latitude: N 35° 03' 30" Longitude: W 79° 02' 57"

2. **Contact Information**

Responsible Party: The Pantry, Inc.
Address: 305 Gregson Drive, Cary, North Carolina 27511 Phone: 919-774-6700

Property Occupant: Vacant Phone: Unknown

Property Owner: McCauley & McDonald Investments, Inc.
Address: P.O. Box 361, Fayetteville, North Carolina 28302 Phone: (910) 483-1861

Consultant/Contractor: Withers & Ravenel
Address: 115 MacKenan Drive, Cary, NC 27511
Phone: (919) 469-3340

Analytical Laboratory: ESC Lab Sciences State Certification #:ENV375
Address: 12065 Lebanon Road, Mount Juliet, TN 37122 Tel: 615.758.5859

3. **Release Information:**

Date Discovered: May 14, 1999
Estimated Quantity of Release: Unknown
Cause of Release: UST system
Source of Release: UST /Piping
Type of material release occurred: Gasoline
Criteria Used to Classify Risk: Water Supply Wells
Sizes & Contents of UST system(s) from which release occurred: 3 - 12,000-gallon gasoline USTs

4. **Information about the Monitoring Report**

Dates of Groundwater Monitoring: June 8, 9, and 10, 2015
Period of Time Reported: January 2015 - June 2015
Type of Monitoring Report: Active Remediation Monitoring

5. **Certification**

I, _____ a Professional Engineer/Licensed Geologist for Withers & Ravenel, Inc., do certify that the information contained in this report is correct and accurate to the best of my knowledge.

Withers & Ravenel, Inc. is licensed to practice geology/engineering in North Carolina. The certification numbers are C-293 (Geology) and C-0832 (Engineering).

July 27, 2015

Division of Waste Management
UST Section
Fayetteville Regional Office
Systel Building, Suite 714
225 Green Street
Fayetteville, North Carolina 28301

Attn: Mr. James Brown

Reference: **Active Remediation Monitoring Report – January 2015 through June 2015**
Pantry #3031
8215 Cliffdale Road
Fayetteville, Cumberland County, North Carolina
Incident # 22150
Withers & Ravenel Project No. 02070860.00

Dear Mr. Brown:

Withers & Ravenel, Inc. has completed this Active Remediation Monitoring Report to document the groundwater monitoring activities completed at the above-referenced site between January 2015 and June 2015. This work was completed in keeping with the requirements of the North Carolina Underground Storage Tank Section and the monitoring plan outlined in the Corrective Action Plan.

If you have any questions about this report, please contact us at (919) 469-3340.

Sincerely,
WITHERS & RAVENEL, INC.

Matt James, P.G.
Project Manager

C. Chan Bryant, P.E.
Vice President

cc: Mr. Brent Puzak, The Pantry, Inc.
Mr. Ivon D. Rohrer, Jr., Development-Management, Inc.

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Appendix A Laboratory Analytical Reports

1.0 BACKGROUND

The Pantry #3031 property is currently a unused property located at the southwest quadrant of the intersection of Cliffdale Road and Rim Road (8215 Cliffdale Road) in Fayetteville, North Carolina (**Figure 1**). The subject property formerly served as a convenience store with retail petroleum sales. Three 12,000-gallon underground storage tanks (USTs) were previously located on the site property. A map of the current site is included in **Figure 2**.

In 1998, LaGrange Waterworks detected petroleum compounds in two public water supply wells located in the vicinity of the site. In April 1998, the NCDWM-UST Section directed The Pantry, Inc. to conduct a subsurface investigation of the Pantry #456 property located east of the site across Rim Road. Subsurface assessment activities performed by SPATCO Engineering and Geological Services, P.C. (SPATCO) concluded that the probable contaminant source was the subject property (Pantry #3031) and not Pantry #456.

A Corrective Action Plan (CAP) was completed in February 2000 by SPATCO that recommended air sparging/soil vapor extraction (AS/SVE) be utilized at the site to remediate soil and groundwater contamination.

In November 2002, an AS/SVE remediation system began operating at the site. The system was shut down in December 2004 as a result of NC Session Law 2004-124 and an assigned Risk Ranking of H140D. The system was re-started in October 2008 (See **Section 3**). In June 2014, W&R personnel reported that the SVE blower was down due to an electrical short within the blower. W&R subsequently removed the blower and transported it to Southern Electric Motor Company, Inc. in Durham, NC. Southern Electric recommended a complete motor rehab at an estimated cost of $4,000.00. W&R contacted the incident manager with NCDENR; W&R and the incident manager agreed not have the blower repaired.

Groundwater monitoring events have taken place semi-annually since February 2009. The monitoring well construction data for all of the monitoring wells associated with the site are summarized in **Table 1** and historical groundwater analytical data is included as **Table 5**.

2.0 GROUNDWATER MONITORING PROGRAM

2.1 Groundwater Elevations

On June 8, 9, and 10, 2015, Withers & Ravenel personnel mobilized to the site to complete groundwater sampling. W&R measured the depth-to-water in all of the accessible onsite monitoring wells. The depth-to-water measurements in the Type II monitoring wells ranged from 36.74 feet below the top of casing (ft-BTOC) in monitoring well MW-15 to 41.93 ft-BTOC in monitoring well MW-22. The data was converted to relative groundwater elevations by subtracting the depth-to-water measurement from the top of casing elevation. The relative groundwater elevations are summarized in **Table 2** and the historical groundwater elevations are summarized in **Table 3**.

Using the groundwater elevation data a groundwater potentiometric surface map, **Figure 3**, was created. Based on the groundwater potentiometric surface map the predicted groundwater flow direction is to the east-southeast. Historical groundwater flows have typically been toward the east-northeast, east, or east-southeast.

2.2 Groundwater Quality

After measuring depth-to-water, the monitoring wells were purged of water and fine sediment by evacuating three well volumes of water or until the well became dry. A groundwater sample was collected from each of the required/accessible monitoring wells using a new polyethylene disposable bailer or a decontaminated submersible pump equipped with virgin disposable polyethylene tubing. The samples were transferred directly from the sampling equipment into laboratory-supplied bottles and stored in an ice-packed cooler. Under proper chain-of-custody procedures, the samples were transported to ESC Lab Sciences in Mt. Juliet, Tennessee for analysis of volatile organic compounds (VOCs) by EPA Method 6200B, analysis for target metals iron, magnesium, and manganese by method 6010C, and natural attenuation parameters alkalinity by method 2320 B-2011, nitrate and sulfate by method 9056 MOD.

The results of the laboratory analysis are summarized in **Table 4**, while a summary of the historical water quality data is included in **Table 5**. Copies of the laboratory report and chain-of-custody are included in **Appendix B**.

The laboratory analytical data revealed one or more VOCs in the following monitoring wells with exceedances to the NC 2L Standard:

- MW-1A, MW-6, MW-8, MW-9, MW-10, MW-11, MW-13, MW-16, and MW-17A.

The laboratory analytical data revealed one or more target metals in the following monitoring wells with exceedances to the NC 2L Standard.

- MW-1A, MW-3, MW-4, MW-5, MW-6, MW-12, MW-13, MW-15, MW-16, MW-17A, MW-18, MW-19, MW-20, MW-22, MW-23, and MW-26.

No monitoring wells were identified to have VOCs at concentrations that exceeded their respective gross contaminant levels (GCLs). Graphical representation of the water quality isoconcentration lines for benzene and MTBE are included as **Figures 4** and **5**, respectively.

Natural attenuation parameters alkalinity, nitrates, and sulfates were collected during the recent sampling event. Nitrate samples were not analyzed in wells MW-8, MW-9, MW-10, MW-14, MW-15, MW-25, and MW-26 through MW-30 because they were received by the lab outside acceptable hold times. Analytical results reported an alkalinity value in source area wells MW-6, MW-13, and MW-17A at concentrations of 35,000 ug/L, 22,000 ug/L, and 21,000 ug/L, respectively. Analytical results identified the presence of nitrates in all the wells that were analyzed while sulfate was not detected in the sampled wells. The presence of alkalinity, nitrate, and iron in the source area monitoring wells indicate that the source area of the plume is undergoing biodegradation by anaerobic conditions.

2.3 Groundwater Receptors

Withers & Ravenel updated the water supply well survey on November 17, 2011. During the survey, Withers & Ravenel personnel completed a walking reconnaissance of properties within 500 feet of the site and a driving reconnaissance of properties within 1,000 feet. In the course of completing the survey, W&R viewed the surrounding properties, interviewed available surrounding property owners, managers, or tenants, and dropped off survey forms at properties within 1,000 feet if no one was available for questioning.

The well survey revealed that no water supply wells are located within a 500-foot radius of the site and least two (2) water supply wells (WSW-13 and WSW-3) are located within a 1,000-foot radius of the site (See **Figure 7** for well locations). Conversations with Aqua, Inc., who is a local water utility company, indicated that a community well (WSW-13) is located approximately 650 feet north of the site. Aqua reported that WSW-13 is a gravel packed well of approximately 100 ft. total depth. Aqua also reported that a second community well, WSW-32, which was located approximately 900 feet from the site, was abandoned in 1999 due to contamination from benzene. The Aqua representative also verified the ongoing use of community water supply wells WSW-1, WSW-4, and WSW-23, which are situated approximately 1,250 feet northeast, 1,520 feet southwest (this well is not shown on **Figure 7,** WSW-4 shown is not an Aqua well), and 1,450 feet southeast.

The property where WSW-4 lies has been cleared and graded. No signs of the water supply well were noted while completing the updated receptor survey. Past conversations with the homeowner of the residence associated with WSW-3 indicated that the well is not in use and that the residence will be connected to the municipal water system in the future. During the receptor survey update, W&R attempted to contact the owner of this residence to verify that the status of WSW-3 had not changed; however, at the time of W&R's site reconnaissance, no one was present at the residence. W&R observed WSW-3 to be in a similar condition as observed during the 2007 receptor survey. W&R left the standard "Water Supply Well Information Survey" form at the residence. However, W&R has not received a completed copy of the form from the property owner. W&R also attempted to locate phone numbers to contact the owner and/or occupant of this property. However, W&R's online research did not reveal such contact information.

3.0 REMEDIATION

3.1 AS/SVE Remediation System

A Corrective Action Plan (CAP) was completed in February 2000 by SPATCO that recommended air sparging/soil vapor extraction (AS/SVE) be utilized at the site to remediate soil and groundwater contamination. In November 2002, an AS/SVE remediation system began operating at the site property. The system was shut down in December 2004 as a result of NC Session Law 2004-124 and an assigned Risk Ranking of H140D.

In response to a Notice of Regulatory Requirements (NORR) dated March 13, 2008, the AS/SVE remediation system was re-started in October 2008. In viewing the results of the four monitoring events prior, W&R noted that the majority of the remaining contamination was located in an area east of the UST pit void of air sparge and soil vapor vent wells. W&R was authorized in PATA 22150-19 to expand the current AS/SVE remediation system.

3.2 AS/SVE Remediation System Expansion

W&R installed additional air sparge points, AS-15 through AS-24, and soil vapor extraction points, VE-21 through VE-29, during June 2010. Apostolic Construction, LLC, was contracted to connect the newly installed AS/SVE points to the existing remediation system during July 2010. The current remediation system layout is depicted in **Figure 6.**

3.3 AS/SVE Remediation System Current Status

In June 2014, W&R personnel reported that the SVE blower was down due to an electrical issue with the blower. W&R subsequently removed the SVE blower and took it to Southern Electric Motor Company in Durham, NC for service. Southern Electric Motor Company provided W&R with a cost estimate of $4,000 to rewind and install new bearings in the SVE Blower. Following receipt of the repair cost, W&R contacted the incident manager with NCDENR; W&R and the incident manager agreed to leave the system off and complete two additional groundwater sampling events to determine if groundwater constituent concentrations remain low.

4.0 CONCLUSIONS AND RECOMMENDATION

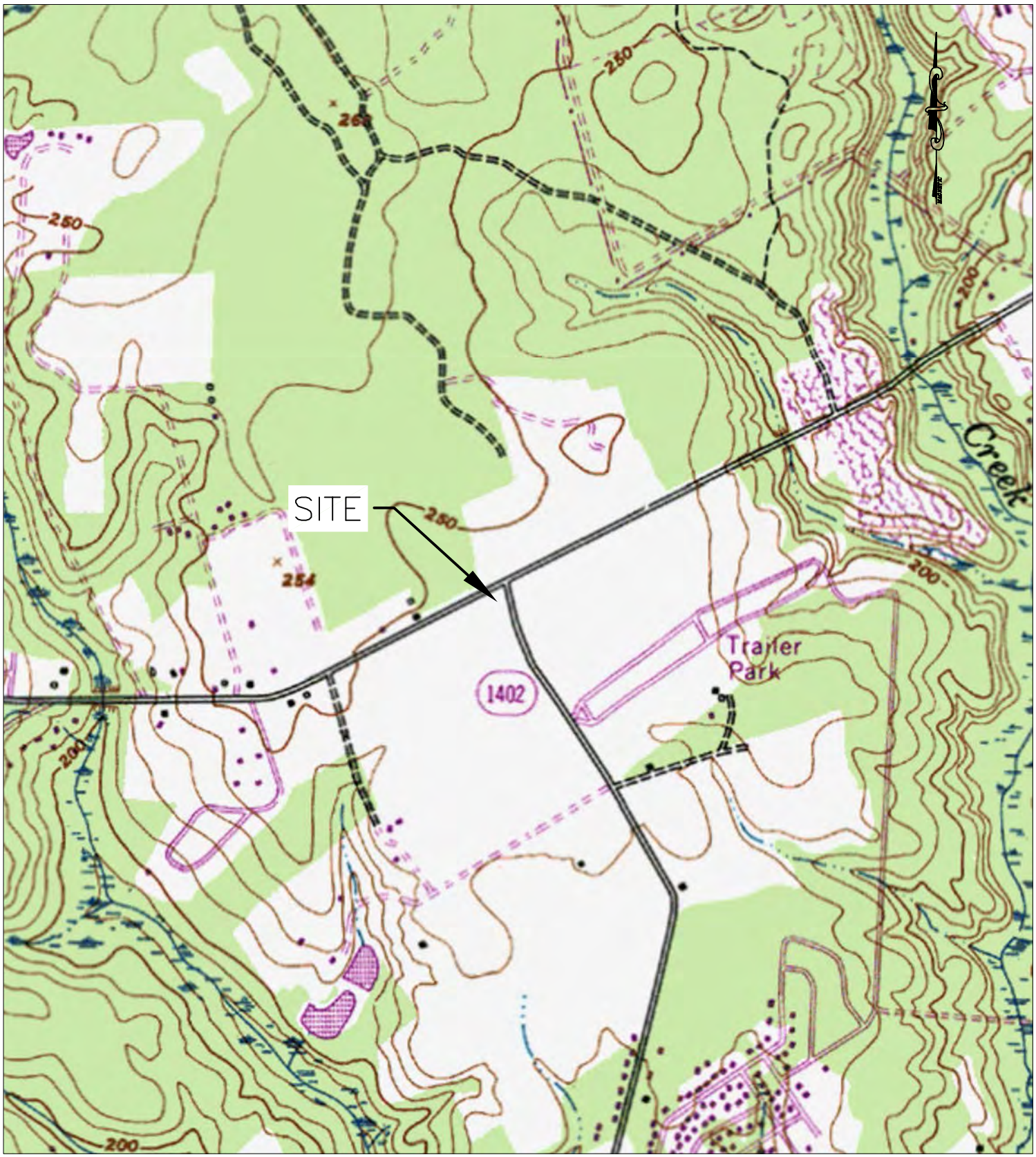
W&R collected groundwater samples from twenty-seven monitoring wells on June 8, 9, 10, 2015. W&R has developed the following conclusions from site work completed between January 2015 and June 2015.

- The onsite remediation system has been down since May 2014;
- Wells MW-1A, MW-6, MW-8, MW-9, MW-10, MW-11, MW-13, MW-16, and MW-17A contained one or more VOCs at concentrations that exceeded their respective NC 2L Standard;
- No monitoring wells were identified to have analyte concentrations that exceeded the gross contaminant levels (GCLs);
- Natural attenuation parameters indicate that the source area is being biodegraded by anaerobic conditions; and
- The dissolved phase plume has extended to the east slightly since the remediation system was shut down; however, no water supply wells are located east of the subject property within 1,000 feet of the source area.

Based upon these conclusions W&R recommends the following:

- The site be re-ranked as “low risk” and the incident for the UST release closed in accordance with 15A NCAC Subchapter 2L .400 requirements.
- A Notice of Residual Petroleum (NRP) with groundwater restrictions applied to the contaminated portion of the site be prepared and filed with NCDENR-DWM and the Cumberland County Register of Deeds Office to close the incident file for this site.

FIGURES



GRAPHIC SCALE

1,000 500 0 1,000

(IN FEET)

1 inch = 1,000 feet

CLIFFDALE, NC QUADRANGLE, 1948, PHOTOREVISED 1982

WITHERS & RAVENEL

ENGINEERS I PLANNERS I SURVEYORS

111 MacKenan Drive Cary, North Carolina 27511 www.withersravenel.com

tel: 919-460-6006 fax: 919-535-4545

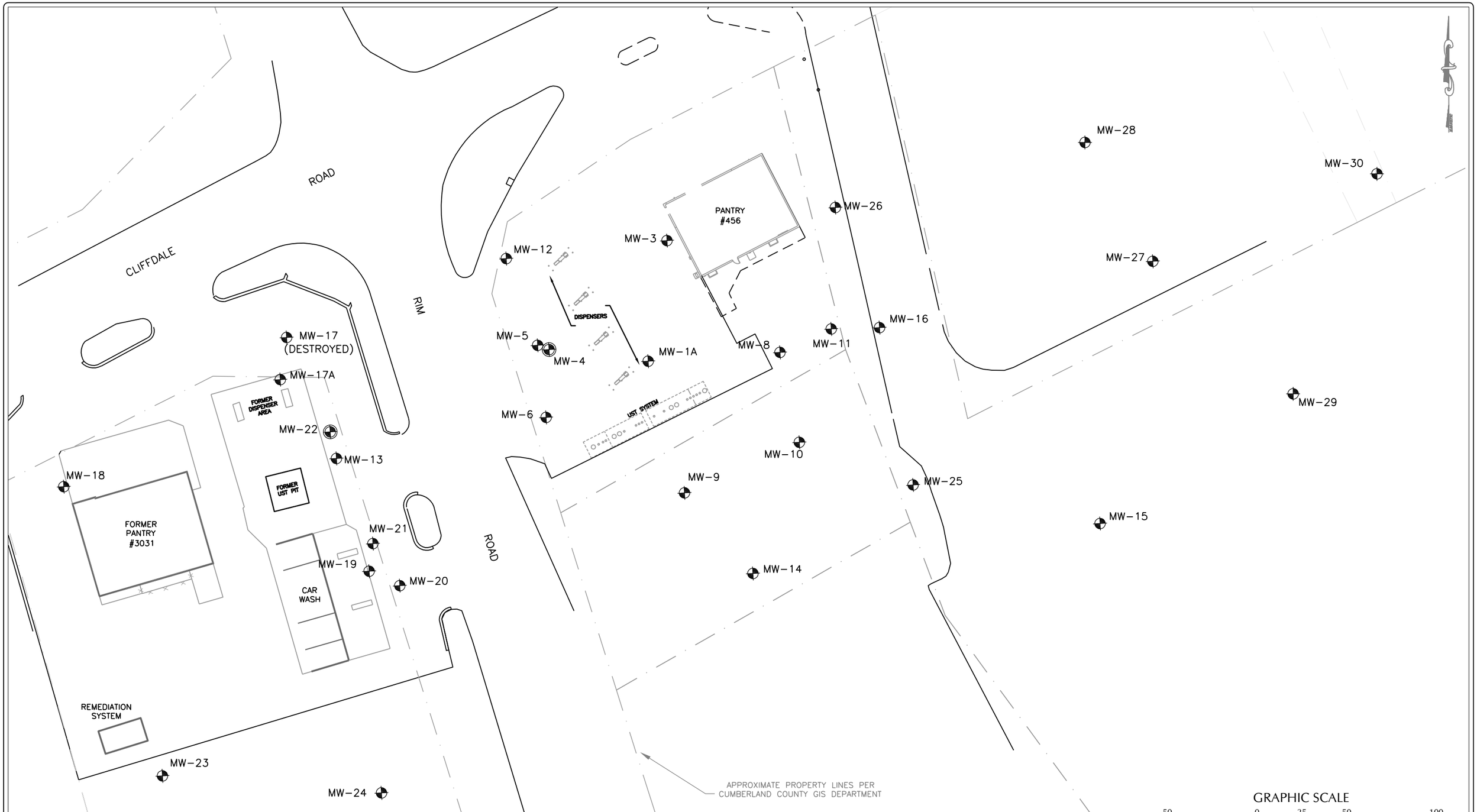
VICINITY MAP

PANTRY #3031
8125 CLIFFDALE ROAD
FAYETTEVILLE, NORTH CAROLINA

DRAWN BY:	SCALE:
MRE	1"=1000'
APPROVED BY:	DATE:
MRE	07/02/08

FIGURE NO. 1

JOB NO: 02070860.0



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Revisions			
No.	Description	Date	By

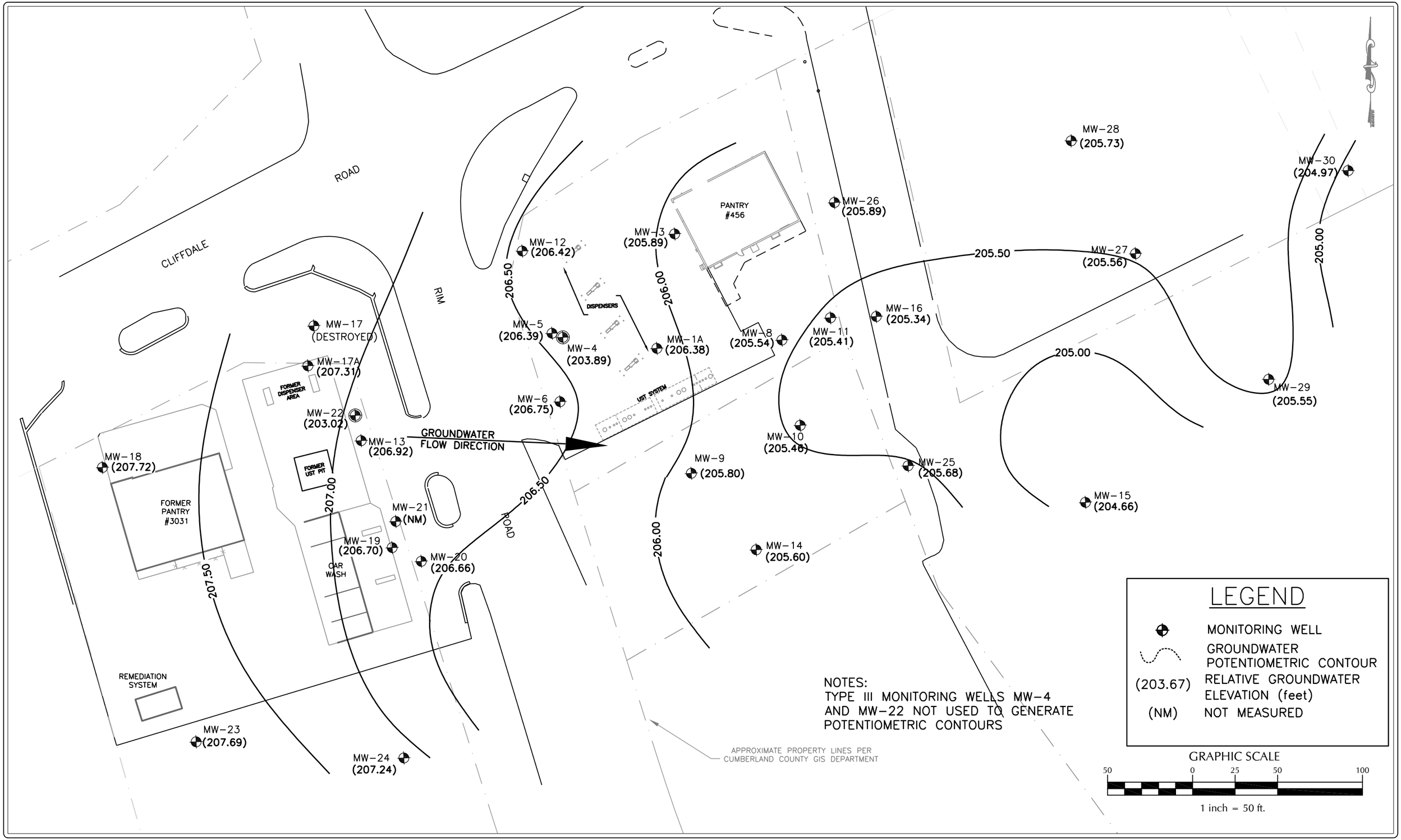
PANTRY #3031
8215 CLIFFDALE ROAD
FAYETTEVILLE, NORTH CAROLINA

SITE MAP

Drawn By: JLF	Scale: 1"=50'
Checked By: KTC	Date: 12/20/11

Job No. 02070860.00
Sheet No. 2

K:\07\07-0860\070860-PANTRY 3031\CAD\GWMR - JUNE 2014\FIGURES 2-10.DWG 1/26/2015 11:23 AM JAMES, MATT 1:1



LEGEND

- MONITORING WELL
- GROUNDWATER POTENTIOMETRIC CONTOUR
- (203.67) RELATIVE GROUNDWATER ELEVATION (feet)
- (NM) NOT MEASURED

NOTES:
TYPE III MONITORING WELLS MW-4 AND MW-22 NOT USED TO GENERATE POTENTIOMETRIC CONTOURS

APPROXIMATE PROPERTY LINES PER CUMBERLAND COUNTY GIS DEPARTMENT

GRAPHIC SCALE

50 0 25 50 100

1 inch = 50 ft.

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No.	Description	Date	By

PANTRY #3031
8215 CLIFFDALE ROAD
FAYETTEVILLE, NORTH CAROLINA

POTENTIOMETRIC MAP

Drawn By: CF	Scale: 1"=50'
Checked By: MJ	Date: 07/10/15

Job No. 02070860
Sheet No. 3

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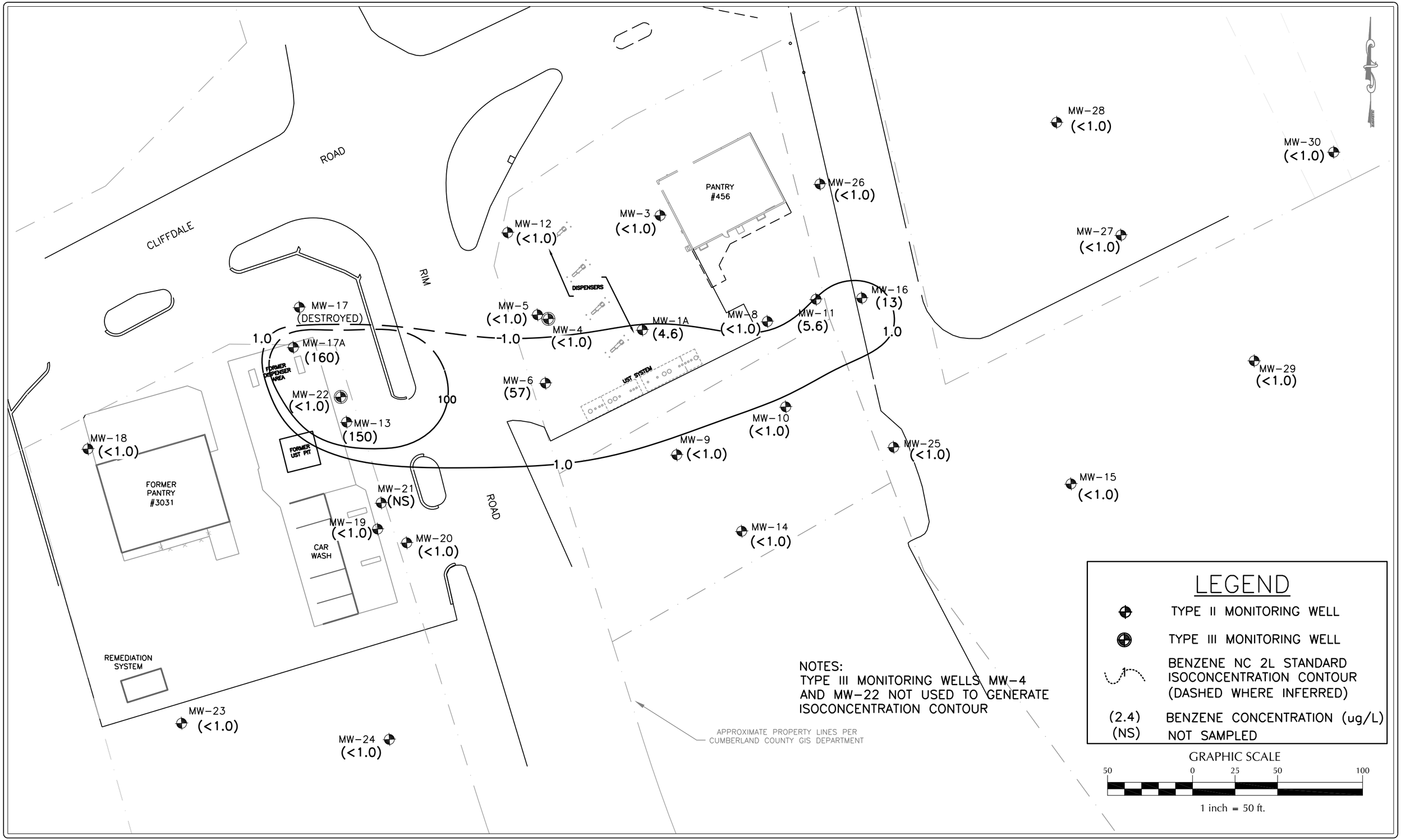

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Revisions			
No.	Description	Date	By

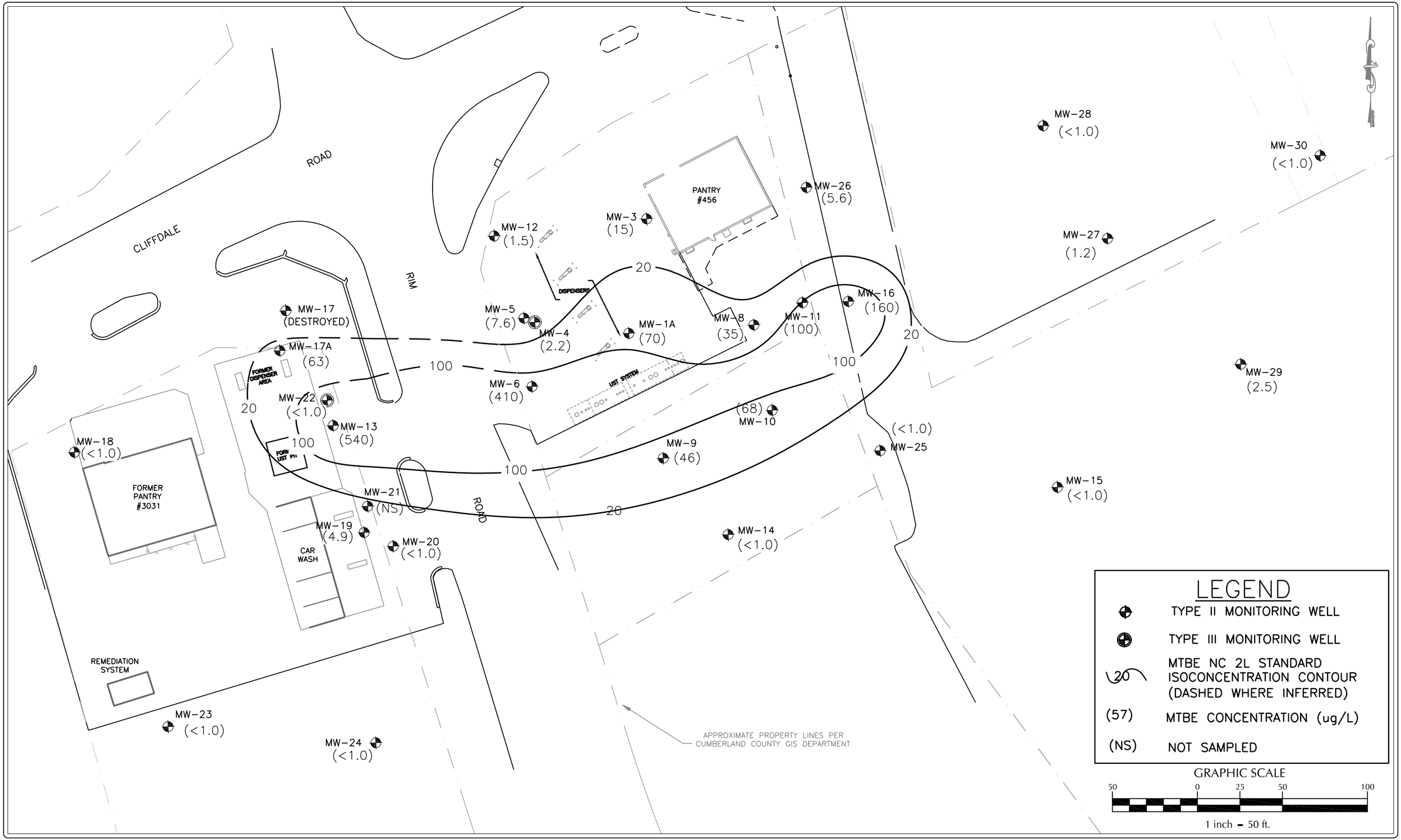
PANTRY #3031
8215 CLIFFDALE ROAD
FAYETTEVILLE, NORTH CAROLINA

BENZENE ISOCONCENTRATION MAP

Drawn By: CF	Scale: 1"=50'
Checked By: MJ	Date: 7/10/15

Job No. 02070860.00
Sheet No. 4

K:\07\07-0860\070860-PANTRY 3031\CAD\BASE MAP - 2015\FIGURES 2-10.DWG 7/22/2015 3:33 PM JAMES, MATT 1:1



LEGEND

- TYPE II MONITORING WELL
- TYPE III MONITORING WELL
- 20 — MTBE NC 2L STANDARD ISOCONCENTRATION CONTOUR (DASHED WHERE INFERRED)
- (57) — MTBE CONCENTRATION (ug/L)
- (NS) — NOT SAMPLED

GRAPHIC SCALE

50 0 25 50 100

1 inch = 50 ft.

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Revisions			
No.	Description	Date	By

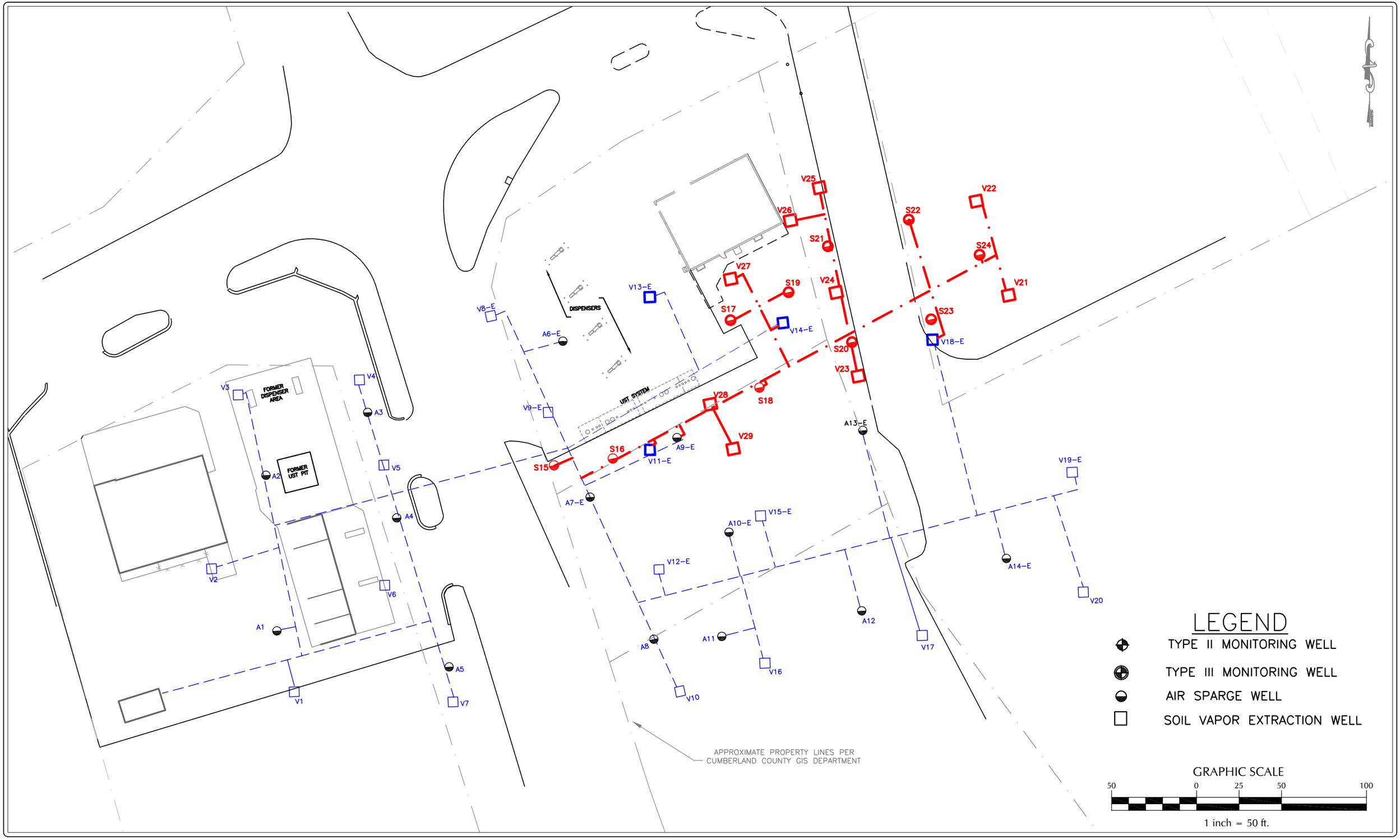
PANTRY #3031
8215 CLIFFDALE ROAD
FAYETTEVILLE, NORTH CAROLINA

MTBE ISOCONCENTRATION MAP

Drawn By: CF	Scale: 1"=50'
Checked By: MJ	Date: 7/10/15

Job No. 02070860.00
Sheet No. 5

K:\07\07-0860\070860-PANTRY 3031\CAD\BASE MAP - 2015\FIGURES 2-10.DWG 7/22/2015 3:33 PM JAMES, MATT 1:1



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Revisions			
No.	Description	Date	By

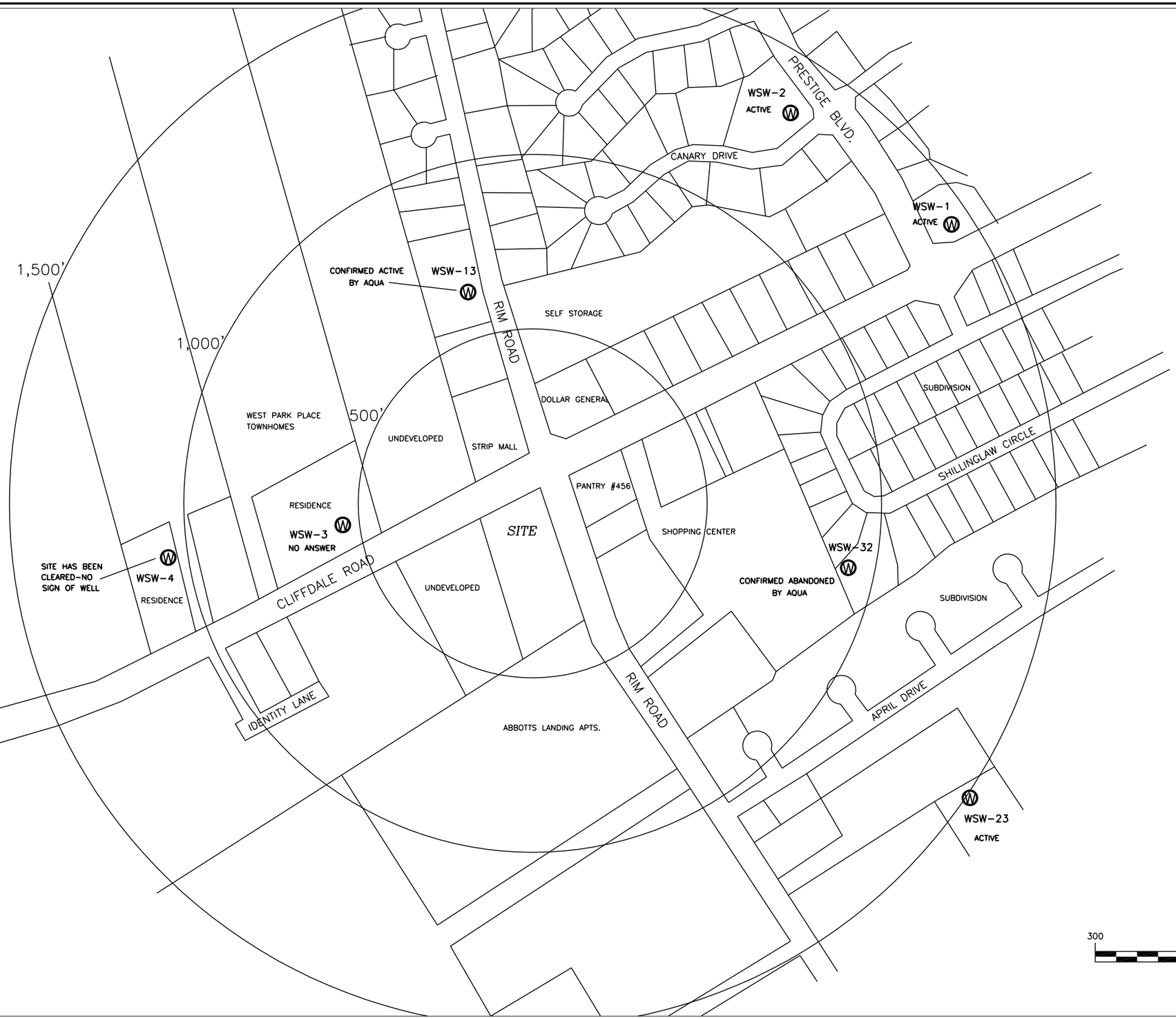
PANTRY #3031
8215 CLIFFDALE ROAD
FAYETTEVILLE, NORTH CAROLINA

SYSTEM LAYOUT

Drawn By: JLF	Scale: 1"=50'
Checked By: KTC	Date: 12/20/11

Job No. 02070860.00
Sheet No. 6

K:\07\07-0860\070860-PANTRY 3031\CAD\GWMR - JUNE 2014\FIGURES 2-10.DWG 1/26/2015 11:26 AM JAMES, MATT 1:1



LEGEND

WATER SUPPLY WELL ID

MAP SOURCE: CUMBERLAND COUNTY GIS

GRAPHIC SCALE

300 0 150 300 600

(IN FEET)

1 inch = 300 ft.

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111 MacKenan Drive Cary, North Carolina 27511 www.withersravenel.com
tel: 919-469-3340 fax: 919-535-4545

Revisions			
No.	Description	Date	By
1	Updated Receptors	1/30/12	KTC

PANTRY #3031
8215 CLIFFDALE ROAD
FAYETTEVILLE, NORTH CAROLINA

SITE VICINITY/WSW LOCATIONS MAP

Drawn By	Scale
JAK	1"=300'
Checked By	Date
CB	10/23/07

Job No. 02070860.0
Figure No. 7

K:\07\07-0860\070860-PANTRY 3031\CAD\GWMR - JUNE 2014\WSW LOCATION MAP.DWG 1/26/2015 11:33 AM JAMES, MATT

TABLES

TABLE 1
MONITORING WELL CONSTRUCTION DATA

FORMER PANTRY 3031
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS & RAVENEL PROJECT NO. 02070860.00

Well ID	Date Installed	Well Casing Depth (ft-bgs)	Screened Interval (ft-bgs)	Bottom of Well (ft-bgs)	Top of Casing Elevation (ft-rel)	Well Diameter (in.)
Type II Monitoring Wells						
MW-1	05/14/98	40.0	20 - 40	40	245.37	2
MW-1A	01/18/09	50.0	35 - 50	50	245.78	2
MW-2*	05/14/98	40.0	20 - 40	40	244.35	2
MW-3	05/15/98	50	20 - 50	50	245.92	2
MW-5	09/09/98	45	25 - 45	45	244.65	2
MW-6	09/09/98	50	30 - 50	50	244.25	2
MW-7*	09/09/98	50	30 - 50	50	243.66	2
MW-8	09/09/98	45	25 - 45	45	244.99	2
MW-9	01/21/99	50	20 - 50	50	243.86	2
MW-10	01/21/99	50	20 - 50	50	244.33	2
MW-11	01/21/99	50	20 - 50	50	244.57	2
MW-12	01/22/99	50	20 - 50	50	244.82	2
MW-13	01/22/99	50	20 - 50	50	245.02	2
MW-14	03/10/99	50	20 - 50	50	243.33	2
MW-15	03/10/99	52	22 - 52	52	241.40	2
MW-16	03/11/99	50	20 - 50	50	243.12	2
MW-17	03/11/99	50	20 - 50	50	245.13	2
MW-17A	07/28/09	50	25-50	50	245.53	2
MW-18	03/11/99	50	20 - 50	50	246.10	2
MW-19	03/11/99	50	20 - 50	50	244.51	2
MW-20	09/13/99	50	25 - 50	50	244.58	2
MW-21	09/13/99	50	40 - 50	50	244.62	2
MW-23	10/23/01	50	20 - 50	50	246.04	2
MW-24	10/24/01	50	20 - 50	50	246.96	2
MW-25	07/28/09	45	20-45	45	243.28	2
MW-26	07/29/09	50	25-50	50	244.43	2
MW-27	07/29/09	50	20 - 50	50	244.92	2
MW-28	11/14/11	55	25-55	55	245.16	2
MW-29	11/14/11	50	25-50	50	242.99	2
MW-30	11/14/11	55	25 - 55	55	245.04	2
Type III Monitoring Wells						
MW-4	09/09/98	60	55 - 60	60	244.61	2
MW-22	10/24/01	60	55 - 60	60	244.95	2

Notes:
NM - Not Measured
* - Monitoring wells MW-2 and MW-7 have been abandoned.

TABLE 2
CURRENT GROUNDWATER ELEVATION DATA

FORMER PANTRY 3031
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS & RAVENEL PROJECT NO. 02070860.00

Well ID	Total Depth of Well (ft)	Screened Interval (ft)	Top of Casing Elevation	Date	Depth to Water (ft bls)	Depth to Free Product (ft bls)	Free Product Thickness	Groundwater Elevation
MW-1	40	20 - 40	245.37	Destroyed				
MW-1A	50	35 - 50	245.78	06/08/15	39.40	-	-	206.38
MW-2	40	20 - 40	244.35	Abandoned				
MW-3	50	20 - 50	245.92	06/08/15	40.03	-	-	205.89
MW-4	60	55 - 60	244.61	06/08/15	40.72	-	-	203.89
MW-5	45	25 - 45	244.65	06/08/15	38.26	-	-	206.39
MW-6	50	30 - 50	244.25	06/08/15	37.50	-	-	206.75
MW-7	50	30 - 50	243.66	Abandoned				
MW-8	45	25 - 45	244.99	06/08/15	39.45	-	-	205.54
MW-9	50	20 - 50	243.86	06/08/15	38.06	-	-	205.80
MW-10	50	20 - 50	244.33	06/08/15	38.87	-	-	205.46
MW-11	50	20 - 50	244.57	06/08/15	39.16	-	-	205.41
MW-12	50	20 - 50	244.82	06/08/15	38.40	-	-	206.42
MW-13	50	20 - 50	245.02	06/08/15	38.10	-	-	206.92
MW-14	50	20 - 50	243.33	06/08/15	37.73	-	-	205.60
MW-15	52	22 - 52	241.40	06/08/15	36.74	-	-	204.66
MW-16	50	20 - 50	243.12	06/08/15	37.78	-	-	205.34
MW-17	50	20 - 50	245.13	Abandoned				
MW-17A	50	25-50	245.53	06/08/15	38.22	-	-	207.31
MW-18	50	20 - 50	246.10	06/08/15	38.38	-	-	207.72
MW-19	50	20 - 50	244.51	06/08/15	37.81	-	-	206.70
MW-20	50	25 - 50	244.58	06/08/15	37.92	-	-	206.66
MW-21	50	40 - 50	244.62	06/08/15	NM	-	-	NM
MW-22	60	55 - 60	244.95	06/08/15	41.93	-	-	203.02
MW-23	50	20 - 50	246.04	06/08/15	38.35	-	-	207.69
MW-24	50	20 - 50	246.96	06/08/15	39.72	-	-	207.24
MW-25	45	20-45	243.28	06/08/15	37.6	-	-	205.68
MW-26	50	25-50	244.43	06/08/15	38.54	-	-	205.89
MW-27	50	20 - 50	244.92	06/08/15	39.36	-	-	205.56
MW-28	55	25-55	245.16	06/08/15	39.43	-	-	205.73
MW-29	50	25-50	242.99	06/08/15	37.44	-	-	205.55
MW-30	55	25-55	245.04	06/08/15	40.07	-	-	204.97

Notes:
NM = Not Measured

TABLE 3
HISTORICAL GROUNDWATER ELEVATION DATA

FORMER PANTRY 3031
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS & RAVENEL PROJECT NO. 02070860.00

Well ID	Total Depth of Well (ft)	Screened Interval (ft)	Top of Casing Elevation	Date	Depth to Water (ft bls)	Depth to Free Product (ft bls)	Free Product Thickness	Groundwater Elevation
MW-1	40	20 - 40	245.37	09/02/03	39.38			205.99
				03/06/04				
				09/08/04				
				10/09/07	Destroyed			
MW-1A	50	35 - 50	245.78	02/16/09	40.67			
				07/29/09	41.32			
				06/21/10	39.37			
				12/29/10	42.12			203.66
				05/13/11	43.61			202.17
				11/21/11	44.89			200.89
				05/09/12	45.92			199.86
				11/20/12	46.71			199.07
				05/24/13	46.52			199.26
				12/26/13	44.02			201.76
				05/12/14	41.30			204.48
				12/16/14	42.11			203.67
				06/09/15	39.40			206.38
MW-2	40	20 - 40	244.35	09/02/03	DRY			
				03/06/04	Abandoned			
MW-3	50	20 - 50	245.92	09/02/03	Not Measured			
				03/06/04				
				09/08/04				
				10/09/07	43.93			201.99
				06/11/08	Not Measured			
				09/16/08	Not Measured			
				02/16/09	Not Measured			
				07/29/09	Not Measured			
				06/21/10	40.12			205.80
				12/29/10	42.76			203.16
				05/13/11	44.21			201.71
				11/21/11	45.51			200.41
				05/09/12	46.59			199.33
				11/20/12	47.38			198.54
				05/23/13	47.20			198.72
				12/26/13	44.62			201.30
				05/12/14	42.25			203.67
				12/16/14	42.70			203.22
				06/09/15	40.03			205.89
MW-4	60	55 - 60	244.61	09/02/03	35.67			208.94
				03/06/04	Not Measured			
				09/08/04	Not Measured			
				10/09/07	44.94			199.67
				06/11/08	46.67			197.94
				09/16/08	45.02			199.59
				02/16/09	41.83			202.78
				07/29/09	42.88			201.73
				12/29/10	42.75			201.86
				05/13/11	45.81			198.80
				11/21/11	45.50			199.11
				05/09/12	49.11			195.50
				11/20/12	49.03			195.58
				05/23/13	47.93			196.68
				12/26/13	45.12			199.49
				05/15/14	39.74			204.87
				12/16/14	43.47			201.14
				06/09/15	40.72			203.89
MW-5	45	25 - 45	244.65	09/02/03	40.00			204.65
				03/06/04	Not Measured			
				09/08/04	Not Measured			
				10/09/07	42.40			202.25
				06/11/08	43.83			200.82
				09/16/08	42.82			201.83
				02/16/09	39.48			205.17
				07/29/09	40.16			204.49
				12/29/10	41.17			203.48
				05/13/11	42.71			201.94
				11/21/11	43.95			200.70
				05/09/12	44.62			200.03
				11/20/12	Not Measured			
				05/24/13	Not Measured			
				12/26/13	43.03			201.62
				05/12/14	39.96			204.69
				12/16/14	41.10			203.55
				06/09/15	38.26			206.39

TABLE 3
HISTORICAL GROUNDWATER ELEVATION DATA

FORMER PANTRY 3031
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS & RAVENEL PROJECT NO. 02070860.00

Well ID	Total Depth of Well (ft)	Screened Interval (ft)	Top of Casing Elevation	Date	Depth to Water (ft bls)	Depth to Free Product (ft bls)	Free Product Thickness	Groundwater Elevation
MW-6	50	30 - 50	244.25	09/02/03	39.00			205.25
				03/06/04	37.73			206.52
				09/08/04	38.75			205.50
				10/09/07	Not Measured			
				06/11/08	Not Measured			
				09/16/08	41.91			202.34
				02/16/09	38.69			205.56
				07/29/09	39.41			204.84
				12/29/10	40.38			203.87
				05/13/11	41.87			202.38
				11/21/11	43.15			201.10
				05/09/12	46.75			197.50
				11/20/12	44.96			199.29
				05/24/13	44.70			199.55
				12/26/13	42.20			202.05
				05/12/14	39.00			205.25
				12/16/14	40.33			203.92
				06/09/15	37.50			206.75
MW-7	50	30 - 50	243.66	09/02/03	38.88			204.78
				03/06/04	37.65			206.01
				09/08/04	38.68			204.98
				10/09/07	Abandoned			
MW-8	45	25 - 45	244.99	09/02/03	Not Measured			
				03/06/04	Not Measured			
				09/08/04	Not Measured			
				10/09/07	Not Measured			
				06/11/08	Not Measured			
				09/16/08	43.94			201.05
				02/16/09	40.70			204.29
				07/29/09	41.09			203.90
				06/21/10	39.41			205.58
				12/29/10	42.01			202.98
				05/13/11	43.34			201.65
				11/21/11	44.85			200.14
				05/09/12	Not Measured			
				11/20/12	Not Measured			
				05/24/13	Not Measured			
				12/26/13	43.96			201.03
				05/12/14	41.84			203.15
				12/16/14	42.00			202.99
				06/09/15	39.45			205.54
MW-9	50	20 - 50	243.86	09/02/03	39.19			204.67
				03/06/04	Not Measured			
				09/08/04	Not Measured			
				10/09/07	41.93			201.93
				06/11/08	43.27			200.59
				09/16/08	42.26			201.60
				02/16/09	40.52			203.34
				07/29/09	39.76			204.10
				06/21/10	37.69			206.17
				12/29/10	40.60			203.26
				05/13/11	42.09			201.77
				11/21/11	43.45			200.41
				05/08/12	44.49			199.37
				11/20/12	45.31			198.55
				05/23/13	45.15			198.71
				12/26/13	42.60			201.26
				05/12/14	39.61			204.25
				12/16/14	40.76			203.10
				06/09/15	38.06			205.80

TABLE 3
HISTORICAL GROUNDWATER ELEVATION DATA

FORMER PANTRY 3031
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS & RAVENEL PROJECT NO. 02070860.00

Well ID	Total Depth of Well (ft)	Screened Interval (ft)	Top of Casing Elevation	Date	Depth to Water (ft bls)	Depth to Free Product (ft bls)	Free Product Thickness	Groundwater Elevation
MW-10	50	20 - 50	244.33	09/02/03	40.11			204.22
				03/06/04	38.64			205.69
				09/08/04	39.72			204.61
				10/09/07	42.65			201.68
				06/11/08	44.09			200.24
				09/16/08	43.15			201.18
				02/16/09	40.03			204.30
				07/29/09	40.45			203.88
				06/21/10	38.67			205.66
				12/29/10	41.25			203.08
				05/13/11	42.72			201.61
				11/21/11	44.19			200.14
				05/08/12	45.19			199.14
				11/20/12	45.98			198.35
				05/23/13	46.04			198.29
				12/26/13	43.20			201.13
				05/12/14	40.78			203.55
				12/16/14	41.45			202.88
				06/09/15	38.87			205.46
MW-11	50	20 - 50	244.57	09/02/03				244.57
				03/06/04	Not Measured			
				09/08/04	Not Measured			
				10/09/07	42.92			201.65
				06/11/08	44.46			200.11
				09/16/08	43.65			200.92
				02/16/09	40.39			204.18
				07/29/09	39.07			205.50
				12/29/10	41.21			203.36
				05/13/11	42.88			201.69
				11/21/11	44.49			200.08
				05/08/12	45.56			199.01
				11/19/12	46.37			198.20
				05/23/13	46.35			198.22
				12/26/13	42.68			201.89
				05/12/14	41.79			202.78
				12/16/14	41.10			203.47
				06/09/15	39.16			205.41

TABLE 3
HISTORICAL GROUNDWATER ELEVATION DATA

FORMER PANTRY 3031
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS & RAVENEL PROJECT NO. 02070860.00

Well ID	Total Depth of Well (ft)	Screened Interval (ft)	Top of Casing Elevation	Date	Depth to Water (ft bls)	Depth to Free Product (ft bls)	Free Product Thickness	Groundwater Elevation
MW-12	50	20 - 50	244.82	09/02/03	Not Measured			
				03/06/04	Not Measured			
				09/08/04	Not Measured			
				10/09/07	Not Measured			
				06/11/08	Not Measured			
				09/16/08	43.30			201.52
				02/16/09	39.74			205.08
				07/29/09	40.65			204.17
				06/21/10	38.48			206.34
				12/29/10	41.55			203.27
				05/13/11	41.55			203.27
				11/21/11	44.31			200.51
				05/09/12	45.37			199.45
				11/19/12	46.19			198.63
				05/23/13	45.95			198.87
				12/26/13	43.44			201.38
				05/12/14	40.30			204.52
				12/16/14	41.42			203.40
				06/09/15	38.24			206.58
MW-13	50	20 - 50	245.02	09/02/03	39.50			205.52
				03/06/04	38.06			206.96
				09/08/04	39.14			205.88
				10/09/07	42.30			202.72
				06/11/08	43.70			201.32
				09/16/08	42.37			202.65
				02/16/09	39.06			205.96
				07/29/09	40.01			205.01
				06/21/10	37.71			207.31
				12/29/10	41.07			203.95
				05/13/11	42.61			202.41
				11/21/11	43.83			201.19
				05/09/12	44.89			200.13
				11/20/12	45.76			199.26
				05/24/13	45.45			199.57
				12/26/13	42.96			202.06
				05/12/14	39.26			205.76
				12/16/14	41.01			204.01
				06/09/15	38.10			206.92
MW-14	50	20 - 50	243.33	09/02/03	38.32			205.01
				03/06/04	Not Measured			
				09/08/04	Not Measured			
				10/09/07	42.53			200.80
				06/11/08	42.81			200.52
				09/16/08	41.57			201.76
				02/16/09	38.79			204.54
				07/29/09	39.32			204.01
				06/21/10	37.22			206.11
				12/29/10	40.18			203.15
				05/13/11	41.69			201.64
				11/21/11	42.97			200.36
				05/08/12	44.02			199.31
				11/20/12	Not Measured			
				05/24/13	Not Measured			
				12/26/13	42.10			201.23
				05/12/14	38.80			204.53
				12/16/14	40.32			203.01
				06/09/15	37.73			205.60

TABLE 3
HISTORICAL GROUNDWATER ELEVATION DATA

FORMER PANTRY 3031
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS & RAVENEL PROJECT NO. 02070860.00

Well ID	Total Depth of Well (ft)	Screened Interval (ft)	Top of Casing Elevation	Date	Depth to Water (ft bls)	Depth to Free Product (ft bls)	Free Product Thickness	Groundwater Elevation
MW-15	52	22 - 52	241.40	09/02/03	Not Measured			
				03/06/04	Not Measured			
				09/08/04	Not Measured			
				10/09/07	41.03			200.37
				06/11/08	41.86			199.54
				09/16/08	40.90			200.50
				02/16/09	37.91			203.49
				07/29/09	38.10			203.30
				06/21/10	36.41			204.99
				12/29/10	38.85			202.55
				05/13/11	40.33			201.07
				11/21/11	41.81			199.59
				05/08/12	42.81			198.59
				11/16/12	43.72			197.68
				05/23/13	44.03			197.37
				12/26/13	40.89			200.51
				05/12/14	38.50			202.90
				12/16/14	39.08			202.32
				06/09/15	36.76			204.64
MW-16	50	20 - 50	243.12	09/02/03	Not Measured			
				03/06/04	Not Measured			
				09/08/04	Not Measured			
				10/09/07	41.52			201.60
				06/11/08	43.12			200.00
				09/16/08	42.35			200.77
				02/16/09	39.04			204.08
				07/29/09	39.34			203.78
				06/21/10	37.72			205.40
				12/29/10	40.23			202.89
				05/13/11	41.59			201.53
				11/21/11	43.13			199.99
				05/08/12	44.24			198.88
				11/16/12	45.00			198.12
				05/22/13	45.06			198.06
				12/26/13	42.19			200.93
				05/12/14	39.95			203.17
				12/16/14	40.32			202.80
				06/09/15	37.78			205.34
MW-17	50	20 - 50	245.13	09/02/03	38.75			206.38
				03/06/04	Not Measured			
				09/08/04	Not Measured			
				10/09/07	Destroyed			
MW-17A	50	25-50	245.53	07/29/09	40.40			205.13
				06/21/10	37.94			207.59
				12/29/10	41.35			204.18
				05/13/11	Not Measured			
				11/21/11	44.07			201.97
				05/09/12	45.11			200.42
				11/19/12	46.15			199.38
				05/24/13	45.84			199.69
				12/26/13	43.30			202.23
				05/12/14	39.43			206.10
				12/16/14	41.27			204.26
				06/09/15	38.22			207.31
MW-18	50	20 - 50	246.1	09/02/03	Not Measured			
				03/06/04	Not Measured			
				09/08/04	Not Measured			
				10/09/07	43.02			203.08
				06/11/08	44.43			201.67
				09/16/08	43.23			202.87
				02/16/09	39.54			206.56
				07/29/09	40.79			205.31
				06/21/10	38.10			208.00
				12/29/10	41.76			204.34
				05/13/11	45.13			200.97
				11/21/11	44.53			201.57
				05/09/12	45.53			200.57
				11/19/12	46.61			199.49
				05/24/13	46.21			199.89
				12/26/13	43.74			202.36
				05/12/14	39.51			206.59
				12/16/14	41.75			204.35
				06/09/15	38.38			207.72

TABLE 3
HISTORICAL GROUNDWATER ELEVATION DATA

FORMER PANTRY 3031
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS & RAVENEL PROJECT NO. 02070860.00

Well ID	Total Depth of Well (ft)	Screened Interval (ft)	Top of Casing Elevation	Date	Depth to Water (ft bls)	Depth to Free Product (ft bls)	Free Product Thickness	Groundwater Elevation
MW-19	50	20 - 50	244.51	09/02/03	38.89			205.62
				03/06/04	37.61			206.90
				09/08/04	30.37			214.14
				10/09/07	Not Measured			
				06/11/08	Not Measured			
				09/16/08	44.67			199.84
				02/16/09	38.68			205.83
				07/29/09	38.66			205.85
				06/21/10	37.14			207.37
				12/29/10	40.79			203.72
				05/13/11	Not Measured			
				11/21/11	Not Measured			
				05/08/12	44.34			200.17
				11/20/12	45.27			199.24
				05/24/13	45			199.51
				12/26/13	42.5			202.01
				05/12/14	Not Measured			
				12/16/14	40.65			203.86
				06/09/15	37.19			
MW-20	50	25 - 50	244.58	09/02/03	Not Measured			
				03/06/04	Not Measured			
				09/08/04	Not Measured			
				10/09/07	42.00			202.58
				06/11/08	43.25			201.33
				09/16/08	44.69			199.89
				02/16/09	38.74			205.84
				07/29/09	39.22			205.36
				06/21/10	37.21			207.37
				12/29/10	40.85			203.73
				05/13/11	42.32			202.26
				11/21/11	43.58			201.00
				05/09/12	44.48			200.10
				11/20/12	45.36			199.22
				05/24/13	44.99			199.59
				12/26/13	42.60			201.98
				05/12/14	38.55			206.03
				12/16/14	40.74			203.84
				06/09/15	37.92			206.66
MW-21	50	25 - 50	244.62	09/02/03	Not Measured			
				03/06/04	Not Measured			
				09/08/04	Not Measured			
				10/09/07	42.07			203.97
				06/11/08	43.43			202.61
				09/16/08	42.00			204.04
				02/16/09	38.80			207.24
				07/29/09	39.81			204.81
				06/21/10	37.35			207.27
				12/29/10	40.91			203.71
				05/13/11	42.37			202.25
				11/21/11	43.64			200.98
				05/09/12	Destroyed			
				05/24/13	Destroyed			
				12/26/13	42.69			201.93
				05/12/14	38.81			205.81
				12/16/14	40.80			203.82
				06/09/15	Not Measured			

TABLE 3
HISTORICAL GROUNDWATER ELEVATION DATA

FORMER PANTRY 3031
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS & RAVENEL PROJECT NO. 02070860.00

Well ID	Total Depth of Well (ft)	Screened Interval (ft)	Top of Casing Elevation	Date	Depth to Water (ft bls)	Depth to Free Product (ft bls)	Free Product Thickness	Groundwater Elevation
MW-22	60	40 - 50	244.95	09/02/03	20.30			225.74
				03/06/04	Not Measured			
				09/08/04	Not Measured			
				10/09/07	45.50			200.54
				06/11/08	46.65			199.39
				09/16/08	44.53			201.51
				02/16/09	42.30			203.74
				07/29/09	43.75			202.29
				06/21/10	41.64			204.40
				12/29/10	44.32			200.63
				05/13/11	47.63			197.32
				11/21/11	47.05			197.90
				05/09/12	49.32			195.63
				11/19/12	49.34			195.61
				05/24/13	48.91			196.04
				12/26/13	46.17			198.78
				05/12/14	42.20			202.75
				12/16/14	44.45			200.50
				06/09/15	41.93			203.02
MW-23	50	20 - 50	246.04	09/02/03	Not Measured			
				03/06/04	Not Measured			
				09/08/04	Not Measured			
				10/09/07	42.83			203.21
				06/11/08	43.98			202.06
				09/16/08	42.30			203.74
				02/16/09	39.28			206.76
				07/29/09	40.53			205.51
				06/21/10	37.67			208.37
				12/29/10	41.51			204.53
				05/13/11	44.97			201.07
				11/21/11	Not Measured			
				05/08/12	Not Measured			
				11/19/12	Not Measured			
				05/23/13	Not Measured			
				12/26/13	43.44			202.6
				05/12/14	38.98			207.06
				12/16/14	41.6			204.44
				06/09/15	38.35			207.69
MW-24	39	20 - 50	246.96	09/02/03	40.29			206.67
				03/06/04	Not Measured			
				09/08/04	Not Measured			
				10/09/07	43.90			203.06
				06/11/08	45.05			201.91
				09/16/08	42.53			204.43
				02/16/09	40.52			206.44
				07/29/09	41.38			205.58
				06/21/10	38.92			208.04
				12/29/10	42.64			204.32
				05/13/11	46.17			200.79
				11/21/11	45.30			201.66
				05/09/12	46.27			200.69
				11/19/12	47.23			199.73
				05/24/13	46.82			200.14
				12/26/13	44.50			202.46
				05/12/14	40.19			206.77
				12/16/14	42.64			204.32
				06/09/15	39.72			207.24
MW-25	45	20-45	243.28	07/29/09	39.28			204.00
				06/21/10	37.30			205.98
				12/29/10	39.92			203.36
				05/13/11	41.29			201.99
				11/21/11	42.67			200.61
				05/08/12	43.21			200.07
				11/19/12	Not Measured			
				05/23/13	Not measured			
				12/26/13	41.97			201.31
				05/12/14	39.65			203.63
				12/16/14	40.50			202.78
				06/09/15	37.60			205.68

TABLE 3
HISTORICAL GROUNDWATER ELEVATION DATA

FORMER PANTRY 3031
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS & RAVENEL PROJECT NO. 02070860.00

Well ID	Total Depth of Well (ft)	Screened Interval (ft)	Top of Casing Elevation	Date	Depth to Water (ft bls)	Depth to Free Product (ft bls)	Free Product Thickness	Groundwater Elevation
MW-26	50	25-50	244.43	07/29/09	40.28			204.15
				6/21/2010	38.60			205.83
				12/29/2010	41.08			203.35
				5/13/2011	42.37			202.06
				11/21/2011	43.98			200.45
				5/8/2012	45.03			199.40
				11/19/2012	45.91			198.52
				5/23/2013	45.85			198.58
				12/26/2013	42.64			201.79
				5/12/2014	40.20			204.23
				12/16/14	41.12			203.31
				06/09/15	38.54			205.89
MW-27	50	20-50	244.92	07/29/09	40.83			204.09
				06/21/10	39.19			205.73
				12/29/10	41.67			203.25
				05/13/11	43.17			201.75
				11/21/11	44.52			200.40
				05/08/12	45.50			199.42
				11/16/12	46.45			198.47
				05/22/13	46.49			198.43
				12/26/13	43.11			201.81
				05/12/14	40.97			203.95
				12/16/14	41.55			203.37
				06/09/15	39.36			205.56
MW-28	55	25-55	245.16	11/21/11	44.75			200.41
				05/08/12	45.65			199.51
				11/16/12	46.67			198.49
				05/22/13	46.62			198.54
				12/26/13	43.61			201.55
				05/12/14	41.53			203.63
				12/16/14	41.70			203.46
				06/09/15	39.43			205.73
MW-29	50	25-50	242.99	11/21/11	42.45			200.54
				05/08/12	43.41			199.58
				11/16/12	44.31			198.68
				05/22/13	44.60			198.39
				12/26/13	44.40			198.59
				05/12/14	39.44			203.55
				12/16/14	39.45			203.54
				06/09/15	37.44			205.55
MW-30	55	25-55	245.04	11/21/11	45.20			199.84
				05/08/12	46.01			199.03
				11/16/12	47.07			197.97
				05/22/13	47.13			197.91
				12/26/13	44.01			201.03
				05/12/14	42.03			203.01
				12/16/14	42.10			202.94
				06/09/15	40.07			204.97

TABLE 4
SUMMARY OF GROUNDWATER ANALTYICAL RESULTS - HITS ONLY
FORMER PANTRY 3031
8215 CLIFFDALE ROAD
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS RAVENEL PROJECT NO. 02070860.00

Client Sample ID					MW-1A		MW-3		MW-4		MW-5		MW-6		MW-8		MW-9		MW-10		MW-11		MW-12		MW-13		MW-14		MW-15		MW-16	
Collect Date					6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015	
Method	Parameter	Units	NC 2L Standard (µg/L)	GCL's (µg/L)	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
6200B-1997	Benzene	µg/l	1	5,000	**4.6**		<1		<1		<1		**57**		<1		<1		<1		**5.6**		<1		**150**		<1		<1		**13**	
6200B-1997	Di-isopropyl ether	µg/l	70	70,000	**12**		<1		**2.2**		<1		**66**		**8.8**		**1.1**		**2.6**		**15**		<1		**66**		<1		<1		**19**	
6200B-1997	Ethylbenzene	µg/l	600	84,500	**3.5**		<1		<1		<1		**240**		<1		<1		**11**		**3.3**		<1		**630**		<1		<1		**32**	
6200B-1997	Isopropylbenzene	µg/l	70	25,000	<1		<1		<1		<1		**7.2**		<1		<1		**3.7**		**1**		<1		**34**		<1		<1		**2.6**	
6200B-1997	Methyl tert-butyl ether	µg/l	20	20,000	**70**		**15**		**2.2**		**7.6**		**410**		**35**		**46**		**68**		**100**		**1.5**		**540**		<1		<1		**160**	
6200B-1997	Naphthalene	µg/l	6	6,000	**7.1**		<5		<5		<5		**160**		<5		<5		**71**		**20**		<5		**720**		<5		<5		**51**	
6200B-1997	n-Propylbenzene	µg/l	70	30,000	<1		<1		<1		<1		**21**		<1		<1		**8.1**		<1		<1		**110**		<1		<1		**3**	
6200B-1997	Styrene	µg/l	70	70,000	**1**		<1		<1		<1		**50**		<1		<1		**1.4**		**1.5**		<1		**140**		<1		<1		**9.1**	
6200B-1997	Toluene	µg/l	600	260,000	<5		<5		<5		<5		**1400**		<5		<5		<5		<5		<5		**1400**		<5		<5		**30**	
6200B-1997	1,2,4-Trimethylbenzene	µg/l	400	28,500	<1		<1		<1		<1		**280**		<1		**3.7**		**74**		**1**		<1		**1700**		<1		<1		**2.1**	
6200B-1997	1,3,5-Trimethylbenzene	µg/l	400	25,000	<1		<1		<1		<1		**94**		<1		<1		**11**		<1		<1		**530**		<1		<1		**4.1**	
6200B-1997	o-Xylene	µg/l	500	85,500	**6**		<1		<1		<1		**470**		<1		**2.9**		**8.3**		**9.6**		<1		**2800**		<1		<1		**61**	
6200B-1997	m&p-Xylenes	µg/l	500	85,500	<2		<2		<2		<2		**720**		<2		**3.5**		**30**		**3.1**		<2		**3300**		<2		<2		**8.6**	
6010C	Iron	µg/l	300	NL	**860**		**3300**		**1100**		**1800**		**20000**		**160**		**210**		**280**		**240**		**3600**		**5600**		**230**		**440**		**850**	
6010C	Magnesium	µg/l	NL	NL	**1100**		<1000		<1000		**1100**		**1900**		<1000		**2000**		<1000		**1100**		**2000**		<1000		**1600**		**1300**		<1000	
6010C	Manganese	µg/l	50	NL	**39**		<10		<10		<10		**46**		<10		**10**		**32**		**700**		<10		**19**		<10		**19**		**550**	
2320 B-2011	Alkalinity	µg/l	NL	NL	<20000		<20000		<20000		<20000		**35000**		<20000		<20000		<20000		<20000		<20000		**22000**		<20000		<20000		<20000	
9056MOD	Nitrate	µg/l	10,000	NL	**390**		**2400**		**2900**		**6400**		**2400**		NA		NA		NA		NA		**2400**		<100		NA		NA		NA	
9056MOD	Sulfate	µg/l	250,000	NL	<5000		<5000		<5000		<5000		<5000		<5000		<5000		<5000		<5000		<5000		<5000		<5000		<5000		<5000	

Notes:

1.) All results provided in ug/L (micrograms per liter) or parts per billion.

2.) Compounds analyzed for by laboratory but not listed were not detected above laboratory detection limits. See the laboratory report included in the Appendix for a full list of constituents.

3.) NC 2L Standard - North Carolina Groundwater Quality Standard as per NC Administrative Code 15A NCAC 02L.

4.) GCLs for Groundwater = NCDENR UST Section Gross Contamination Levels for Groundwater.

NL	= Not Listed
NA	= Compound Not Analyzed for by Laboratory.
NR	= Compound Not Reported By Previous Consultants
ND	= Compound Not Detected.
Result	= Result Exceeds Laboratory Detection Limits
Result	= Result Exceeds 2L Standard
Result	= Result Exceeds GCL Value

Qualifiers:

V3 - (ESC) - Additional QC Info: The internal standard exhibited poor recovery due to sample matrix interference. The analytical results will be biased high. BDL results will be unaffected.

J3 - The associated batch QC was outside the established quality control range for precision.

TABLE 4
SUMMARY OF GROUNDWATER ANALTYICAL RESULTS - HITS ONLY
FORMER PANTRY 3031
8215 CLIFFDALE ROAD
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS RAVENEL PROJECT NO. 02070860.00

Client Sample ID					MW-17A		MW-18		MW-19		MW-20		MW-22		MW-23		MW-24		MW-25		MW-26		MW-27		MW-28		MW-29		MW-30	
Collect Date					6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015		6/9/2015	
Method	Parameter	Units	NC 2L Standard (µg/L)	GCL's (µg/L)	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual	Value	Qual
6200B-1997	Benzene	µg/l	1	5,000	**160**		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1	
6200B-1997	Di-isopropyl ether	µg/l	70	70,000	**63**		<1		<1		<1		<1		<1		<1		<1		<1		**1.1**		<1		<1		<1	
6200B-1997	Ethylbenzene	µg/l	600	84,500	**210**		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1	
6200B-1997	Isopropylbenzene	µg/l	70	25,000	<50		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1	
6200B-1997	Methyl tert-butyl ether	µg/l	20	20,000	**63**		<1		**4.9**		<1		<1		<1		<1		<1		**5.6**		**1.2**		<1		**2.5**		<1	
6200B-1997	Naphthalene	µg/l	6	6,000	<250		<5		<5		<5		<5		<5		<5		<5		<5		<5		<5		<5		<5	
6200B-1997	n-Propylbenzene	µg/l	70	30,000	<50		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1	
6200B-1997	Styrene	µg/l	70	70,000	<50		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1	
6200B-1997	Toluene	µg/l	600	260,000	**700**		<5		<5		<5		<5		<5		<5		<5		<5		<5		<5		<5		<5	
6200B-1997	1,2,4-Trimethylbenzene	µg/l	400	28,500	**260**		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1	
6200B-1997	1,3,5-Trimethylbenzene	µg/l	400	25,000	**83**		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1		<1	
6200B-1997	o-Xylene	µg/l	500	85,500	**440**		<1		<1		**1.1**		<1		<1		<1		<1		<1		<1		<1		<1		<1	
6200B-1997	m&p-Xylenes	µg/l	500	85,500	**890**		<2		<2		**2.5**		<2		<2		<2		<2		<2		<2		<2		<2		<2	
6010C	Iron	µg/l	300	NL	**6700**		**1300**		**8200**		**360**		**930**		**770**		**140**		**260**		**1800**		<100		**140**		**130**		**110**	
6010C	Magnesium	µg/l	NL	NL	**1000**		<1000		<1000		<1000		<1000		**1200**		<1000		**1400**		<1000		<1000		<1000		<1000		**2000**	
6010C	Manganese	µg/l	50	NL	**16**		<10		**20**		<10		<10		<10		<10		<10		<10		**15**		<10		**22**		<10	
2320 B-2011	Alkalinity	µg/l	NL	NL	**21000**		<20000		<20000		<20000		<20000		<20000		<20000		<20000		<20000		<20000		<20000		<20000		<20000	
9056MOD	Nitrate	µg/l	10,000	NL	**420**		**760**		**2900**		**2900**		**1300**		**2600**		**2100**		NA		NA		NA		NA		NA		NA	
9056MOD	Sulfate	µg/l	250,000	NL	<5000		<5000		<5000		<5000		<5000		<5000		<5000		<5000		<5000		<5000		<5000		<5000		<5000	

Notes:

1.) All results provided in ug/L (micrograms per liter) or parts per billion.

2.) Compounds analyzed for by laboratory but not listed were not detected above laboratory detection limits. See the laboratory report included in the Appendix for a full list of constituents.

3.) NC 2L Standard - North Carolina Groundwater Quality Standard as per NC Administrative Code 15A NCAC 02L.

4.) GCLs for Groundwater = NCDENR UST Section Gross Contamination Levels for Groundwater.

NL	= Not Listed
NA	= Compound Not Analyzed for by Laboratory.
NR	= Compound Not Reported By Previous Consultants
ND	= Compound Not Detected.
Result	= Result Exceeds Laboratory Detection Limits
Result	= Result Exceeds 2L Standard
Result	= Result Exceeds GCL Value

Qualifiers:

V3 - (ESC) - Additional QC Info: The internal standard exhibited poor recovery due to sample matrix interference. The analytical results will be biased high. BDL results will be unaffected.

J3 - The associated batch QC was outside the established quality control range for precision.

TABLE 5
SUMMARY OF HISTORICAL GROUNDWATER VOC ANALYTICAL RESULTS
FORMER PANTRY 3031
8215 CLIFFDALE ROAD
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS & RAVENEL PROJECT NO. 02070860.00

Analytical Method		VOC (mg/L) by EPA Methods 601 & 602											
Contaminant Of Concern													
Well ID	Date Collected	Benzene	Ethyl benzene	Toluene	Total Xylenes	MTBE	Naphthalene	Isopropyl benzene	n-Propyl benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	IPE	EDB
2L Standard (mg/L)		1	600	600	500	20	6	70	70	400	400	70	0.02
GCL (mg/L)		5,000	84,500	260,000	85,500	200,000	6,000	25,000	30,000	28,500	25,000	70,000	50
MW-1	05/18/98	**180**	BDL	2.0	18	**280**						3.0	NA
	09/23/98	No Data											
	01/25/99	No Data											
	03/17/99	**72**	BDL	6.8	BDL	110						1.5	NA
	10/25/01	No Data											
	12/18/02	Not Sampled. Well Dry											
	03/13/03	<1	<1	<5	<3	11						<5	<5
	06/17/03	Not Sampled. Well Dry											
	09/02/03	<1.0	<1.0	<5.0	<3.0	9.5						<1.0	NA
	03/06/04	No Data											
	09/08/04	No Data											
	10/09/07	DESTROYED											
MW-1A	02/13/09	**250**	140	**1500**	**2600**	**890**	**92**	<10	<10	330	180	61	<10
	07/31/09	**260**	180	<500	**900**	**590**	<500	<100	<100	120	<100	120	<100
	06/22/10	**550**	910	**1100**	**2400**	**860**	**340**	**31**	120	**1100**	380	**240**	<100
	12/30/10	**310**	140	<50	**193**	**380**	**95**	<10	17	90	100	**160**	<10
	05/18/11	**40**	2.3	30	**15.7**	**52**	**8.5**	BDL	BDL	2.6	BDL	29	BDL
	11/22/11	**55**	BDL	BDL	BDL	**430**	BDL	BDL	BDL	BDL	BDL	55	BDL
	05/09/12	**1.6**	1.7	6.6	13.7	**98**	BDL	BDL	BDL	3.5	1.2	63	BDL
	11/20/12	BDL	BDL	BDL	BDL	**100**	BDL	BDL	BDL	BDL	BDL	25	BDL
	12/11/13	**2.3**	3.8	BDL	31	**120**	**16**	BDL	1.7	7.7	4.5	BDL	BDL
	05/14/14	**3.4**	22	5.4	35	**180**	**75**	5.6	14	24	26	BDL	BDL
	12/18/14	**2.4**	1.3	BDL	BDL	**57**	BDL	BDL	BDL	BDL	BDL	8.4	BDL
	06/09/15	**4.6**	3.5	BDL	6.0	**70**	**7.1**	BDL	BDL	BDL	6.0	12	BDL
MW-2	05/18/98	**92**	BDL	12	70	**6,100**						56	NA
	09/23/98	No Data											
	01/25/99	No Data											
	03/17/99	Not Sampled. Well Dry											
	10/25/01	No Data											
	12/18/02	Not Sampled. Well Dry											
	03/13/03	Not Sampled. Well Dry											
	06/17/03	Not Sampled. Well Dry											
	09/02/03	Not Sampled. Well Dry											
	03/06/04	ABANDONED											
MW-3	05/18/98	**1**	BDL	BDL	BDL	42						BDL	NA
	09/23/98	No Data											
	01/25/99	No Data											
	03/17/99	BDL	BDL	BDL	BDL	43						BDL	BDL
	10/25/01	No Data											
	12/18/02	<0.5	<0.5	<0.5	<1.5	4.2						<1.0	<0.01
	03/13/03	<1	<1	<5	<3	5.6						<5	<5
	06/17/03	<1.0	<1.0	<5.0	<3.0	4.4						<1.0	NA
	09/02/03	No Data											
	03/06/04	No Data											
	09/08/04	No Data											
	10/09/07	BDL	BDL	BDL	BDL	1.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/12/08	Not Sampled. Well Damaged											
	09/16/08												
	02/13/09												
	07/28/09												
	06/22/10	<1.0	<1.0	<5.0	<3.0	1.5	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/30/10	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/13/11	Not Sampled											
	12/01/11	BDL	BDL	BDL	BDL	4.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/09/12	BDL	1.8	7.5	15.9	1.5	BDL	BDL	BDL	4.0	1.5	BDL	BDL
	11/20/12	BDL	BDL	BDL	BDL	8.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/11/2013	BDL	BDL	BDL	BDL	**51**	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/14/14	BDL	BDL	BDL	BDL	**44**	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/18/14	BDL	BDL	BDL	BDL	**32**	BDL	BDL	BDL	BDL	BDL	1.6	BDL
	06/09/15	BDL	BDL	BDL	BDL	15	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-4	05/18/98	BDL	BDL	BDL	BDL	BDL						BDL	BDL
	09/23/98	No Data											
	01/25/99	No Data											
	03/17/99	BDL	BDL	BDL	BDL	BDL						BDL	BDL
	10/25/01	No Data											
	12/18/02	<0.5	<0.5	<0.5	<1.5	<1.0						<1.0	<0.01
	03/13/03	<1	<1	<5	<3	<5						<5	<5
	06/17/03	<1.0	<1.0	<5.0	<3.0	<1.0						<1.0	NA
	09/02/03	<1.0	<1.0	<5.0	<3.0	<1.0						<1.0	NA
	03/06/04	No Data											
	09/08/04	No Data											
	10/09/07	BDL	BDL	BDL	1.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/12/08	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/16/08	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	02/13/09	<1.0	<1.0	<5.0	<3.0	2	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/31/09	<1.0	<1.0	<5.0	<3.0	1.5	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/22/10	<1.0	<1.0	<5.0	<3.0	9.6	<5.0	<1.0	<1.0	<1.0	<1.0	3.8	<1.0
	12/29/10	<1.0	<1.0	<5.0	<3.0	2.7	<5.0	<1.0	<1.0	<1.0	<1.0	3.8	<1.0
	05/18/11	BDL	BDL	BDL	BDL	1.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/01/11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/09/12	BDL	1.1	5.0	10.1	5.1	BDL	BDL	BDL	2.3	BDL	BDL	BDL
	11/20/12	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/11/13	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/18/14	BDL	BDL	BDL	BDL	1.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/14/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2.0	BDL
	06/09/15	BDL	BDL	BDL	BDL	2.2	BDL	BDL	BDL	BDL	BDL	2.2	BDL

TABLE 5
SUMMARY OF HISTORICAL GROUNDWATER VOC ANALYTICAL RESULTS
FORMER PANTRY 3031
8215 CLIFFDALE ROAD
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS & RAVENEL PROJECT NO. 02070860.00

Analytical Method		VOC (mg/L) by EPA Methods 601 & 602											
Contaminant Of Concern													
Well ID	Date Collected	Benzene	Ethyl benzene	Toluene	Total Xylenes	MTBE	Naphthalene	Isopropyl benzene	n-Propyl benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	IPE	EDB
2L Standard (mg/L)		1	600	600	500	20	6	70	70	400	400	70	0.02
GCL (mg/L)		5,000	84,500	260,000	85,500	200,000	6,000	25,000	30,000	28,500	25,000	70,000	50
MW-5	05/18/98	**99**	1.0	97	135	BDL						46	BDL
	09/23/98	No Data											
	01/25/99	No Data											
	03/17/99	**80**	6.1	11	53	17						BDL	BDL
	10/25/01	No Data											
	12/18/02	Not Sampled. Well Dry											
	03/13/03	Not Sampled. Well Dry											
	06/17/03	Not Sampled. Well Dry											
	09/02/03	<1.0	<5.0	<1.0	<3.0	<1.0						<1.0	NA
	03/06/04	No Data											
	09/08/04	No Data											
	10/09/07	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/12/08	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/16/08	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	02/13/09	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/31/09	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/22/10	<1.0	<1.0	<5.0	<3.0	1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/30/10	<1.0	3.6	6.5	35.6	<1.0	<5.0	<1.0	<1.0	7.8	2.6	<1.0	<1.0
	05/13/11	BDL	BDL	BDL	BDL	1.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/01/11	BDL	BDL	BDL	BDL	2.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/09/12	BDL	1.1	5.1	10.2	5.2	BDL	BDL	BDL	2.5	BDL	BDL	BDL
	11/20/12	Not Sampled. Well Dry											
	12/16/13	BDL	BDL	BDL	BDL	3.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/14/14	BDL	BDL	BDL	BDL	15	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/18/14	BDL	BDL	BDL	BDL	2.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/09/15	BDL	BDL	BDL	BDL	7.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-6	05/18/98	Not Installed											
	09/23/98	**75**	1.5	30	19.3	**340**						7.0	BDL
	01/25/99	No Data											
	03/17/99	**660**	**120**	620	**1,100**	74						**210**	**0.048**
	10/25/01	No Data											
	12/18/02	**108.1**	<0.5	46.5	33.5	38.9						10.3	<0.01
	03/13/03	**110**	<5	<25	<15	89						<25	<25
	06/17/03	<1.0	<1.0	<5.0	<3.0	1.1						4.6	NA
	09/02/03	**1,100**	**700**	**8,700**	**5,800**	<200						**240**	NA
	03/06/04	**100**	<29	310	210	<50						51	NA
	09/08/04	No Data											
	10/09/07	Not Sampled											
	06/12/08	Not Sampled											
	09/16/08	**280**	**1,200**	**2,300**	**7,600**	**840**	**460**	57	**150**	**1,500**	**360**	**75**	<10
	02/13/09	**110**	**680**	**1,200**	**4,700**	**470**	**460**	<50	**54**	**550**	**200**	**<50**	<50
	07/31/09	**290**	**340**	**2,500**	**1,960**	**850**	**<500**	**<100**	**<100**	**350**	110	**150**	<100
	06/22/10	**250**	**870**	**2,500**	**4,900**	**600**	**320**	<50	**190**	**1,900**	**590**	56	<50
	12/30/10	**580**	**770**	**6,000**	**3,800**	**870**	**<250**	<50	**80**	**580**	190	**200**	<50
	05/18/11	**40**	**4.8**	73	37	**58**	**8**	BDL	BDL	**5**	2.2	**27**	BDL
	11/22/11	**350**	560	**4,400**	**3,100**	**760**	**190**	17	58	**540**	150.0	**140**	BDL
	05/09/12	**260**	96	**1,100**	**1,290**	**840**	BDL	BDL	BDL	200	98	**230**	BDL
	11/20/12	**520**	580	**2,200**	**3,500**	**2,600**	**230**	20	**72**	**960**	320	20	BDL
	12/11/13	BDL	120	BDL	**750**	**46**	**310**	14	**36**	**520**	120	BDL	BDL
	05/14/14	BDL	63	BDL	**490**	**69**	**210**	12	**32**	**460**	110	BDL	BDL
	12/18/14	**37**	150	370	**410**	**300**	**210**	BDL	13	170	66	38	BDL
	06/09/15	**57**	240	**1,400**	**3,120**	**410**	**160**	7.2	21	280	94	66	BDL
MW-7	05/18/98	Not Installed											
	09/23/98	**740**	6.1	380	226	180						43	BDL
	01/25/99	No Data											
	03/17/99	**920**	**120**	**1,000**	**1,380**	**460**						**230**	**0.051**
	10/25/01	No Data											
	12/18/02	**42.6**	<0.625	1.1	15.8	**262.6**						10.8	<0.01
	03/13/03	<1	<1	<5	<3	**140**						<5	<5
	06/17/03	**260**	26	150	340	**75**						**180**	NA
	09/02/03	**610**	**420**	**2,000**	**960**	**170**						**310**	NA
	03/06/04	<1.0	<1.0	<5.0	<3.0	12						3.4	NA
	09/08/04	No Data											
	10/09/07	ABANDONED											
MW-8	05/18/98	Not Installed											
	09/23/98	**950**	8.8	30	185	**4,000**						54	BDL
	01/25/99	No Data											
	03/17/99	**430**	BDL	280	500	**940**						BDL	BDL
	10/25/01	No Data											
	12/18/02	Not Sampled. Well Dry											
	03/13/03	Not Sampled. Well Dry											
	06/17/03	Not Sampled. Well Dry											
	09/02/03	No Data											
	03/06/04	<1.0	<1.0	<5.0	<3.0	12						3.4	NA
	09/08/04	No Data											
	10/09/07	Not Sampled											
	06/12/08	Not Sampled											
	09/16/08	**2.3**	1.4	<5.0	7.9	**1,300**	<5.0	<1.0	<1.0	<1.0	<1.0	13	<1.0
	02/13/09	**310.0**	190.0	190	820.0	**4,200**	**56**	14	18	220	69	29	<50
	07/28/09	**390**	<50	<250	<100	**3,600**	<250	<50	<50	<50	<50	<50	<50
	06/22/10	**170**	340	**650**	**2,200**	**710**	<500	<100	<100	370	110	<100	<100
	12/30/10	**420**	220	**720**	**620**	**3,000**	**260**	<20	22	360	150	**140**	<20
	05/13/11	**530**	110	**170**	**361**	**3,900**	**240**	BDL	BDL	340	150	**190**	BDL
	11/22/11	**39**	14	**11**	**250**	**1,900**	**10**	1	BDL	67	3	14	BDL
	05/09/12	Not Sampled											
	11/19/12	Not Sampled											
	12/26/13	BDL	BDL	BDL	BDL	8.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/14/14	BDL	BDL	BDL	BDL	2.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/18/14	BDL	BDL	BDL	BDL	6.3	BDL	BDL	BDL	BDL	BDL	3.2	BDL
	06/09/15	BDL	BDL	BDL	BDL	**35**	BDL	BDL	BDL	BDL	BDL	8.8	BDL

TABLE 5
SUMMARY OF HISTORICAL GROUNDWATER VOC ANALYTICAL RESULTS
FORMER PANTRY 3031
8215 CLIFFDALE ROAD
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS & RAVENEL PROJECT NO. 02070860.00

Analytical Method		VOC (mg/L) by EPA Methods 601 & 602											
Contaminant Of Concern		Benzene	Ethyl benzene	Toluene	Total Xylenes	MTBE	Naphthalene	Isopropyl benzene	n-Propyl benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	IPE	EDB
Well ID	Date Collected												
2L Standard (mg/L)		1	600	600	500	20	6	70	70	400	400	70	0.02
GCL (mg/L)		5,000	84,500	260,000	85,500	200,000	6,000	25,000	30,000	28,500	25,000	70,000	50
MW-9	05/18/98	Not Installed											
	09/23/98	Not Installed											
	01/25/99	**3,700**	540	**10,000**	**3,500**	**290**						**1,200**	BDL
	03/17/99	**3,500**	**800**	**12,000**	**5,600**	**420**						**1,300**	BDL
	10/25/01	No Data											
	12/18/02	**533**	32.8	679.4	**608.5**	67.7						**171.8**	<10
	03/13/03	**1,300**	40	820	**2,300**	<50						**270**	<5
	06/17/03	**400**	13	670	**650**	68						**250**	NA
	09/02/03	**190**	10	160	280	55						**190**	NA
	03/06/04	No Data											
	09/08/04	No Data											
	10/09/07	**39**	140	130	**950**	140	**34**	2.9	6.4	66	18	11	BDL
	06/12/08	**45**	280	150	**1,300**	180	**140**	9.5	34	310	83	16	<1.0
	09/16/08	<1.0	2.0	<5.0	7.9	4.8	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	02/13/09	<1.0	<1.0	<5.0	<3.0	8.3	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/29/09	<1.0	<1.0	<5.0	<3.0	3.9	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/22/10	<1.0	<1.0	<5.0	<3.0	**71**	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/29/10	**11**	32	7.2	158	**56**	**35**	2.6	7.1	54	19	3.3	<1.0
	05/13/11	**3.8**	14	6.6	187	**96**	**38**	<1.0	1.8	38	18	4.8	BDL
	11/22/11	**4.2**	21	BDL	26	**47**	**24**	2.4	6.2	23	8.9	2.4	BDL
	05/08/12	**7.4**	50	20	113	**140**	**58**	3.0	8.2	86	29	10	BDL
	11/20/12	**16.0**	59	34	91	**230**	**110**	4.9	14	92	52	BDL	BDL
	12/11/13	BDL	BDL	BDL	BDL	1.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/15/14	BDL	BDL	BDL	BDL	1.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/17/14	BDL	BDL	BDL	2.6	**27**	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/09/15	BDL	BDL	BDL	6.4	**46**	BDL	BDL	BDL	3.7	BDL	1.1	BDL
MW-10	05/18/98	Not Installed											
	09/23/98	Not Installed											
	01/25/99	**750**	**80**	**1,000**	**720**	**1,200**						**320**	**0.040**
	03/17/99	**1,400**	**200**	**1,800**	**1,950**	**3,300**						**180**	**0.036**
	10/25/01	No Data											
	12/18/02	Not Sampled. Well Dry											
	03/13/03	Not Sampled. Well Dry											
	06/17/03	<1.0	<1.0	<5.0	<3.0	46						48	NA
	09/02/03	<1.0	<1.0	<5.0	<3.0	11						**120**	NA
	03/06/04	**4.0**	<29	<250	<150	<50						**78**	NA
	09/08/04	No Data											
	10/09/07	**420**	**790**	**3,400**	**4,400**	**680**	**370**	52	**89**	**820**	250	**150**	BDL
	06/12/08	**340**	**670**	**1,800**	**3,700**	**1,200**	**300**	30	**86**	**800**	210	**110**	<5.0
	09/16/08	**26**	100	47	420	110	**46**	3.7	11	120	31	7.8	<1.0
	2/13/090	**2**	<1.0	<5.0	3	45	**<5.0**	<1.0	<1.0	1	<1.0	4.2	<1.0
	07/28/09	**39.0**	36	<120	<50	**260**	<120	<25	<25	<25	<25	<25	<25
	06/22/10	<1.0	<1.0	<5	<50	3.5	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/30/10	**36**	410	250	**2,440**	**280**	**410**	26	51	**640**	150	14	<1.0
	05/13/11	**200**	960	1,500	**3,700**	**1,500**	**530**	46	120	**1000**	390	52	BDL
	11/22/11	**42**	300	130	**920**	**740**	**150**	12	31	**380**	110	19	BDL
	05/08/12	**180**	120	**1,100**	**1,360**	**1,100**	**90**	BDL	10	330	130	**71**	BDL
	11/20/12	**20**	58	BDL	174	**1,100**	**76**	1.7	3.7	120	92	BDL	BDL
	12/11/13	BDL	BDL	BDL	BDL	3	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/15/14	BDL	BDL	BDL	BDL	2.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/17/14	BDL	15	BDL	79	**71**	**60**	2.5	6.7	26	48	2.1	BDL
	06/09/15	BDL	11.0	BDL	38.3	**68**	**71**	3.7	8.1	74	11	2.6	BDL
MW-11	05/18/98	Not Installed											
	09/23/98	Not Installed											
	01/25/99	**14**	BDL	2.0	2.0	36						33	BDL
	03/17/99	**7.3**	BDL	BDL	BDL	3.0						BDL	BDL
	10/25/01	No Data											
	12/18/02	<0.5	<0.5	<0.5	<1.5	97.3						<1.0	<0.01
	03/13/03	<5	<5	<25	<15	**400**						<25	<25
	06/17/03	<1.0	<1.0	<5.0	<3.0	94						<1.0	NA
	09/02/03	<1.0	<1.0	<5.0	<3.0	26						<1.0	NA
	03/06/04	No Data											
	09/08/04	No Data											
	10/09/07	BDL	BDL	BDL	5.8	22	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/12/08	<1.0	<1.0	<5.0	<3.0	**370**	<5.0	<1.0	<1.0	<1.0	<1.0	3.8	<1.0
	09/16/08	**200**	98	190	**710**	**660**	**63**	6.2	7.8	160	57	**82**	<1.0
	02/16/09	**440**	300	<5.0	**1,550**	**3,500**	<5.0	<25	33	**400**	120	**<25**	<25
	07/28/09	**210**	210	<120	380	**2,200**	**210**	<25	26	140	110	41	<25
	06/22/10	**140**	**720**	**670**	**3,600**	**1,300**	<250	<50	**82**	**690**	180	<50	<50
	12/30/10	**350**	440	**1,400**	**1,130**	**1,600**	**530**	23	53	380	130	<20	<20
	05/13/11	**380**	140	170	229	**1,700**	**250**	BDL	BDL	150	82	**190**	BDL
	11/22/11	**520**	250	900	1,130	**2,100**	**250**	15	16	380	130	**190**	BDL
	05/08/12	BDL	BDL	BDL	BDL	**1,900**	BDL	BDL	BDL	BDL	BDL	58	BDL
	11/19/12	BDL	BDL	BDL	BDL	**430**	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/11/13	BDL	BDL	BDL	BDL	**43**	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/14/14	BDL	BDL	BDL	BDL	**31**	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	15/17/14	BDL	BDL	BDL	BDL	**40**	BDL	BDL	BDL	BDL	BDL	4.7	BDL
	06/09/15	**5.6**	3.3	BDL	12.7	**100**	**20**	1.0	BDL	1.0	BDL	15.0	BDL
MW-12	05/18/98	Not Installed											
	09/23/98	Not Installed											
	01/25/99	BDL	BDL	BDL	BDL	BDL						BDL	BDL
	03/17/99	**6.3**	BDL	BDL	BDL	3.2						BDL	BDL
	10/25/01	No Data											
	12/18/02	<0.5	<0.5	<0.5	<1.5	<1.0						<1.0	<0.01
	03/13/03	<1	<1	<5	<3	<5						<5	<5
	06/17/03	<1.0	<1.0	<5.0	<3.0	<1.0						<1.0	NA
	09/02/03	No Data											
	03/06/04	No Data											
	09/08/04	No Data											
	10/09/07	Not Sampled											
	06/12/08	Not Sampled											
	09/16/08	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	02/13/09	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/31/09	**5.3**	4	<5.0	<3.0	12	<5.0	<1.0	<1.0	<1.0	<1.0	3	<1.0
	06/22/10	<1.0	<1.0	<5.0	<3.0	2.8	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/30/10	<1.0	9.4	18	96	2.7	9.8	<1.0	2.1	**2,300**	**580**	<100	<100
	05/13/11	BDL	BDL	BDL	BDL	3.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/01/11	BDL	BDL	BDL	BDL	3.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/09/12	BDL	BDL	BDL	9.3	1.5	BDL	BDL	BDL	2.5	BDL	BDL	BDL
	11/19/12	BDL	BDL	BDL	BDL	2.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/11/13	BDL	BDL	BDL	BDL	3.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/14/14	BDL	BDL	BDL	BDL	8.8	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/18/14	BDL	BDL	BDL	BDL	2.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/09/15	BDL	BDL	BDL	BDL	1.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL

TABLE 5
SUMMARY OF HISTORICAL GROUNDWATER VOC ANALYTICAL RESULTS
FORMER PANTRY 3031
8215 CLIFFDALE ROAD
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS & RAVENEL PROJECT NO. 02070860.00

Analytical Method		VOC (mg/L) by EPA Methods 601 & 602											
Contaminant Of Concern		Benzene	Ethyl benzene	Toluene	Total Xylenes	MTBE	Naphthalene	Isopropyl benzene	n-Propyl benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	IPE	EDB
Well ID	Date Collected												
2L Standard (mg/L)		1	600	600	500	20	6	70	70	400	400	70	0.02
GCL (mg/L)		5,000	84,500	260,000	85,500	200,000	6,000	25,000	30,000	28,500	25,000	70,000	50
MW-13	05/18/98	Not Installed											
	09/23/98	Not Installed											
	01/25/99	**2,300**	**950**	**6,200**	**4,400**	BDL						**1,100**	**0.610**
	03/17/99	**2,100**	**710**	**4,800**	**3,500**	**210**						**590**	**0.980**
	10/25/01	No Data											
	12/18/02	**1,411.8**	216.9	**4,298.3**	**3,130**	187.8						**357.1**	**0.360**
	03/13/03	**3,900**	**1,500**	**25,000**	**14,000**	‹1,000						‹1,000	‹1,000
	06/17/03	**2,200**	470	**12,000**	**8,500**	**260**						**340**	NA
	09/02/03	**410**	**930**	**6,400**	**7,600**	**500**						**110**	NA
	03/06/04	**780**	**1,300**	**10,000**	**9,600**	**1,500**						**210**	NA
	09/08/04	No Data											
	10/09/07	**140**	440	710	**2,950**	150	**230**	24	**70**	**770**	200	30	BDL
	06/12/08	**320**	**1,200**	**1,000**	**6,900**	**660**	**390**	56	**150**	**1,400**	**390**	67	‹20
	09/16/08	**270**	**580**	**2,400**	**5,700**	**120**	**310**	‹50	‹50	**700**	170	**80**	‹50
	02/16/09	**400**	**1,700**	**4,600**	**13,700**	**980**	**650**	60	180	**2,300**	**820**	**120**	‹50
	07/28/09	**580**	**1,600**	**7,300**	**14,900**	**2,000**	‹1200	‹250	‹250	**2,300**	**630**	‹250	‹250
	06/22/10	**210**	**1,200**	**3,300**	**10,300**	**530**	**610**	57	**210**	**2,600**	**690**	‹50	‹50
	12/30/10	**430**	**1,500**	**6,400**	**11,600**	**1,400**	**670**	‹100	**200**	**2,300**	**580**	**100**	‹100
	05/18/11	BDL	340	**1,000**	**3,400**	**510**	**340**	BDL	**160**	**1,900**	**470**	BDL	BDL
	12/01/11	**150**	**600**	**1,300**	**5,300**	**1,000**	**790**	**98**	**280**	**3,000**	**720**	**70**	BDL
	05/09/12	**110**	280	460	**2,590**	**860**	**470**	56	**170**	**2,200**	**540**	57	BDL
	11/20/12	**24**	43	74	**730**	**430**	**350**	38	**120**	**1,800**	**390**	BDL	BDL
	12/11/13	BDL	130	98	**2,110**	**130**	**350**	BDL	**77**	**2,100**	380	BDL	BDL
	05/14/14	BDL	110	BDL	**1,930**	**110**	**220**	BDL	**45**	**890**	240	BDL	BDL
	12/18/14	**43**	530	**740**	**5,700**	**420**	**670**	36	**120**	**1,800**	550	28	BDL
	06/09/15	**150**	**630**	**1,400**	**6,100**	**540**	**720**	34	**110**	**1,700**	530	66	BDL
MW-14	05/18/98	Not Installed											
	09/23/98	Not Installed											
	01/25/99	Not Installed											
	03/17/99	**340**	56	260	**830**	100						**76**	BDL
	10/25/01	No Data											
	12/18/02	Not Sampled. Well Dry											
	03/13/03	Not Sampled. Well Dry											
	06/17/03	**1.2**	‹1.0	‹5.0	4	21						7.7	NA
	09/02/03	‹1.0	‹1.0	‹5.0	‹3.0	4.9						2.9	NA
	03/06/04	No Data											
	09/08/04	No Data											
	10/09/07	BDL	BDL	BDL	6.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/12/08	‹1.0	‹1.0	‹5.0	‹3.0	‹1.0	‹5.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0
	09/16/08	‹1.0	‹1.0	‹5.0	‹3.0	‹1.0	‹5.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0
	02/13/09	‹1.0	‹1.0	‹5.0	‹3.0	1	‹5.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0
	07/29/09	‹1.0	‹1.0	‹5.0	‹3.0	‹1.0	‹5.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0
	06/22/10	‹1.0	‹1.0	‹5.0	‹3.0	‹1.0	‹5.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0
	12/29/10	‹1.0	‹1.0	‹5.0	‹3.0	‹1.0	‹5.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0
	05/13/11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/22/11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/08/12	**9.6**	18	130	208	**26**	**14**	BDL	1.1	41	14	BDL	BDL
	11/16/12	Not Sampled. Well Dry											
	12/16/13	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/15/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/17/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/09/15	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-15	05/18/98	Not Installed											
	09/23/98	Not Installed											
	01/25/99	Not Installed											
	03/17/99	**94**	16	60	116	**1,600**						9.2	**0.027**
	10/25/01	No Data											
	12/18/02	‹0.5	‹0.5	‹0.5	‹1.5	41.7						6.5	‹0.01
	03/13/03	‹1	‹1	‹5	‹3	100						‹5	‹5
	06/17/03	‹1.0	‹1.0	‹5.0	‹3.0	**310**						9.0	NA
	09/02/03	No Data											
	03/06/04	No Data											
	09/08/04	No Data											
	10/09/07	BDL	BDL	BDL	BDL	4.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/12/08	‹1.0	‹1.0	‹5.0	‹3.0	‹1.0	‹5.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0
	09/16/08	‹1.0	‹1.0	‹5.0	‹3.0	‹1.0	‹5.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0
	02/16/09	‹1.0	‹1.0	‹5.0	‹3.0	‹1.0	‹5.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0
	07/29/09	‹1.0	‹1.0	‹5.0	‹3.0	1	‹5.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0
	06/22/10	‹1.0	‹1.0	‹5.0	‹3.0	‹1.0	‹5.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0	‹1.0
	12/29/10	‹1.0	2.5	‹5.0	14.9	‹1.0	‹5.0	‹1.0	‹1.0	5.2	1.8	‹1.0	‹1.0
	05/13/11	BDL	BDL	BDL	BDL	5	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/22/11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/08/12	BDL	BDL	BDL	BDL	**40**	BDL	BDL	BDL	BDL	BDL	1.9	BDL
	11/16/12	BDL	BDL	BDL	BDL	9	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/12/13	BDL	BDL	BDL	BDL	1	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/17/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/09/15	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-16	05/18/98	Not Installed											
	09/23/98	Not Installed											
	01/25/99	Not Installed											
	03/17/99	BDL	BDL	BDL	BDL	BDL						BDL	BDL
	10/25/01	No Data											
	12/18/02	‹0.5	‹0.5	‹0.5	‹1.5	38.8						‹1.0	‹0.01
	03/13/03	‹1	‹1	‹5	‹3	**400**						‹5	‹5
	06/17/03	‹1.0	‹1.0	‹5.0	‹3.0	79						‹1.0	NA
	09/02/03	No Data											
	03/06/04	No Data											
	09/08/04	No Data											
	10/09/07	BDL	BDL	BDL	BDL	82	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/12/08	‹1.0	‹1.0	‹5.0	‹3.0	**200**	‹5.0	‹1.0	‹1.0	‹1.0	‹1.0	3.8	‹1.0
	09/16/08	**270**	130	180	**850**	**2,200**	‹100	‹20	‹20	160	69	69	‹20
	02/16/09	**25**	20	11	54	**320**	**26**	1	2	4	9	10	‹1.0
	07/29/09	**120**	260	93	194	**2,200**	**150**	16	26	67	58	16	‹2.0
	06/22/10	**160**	440	**650**	**1,780**	**1,500**	**180**	33	**75**	**650**	170	16	‹10
	12/30/10	**190**	320	**920**	**1,330**	**750**	**220**	23	47	**410**	120	57	‹5.0
	05/18/11	**340**	130	**590**	300	**1,700**	**170**	BDL	BDL	120	52	**160**	BDL
	11/22/11	**580**	380	**2,100**	1,760	**4,000**	**250**	22	27	410	140	**260**	BDL
	05/08/12	BDL	BDL	BDL	BDL	**2,100**	BDL	BDL	BDL	BDL	BDL	**100**	BDL
	11/16/12	BDL	69	BDL	BDL	**730**	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/12/13	BDL	BDL	BDL	BDL	19	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/14/14	BDL	BDL	BDL	BDL	12	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/17/14	BDL	BDL	BDL	1.4	**29**	**9.5**	1	1.1	BDL	BDL	BDL	BDL
	06/09/15	**13**	32	30	69.7	**160**	**51**	2.6	3.0	2.1	4.1	19	BDL

TABLE 5
SUMMARY OF HISTORICAL GROUNDWATER VOC ANALYTICAL RESULTS
FORMER PANTRY 3031
8215 CLIFFDALE ROAD
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS & RAVENEL PROJECT NO. 02070860.00

Analytical Method		VOC (mg/L) by EPA Methods 601 & 602											
Contaminant Of Concern		Benzene	Ethyl benzene	Toluene	Total Xylenes	MTBE	Naphthalene	Isopropyl benzene	n-Propyl benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	IPE	EDB
Well ID	Date Collected												
2L Standard (mg/L)		1	600	600	500	20	6	70	70	400	400	70	0.02
GCL (mg/L)		5,000	84,500	260,000	85,500	200,000	6,000	25,000	30,000	28,500	25,000	70,000	50
MW-17	05/18/98	Not Installed											
	09/23/98	Not Installed											
	01/25/99	Not Installed											
	03/17/99	**10**	7	14	29	BDL						2.6	BDL
	10/25/01	No Data											
	12/18/02	**15.5**	1.9	19.5	40.6	<1.0						6.3	<0.01
	03/13/03	**9.8**	3.8	29	43	<5						6.0	<5
	06/17/03	<1.0	<1.0	<5.0	<3.0	1.6						4.0	NA
	09/02/03	**130**	**250**	**1,400**	**1,500**	<100						<70	NA
	03/06/04	No Data											
	09/08/04	No Data											
	10/09/07	DESTROYED											
MW-17A	07/30/09	**500**	**1,100**	**4,300**	**7,300**	**410**	<1000	**210**	**220**	**1,900**	**560**	<200	<200
	06/22/10	**1,600**	**1,300**	**4,200**	**8,300**	**580**	**280**	<50	**180**	**1,700**	**470**	**500**	<50
	12/30/10	**1,500**	**1,300**	**6,400**	**7,300**	**860**	**530**	34	**120**	**1,200**	340	**580**	<20
	05/13/11	Not Sampled											
	12/01/11	**460**	300	**1,000**	**1,550**	**390**	BDL	BDL	24	260	83	**220**	BDL
	05/09/12	**11**	7.8	53	40	**23**	BDL	BDL	BDL	4.9	2.9	12	BDL
	11/19/12	**16**	38	360	310	**140**	BDL	BDL	7	66	28	BDL	BDL
	12/11/13	**140**	87	**860**	**1,070**	**5,400**	BDL	3	9.8	110	110	BDL	BDL
	05/14/14	**560**	380	**2,600**	**3,200**	**970**	BDL	BDL	BDL	580	220	BDL	BDL
	12/18/14	**130**	240	**610**	**1,430**	**200**	BDL	BDL	BDL	340	110	**83**	BDL
	06/09/15	**160**	210	**700**	**1,310**	**63**	BDL	BDL	BDL	260	83	63	BDL
MW-18	05/18/98	Not Installed											
	09/23/98	Not Installed											
	01/25/99	Not Installed											
	03/17/99	BDL	BDL	BDL	BDL	BDL						BDL	BDL
	10/25/01	No Data											
	12/18/02	<0.5	<0.5	<0.5	<1.5	<1.0						<1.0	<0.01
	03/13/03	<1	<1	<5	<3	<5						<5	<5
	06/17/03	<1.0	<1.0	<5.0	<3.0	4.5						<1.0	NA
	09/02/03	No Data											
	03/06/04	No Data											
	09/08/04	No Data											
	10/09/07	BDL	BDL	BDL	BDL	2.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/12/08	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/16/08	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	02/16/09	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/28/09	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/22/10	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/29/10	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/18/11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/01/11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/09/12	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/19/12	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/11/13	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/12/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/17/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/09/15	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-19	03/17/99	**6,600**	**2,600**	**29,000**	**19,600**	**4,000**						**890**	**0.250**
	10/25/01	No Data											
	12/18/02	**1,317.3**	**779.0**	**5,174.8**	**6,713.3**	**994.9**	BDL	BDL	BDL	BDL	BDL	**420.8**	**0.116**
	03/13/03	**650**	**930**	**6,000**	**10,000**	**1,800**	BDL	BDL	BDL	BDL	BDL	**270**	<250
	06/17/03	**1,200**	**490**	**4,200**	**8,500**	**1,300**	BDL	BDL	BDL	BDL	BDL	**340**	NA
	09/02/03	**51**	<25	210	510	**790**	BDL	BDL	BDL	BDL	BDL	**71**	NA
	03/06/04	**4.8**	<1.0	<5.0	81	**350**	BDL	BDL	BDL	BDL	BDL	51	NA
	09/08/04	No Data											
	10/09/07												
	06/12/08												
	09/16/08												
	02/16/09												
	07/28/09												
	06/22/10												
	05/13/11	Not Sampled											
	11/22/11	Not Sampled											
	05/08/12	**22**	26	BDL	27.2	10	**45**	2.1	3.8	2.7	2.0	11	BDL
	11/20/12	**5.2**	BDL	BDL	BDL	2	5.2	BDL	BDL	BDL	BDL	BDL	BDL
	12/11/13	BDL	BDL	BDL	BDL	2.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/17/14	BDL	BDL	BDL	BDL	1.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/09/15	BDL	BDL	BDL	BDL	4.9	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-20	10/25/01	No Data											
	12/18/02	No Data											
	03/13/03	No Data											
	06/17/03	No Data											
	09/02/03												
	03/06/04	No Data											
	09/08/04	No Data											
	10/09/07	**60**	170	56	513	**280**	**91**	6.4	19	320	120	29	BDL
	06/12/08	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/16/08	Not Sampled											
	02/16/09	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/30/09	<1.0	<1.0	<5.0	<3.0	1.4	<5.0	<1.0	<1.0	<1.0	<1.0	1.6	<1.0
	06/22/10	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	1.6	<1.0
	12/29/10	<1.0	<1.0	<5.0	1.2	1.7	<5.0	<1.0	<1.0	<1.0	<1.0	2.2	<1.0
	05/18/11	**6.7**	BDL	BDL	21.5	7.2	10	BDL	BDL	1.4	1.3	5.2	BDL
	12/01/11	**4.0**	BDL	BDL	4.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/09/12	**1.3**	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	2.0	BDL
	11/20/12	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	1.4	BDL	BDL	BDL
	12/11/13	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/12/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/17/14	BDL	BDL	BDL	BDL	1.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/09/15	BDL	BDL	BDL	3.4	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

TABLE 5
SUMMARY OF HISTORICAL GROUNDWATER VOC ANALYTICAL RESULTS
FORMER PANTRY 3031
8215 CLIFFDALE ROAD
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS & RAVENEL PROJECT NO. 02070860.00

Analytical Method		VOC (mg/L) by EPA Methods 601 & 602											
Contaminant Of Concern		Benzene	Ethyl benzene	Toluene	Total Xylenes	MTBE	Naphthalene	Isopropyl benzene	n-Propyl benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	IPE	EDB
Well ID	Date Collected												
2L Standard (mg/L)		1	600	600	500	20	6	70	70	400	400	70	0.02
GCL (mg/L)		5,000	84,500	260,000	85,500	200,000	6,000	25,000	30,000	28,500	25,000	70,000	50
MW-21	10/25/01	No Data											
	12/18/02	No Data											
	03/13/03	No Data											
	06/17/03	No Data											
	09/02/03	No Data											
	03/06/04	No Data											
	09/08/04	No Data											
	10/09/07	**720**	510	**5,000**	**5,100**	**2,700**	**230**	39	45	**350**	100	**200**	BDL
	06/12/08	**44**	82	48	411	**230**	**53**	4.1	12	180	73	25	<1.0
	09/16/08	**1.8**	2.0	<5.0	14.2	12	<5.0	<1.0	<1.0	3.0	1.9	<1.0	<1.0
	02/16/09	**15.0**	24.0	8.7	240.0	8.6	**22**	1.6	7	120.0	48.0	7.5	<1.0
	07/28/09	<1.0	<1.0	<5.0	<3.0	1.7	<5.0	<1.0	<1.0	<1.0	<1.0	1.3	<1.0
	06/22/10	<1.0	<1.0	<5.0	<3.0	3.2	<5.0	<1.0	<1.0	<1.0	<1.0	1.8	<1.0
	12/30/10	**170**	**940**	**3,400**	**8,600**	**700**	**620**	43	**130**	**1,800**	**490**	33	<1.0
	05/18/11	**13**	18	100	**340**	**380**	**35**	1.0	2.9	72	26	14	BDL
	12/01/11	81	440	1,200	**3,300**	**530**	**270**	22.0	66.0	920	280	BDL	BDL
	05/09/12	Not Sampled											
	11/19/12	Not Sampled											
	12/11/13	Not Sampled											
	05/14/14	BDL	BDL	BDL	BDL	2.1	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/17/14	Not Sampled											
	06/09/15	Not Sampled											
MW-22	05/18/98	Not Installed											
	09/23/98	Not Installed											
	01/25/99	Not Installed											
	03/17/99	Not Installed											
	10/25/01	**59**	98	440	**730**	BDL						5.0	BDL
	12/18/02	Not Sampled. Well Dry											
	03/13/03	<1	<1	<5	<3	<5						<5	<5
	06/17/03	<1.0	<1.0	<5.0	<3.0	<1.0						<1.0	NA
	09/02/03	<1.0	<1.0	<5.0	<3.0	<1.0						<1.0	NA
	03/06/04	No Data											
	09/08/04	No Data											
	10/09/07	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/12/08	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/16/08	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	02/16/09	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/28/09	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/22/10	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/30/10	<1.0	<1.0	<5.0	<2.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/18/11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/01/11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/09/12	BDL	1.4	6.5	7.3	1.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/19/12	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/11/13	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/14/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/18/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/09/15	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-23	05/18/98	Not Installed											
	09/23/98	Not Installed											
	01/25/99	Not Installed											
	03/17/99	Not Installed											
	10/25/01	BDL	BDL	1.4	BDL	BDL						BDL	NA
	12/18/02	<0.5	<0.5	<0.5	<1.5	<1.0						<1.0	<0.01
	03/13/03	<1	<1	<5	<3	<5						<5	<5
	06/17/03	<1.0	<1.0	<5.0	<3.0	1.2						<1.0	NA
	09/02/03	No Data											
	03/06/04	No Data											
	09/08/04	No Data											
	10/09/07	BDL	BDL	BDL	BDL	1.3	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/12/08	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/16/08	<1.0	<1.0	<5.0	<3.0	1	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	02/16/09	<1.0	<1.0	<5.0	<3.0	1	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/30/09	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/22/10	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/29/10	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/18/11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/01/11	Not Sampled. Well was covered by fallen fence.											
	05/09/12	Not Sampled. Well was covered by fallen Fence.											
	11/19/12	Not Sampled. Well was covered by fallen Fence.											
	12/16/13	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/14/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/17/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/09/15	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-24	10/25/01	BDL	BDL	BDL	BDL	BDL						BDL	BDL
	12/18/02	<0.5	<0.5	<0.5	<1.5	<1.0						<1.0	<0.01
	03/13/03	<1	<1	<5	<3	<5						<5	<5
	06/17/03	<1.0	<1.0	<5.0	<3.0	<1.0						<1.0	NA
	09/02/03	<1.0	<1.0	<5.0	<3.0	<1.0						<1.0	NA
	03/06/04	No Data											
	09/08/04	No Data											
	10/09/07	BDL	BDL	BDL	BDL	1.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/12/08	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	09/16/08	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	02/16/09	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	07/30/09	<1.0	<1.0	<5.0	<3.0	1.3	<5.0	<1.0	<1.0	<1.0	<1.0	1.8	<1.0
	06/22/10	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/29/10	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/18/11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/01/11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/09/12	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/19/12	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/11/13	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/14/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/17/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/09/15	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-25	07/30/09	<1.0	<1.0	<5.0	<3.0	30	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	06/22/10	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/29/10	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	05/13/11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/22/11	BDL	BDL	BDL	BDL	5	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/08/12	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/19/12	Not Sampled. Well Dry											
	12/26/13	BDL	BDL	BDL	BDL	5.7	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/14/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/16/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/09/15	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

TABLE 5
SUMMARY OF HISTORICAL GROUNDWATER VOC ANALYTICAL RESULTS
FORMER PANTRY 3031
8215 CLIFFDALE ROAD
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS & RAVENEL PROJECT NO. 02070860.00

Analytical Method		VOC (mg/L) by EPA Methods 601 & 602											
Contaminant Of Concern													
Well ID	Date Collected	Benzene	Ethyl benzene	Toluene	Total Xylenes	MTBE	Naphthalene	Isopropyl benzene	n-Propyl benzene	1,2,4-Trimethyl benzene	1,3,5-Trimethyl benzene	IPE	EDB
2L Standard (mg/L)		1	600	600	500	20	6	70	70	400	400	70	0.02
GCL (mg/L)		5,000	84,500	260,000	85,500	200,000	6,000	25,000	30,000	28,500	25,000	70,000	50
MW-26	07/30/09	**64**	22	<100	103	**660**	<100	<20	<20	41	<20	<20	<20
	06/22/10	<1.0	<1.0	<5.0	<3.0	11.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	12/30/10	<1.0	1.8	<5.0	22.8	6.5	<5.0	<1.0	<1.0	9.3	2.4	<1.0	<1.0
	05/13/11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/22/11	BDL	BDL	BDL	BDL	4.0	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/08/12	BDL	BDL	BDL	BDL	7.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/19/12	BDL	BDL	BDL	BDL	15	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/11/13	BDL	BDL	BDL	BDL	13	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/14/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/17/14	BDL	BDL	BDL	BDL	9.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/09/15	BDL	BDL	BDL	BDL	5.6	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-27	07/30/09	<1.0	<1.0	<5.0	<3.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	1.8	<1.0
	06/22/10	**350**	**1,000**	**640**	**2,800**	**1,700**	**500**	57	**150**	**970**	380	**71**	<1.0
	12/30/10	**390**	460	64	99	**1,000**	**230**	26	54	43	50	**140**	<1.0
	05/18/11	**59**	3.0	BDL	14	**180**	**18**	1.1	BDL	2	3	38	BDL
	11/22/11	**9.3**	BDL	BDL	1.8	**200**	**8**	1.3	BDL	BDL	BDL	61	BDL
	05/08/12	BDL	BDL	BDL	BDL	**140**	BDL	BDL	BDL	BDL	BDL	27	BDL
	11/16/12	BDL	4.5	BDL	BDL	19	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/12/13	BDL	BDL	BDL	BDL	**46**	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/14/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/16/14	BDL	BDL	BDL	BDL	1.2	BDL	BDL	BDL	BDL	BDL	1.3	BDL
	06/09/15	BDL	BDL	BDL	BDL	1.2	BDL	BDL	BDL	BDL	BDL	1.1	BDL
MW-28	11/21/11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/08/12	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/16/12	BDL	BDL	BDL	BDL	2	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/12/13	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/14/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/16/14	BDL	BDL	BDL	BDL	1.2	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/09/15	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-29	11/21/11	BDL	BDL	BDL	BDL	**26**	BDL	BDL	BDL	BDL	BDL	1.6	BDL
	05/08/12	BDL	BDL	BDL	BDL	**430**	BDL	BDL	BDL	BDL	BDL	13	BDL
	11/16/12	BDL	BDL	BDL	BDL	**22**	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/12/13	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/14/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/17/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/09/15	BDL	BDL	BDL	BDL	2.5	BDL	BDL	BDL	BDL	BDL	BDL	BDL
MW-30	11/21/11	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/08/12	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	11/16/12	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/12/13	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	05/14/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	12/16/14	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL
	06/09/15	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

Notes:
Concentrations above 2L Standard are shown in bold.
Concentrations above GCL are highlighted.
MTBE - Methyl tertiary butyl ether
IPE - Isopropyl ether
GCL - Gross Contaminant Level
mg/L - microgram per liter

APPENDIX A

Laboratory Analytical Report

12065 Lebanon Rd.
Mt. Juliet, TN 37122
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Tax I.D. 62-0814289

Est. 1970

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

Report Summary

Tuesday June 23, 2015

Report Number: L770436
Samples Received: 06/11/15
Client Project: 02070860.0

Description: Pantry 3031

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: Jimmy Hunt

Jimmy Hunt , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - 01157CA, CT - PH-0197, FL - E87487, GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704/BIO041, ND - R-140. NJ - TN002, NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 460132, WV - 233, AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032011-1, TX - T104704245-11-3, OK - 9915, PA - 68-02979, IA Lab #364, EPA - TN002

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-01

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-1A

Collected By : Phillip Jones
Collection Date : 06/09/15 15:40

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Nitrate	390	100	ug/l	9056MOD	06/11/15	1
Sulfate	BDL	5000	ug/l	9056MOD	06/20/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	860	100	ug/l	6010C	06/12/15	1
Magnesium	1100	1000	ug/l	6010C	06/12/15	1
Manganese	39.	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/20/15	1
Benzene	4.6	1.0	ug/l	6200B-1997	06/20/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-01

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-1A

Collected By : Phillip Jones
Collection Date : 06/09/15 15:40

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Di-isopropyl ether	12.	1.0	ug/l	6200B-1997	06/20/15	1
Ethylbenzene	3.5	1.0	ug/l	6200B-1997	06/20/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/20/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methyl tert-butyl ether	70.	1.0	ug/l	6200B-1997	06/20/15	1
Naphthalene	7.1	5.0	ug/l	6200B-1997	06/20/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Styrene	1.0	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
o-Xylene	6.0	1.0	ug/l	6200B-1997	06/20/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/20/15	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	6200B-1997	06/20/15	1
Dibromofluoromethane	103.		% Rec.	6200B-1997	06/20/15	1
a,a,a-Trifluorotoluene	97.9		% Rec.	6200B-1997	06/20/15	1
4-Bromofluorobenzene	99.9		% Rec.	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-02

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-3

Collected By : Phillip Jones
Collection Date : 06/09/15 10:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Nitrate	2400	100	ug/l	9056MOD	06/13/15	1
Sulfate	BDL	5000	ug/l	9056MOD	06/13/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	3300	100	ug/l	6010C	06/12/15	1
Magnesium	BDL	1000	ug/l	6010C	06/12/15	1
Manganese	BDL	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/20/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-02

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-3

Collected By : Phillip Jones
Collection Date : 06/09/15 10:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Di-isopropyl ether	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/20/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methyl tert-butyl ether	15.	1.0	ug/l	6200B-1997	06/20/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
o-Xylene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/20/15	1
Surrogate Recovery						
Toluene-d8	100.		% Rec.	6200B-1997	06/20/15	1
Dibromofluoromethane	97.4		% Rec.	6200B-1997	06/20/15	1
a,a,a-Trifluorotoluene	102.		% Rec.	6200B-1997	06/20/15	1
4-Bromofluorobenzene	91.1		% Rec.	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-03

Date Received : June 11, 2015
Description : Pantry 3031

Site ID :

Sample ID : MW-4

Project # : 02070860.0

Collected By : Phillip Jones
Collection Date : 06/09/15 13:08

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Nitrate	2900	100	ug/l	9056MOD	06/11/15	1
Sulfate	BDL	5000	ug/l	9056MOD	06/11/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	1100	100	ug/l	6010C	06/12/15	1
Magnesium	BDL	1000	ug/l	6010C	06/12/15	1
Manganese	BDL	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/20/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-03

Date Received : June 11, 2015
Description : Pantry 3031

Site ID :

Sample ID : MW-4

Project # : 02070860.0

Collected By : Phillip Jones
Collection Date : 06/09/15 13:08

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Di-isopropyl ether	2.2	1.0	ug/l	6200B-1997	06/20/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/20/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methyl tert-butyl ether	2.2	1.0	ug/l	6200B-1997	06/20/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
o-Xylene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/20/15	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	6200B-1997	06/20/15	1
Dibromofluoromethane	101.		% Rec.	6200B-1997	06/20/15	1
a,a,a-Trifluorotoluene	102.		% Rec.	6200B-1997	06/20/15	1
4-Bromofluorobenzene	101.		% Rec.	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-04

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-5

Collected By : Phillip Jones
Collection Date : 06/09/15 13:40

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Nitrate	6400	100	ug/l	9056MOD	06/20/15	1
Sulfate	BDL	5000	ug/l	9056MOD	06/20/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	1800	100	ug/l	6010C	06/12/15	1
Magnesium	1100	1000	ug/l	6010C	06/12/15	1
Manganese	BDL	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/20/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-04

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-5

Collected By : Phillip Jones
Collection Date : 06/09/15 13:40

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Di-isopropyl ether	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/20/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methyl tert-butyl ether	7.6	1.0	ug/l	6200B-1997	06/20/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
o-Xylene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/20/15	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	6200B-1997	06/20/15	1
Dibromofluoromethane	115.		% Rec.	6200B-1997	06/20/15	1
a,a,a-Trifluorotoluene	99.0		% Rec.	6200B-1997	06/20/15	1
4-Bromofluorobenzene	105.		% Rec.	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-05

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-6

Collected By : Phillip Jones
Collection Date : 06/09/15 16:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Nitrate	2400	100	ug/l	9056MOD	06/20/15	1
Sulfate	BDL	5000	ug/l	9056MOD	06/20/15	1
Alkalinity	35000	20000	ug/l	2320 B-201	06/16/15	1
Iron	20000	100	ug/l	6010C	06/12/15	1
Magnesium	1900	1000	ug/l	6010C	06/12/15	1
Manganese	46.	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	250	ug/l	6200B-1997	06/20/15	5
Acrolein	BDL	250	ug/l	6200B-1997	06/20/15	5
Acrylonitrile	BDL	50.	ug/l	6200B-1997	06/20/15	5
Benzene	57.	5.0	ug/l	6200B-1997	06/20/15	5
Bromobenzene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
Bromodichloromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	5
Bromoform	BDL	5.0	ug/l	6200B-1997	06/20/15	5
Bromomethane	BDL	25.	ug/l	6200B-1997	06/20/15	5
n-Butylbenzene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
sec-Butylbenzene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
tert-Butylbenzene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
Carbon tetrachloride	BDL	5.0	ug/l	6200B-1997	06/20/15	5
Chlorobenzene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
Chlorodibromomethane	BDL	5.0	ug/l	6200B-1997	06/20/15	5
Chloroethane	BDL	25.	ug/l	6200B-1997	06/20/15	5
Chloroform	BDL	25.	ug/l	6200B-1997	06/20/15	5
Chloromethane	BDL	12.	ug/l	6200B-1997	06/20/15	5
2-Chlorotoluene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
4-Chlorotoluene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
1,2-Dibromo-3-Chloropropane	BDL	25.	ug/l	6200B-1997	06/20/15	5
1,2-Dibromoethane	BDL	5.0	ug/l	6200B-1997	06/20/15	5
Dibromomethane	BDL	5.0	ug/l	6200B-1997	06/20/15	5
1,2-Dichlorobenzene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
1,3-Dichlorobenzene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
1,4-Dichlorobenzene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
Dichlorodifluoromethane	BDL	25.	ug/l	6200B-1997	06/20/15	5
1,1-Dichloroethane	BDL	5.0	ug/l	6200B-1997	06/20/15	5
1,2-Dichloroethane	BDL	5.0	ug/l	6200B-1997	06/20/15	5
1,1-Dichloroethene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
cis-1,2-Dichloroethene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
trans-1,2-Dichloroethene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
1,2-Dichloropropane	BDL	5.0	ug/l	6200B-1997	06/20/15	5
1,1-Dichloropropene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
1,3-Dichloropropane	BDL	5.0	ug/l	6200B-1997	06/20/15	5

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-05

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-6

Collected By : Phillip Jones
Collection Date : 06/09/15 16:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	5.0	ug/l	6200B-1997	06/20/15	5
Di-isopropyl ether	66.	5.0	ug/l	6200B-1997	06/20/15	5
Ethylbenzene	240	5.0	ug/l	6200B-1997	06/20/15	5
Hexachloro-1,3-butadiene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
Isopropylbenzene	7.2	5.0	ug/l	6200B-1997	06/20/15	5
p-Isopropyltoluene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
2-Butanone (MEK)	BDL	50.	ug/l	6200B-1997	06/20/15	5
Methylene Chloride	BDL	25.	ug/l	6200B-1997	06/20/15	5
4-Methyl-2-pentanone (MIBK)	BDL	50.	ug/l	6200B-1997	06/20/15	5
Methyl tert-butyl ether	410	5.0	ug/l	6200B-1997	06/20/15	5
Naphthalene	160	25.	ug/l	6200B-1997	06/20/15	5
n-Propylbenzene	21.	5.0	ug/l	6200B-1997	06/20/15	5
Styrene	50.	5.0	ug/l	6200B-1997	06/20/15	5
1,1,1,2-Tetrachloroethane	BDL	5.0	ug/l	6200B-1997	06/20/15	5
1,1,2,2-Tetrachloroethane	BDL	5.0	ug/l	6200B-1997	06/20/15	5
Tetrachloroethene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
Toluene	1400	250	ug/l	6200B-1997	06/23/15	50
1,2,3-Trichlorobenzene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
1,2,4-Trichlorobenzene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
1,1,1-Trichloroethane	BDL	5.0	ug/l	6200B-1997	06/20/15	5
1,1,2-Trichloroethane	BDL	5.0	ug/l	6200B-1997	06/20/15	5
Trichloroethene	BDL	5.0	ug/l	6200B-1997	06/20/15	5
Trichlorofluoromethane	BDL	25.	ug/l	6200B-1997	06/20/15	5
1,2,3-Trichloropropane	BDL	12.	ug/l	6200B-1997	06/20/15	5
1,2,4-Trimethylbenzene	280	5.0	ug/l	6200B-1997	06/20/15	5
1,3,5-Trimethylbenzene	94.	5.0	ug/l	6200B-1997	06/20/15	5
Vinyl chloride	BDL	5.0	ug/l	6200B-1997	06/20/15	5
o-Xylene	470	5.0	ug/l	6200B-1997	06/20/15	5
m&p-Xylenes	720	10.	ug/l	6200B-1997	06/20/15	5
Surrogate Recovery						
Toluene-d8	101.		% Rec.	6200B-1997	06/20/15	1
Dibromofluoromethane	105.		% Rec.	6200B-1997	06/20/15	1
a,a,a-Trifluorotoluene	98.2		% Rec.	6200B-1997	06/20/15	1
4-Bromofluorobenzene	95.7		% Rec.	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-06

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-8

Collected By : Phillip Jones
Collection Date : 06/08/15 18:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Sulfate	BDL	5000	ug/l	9056MOD	06/19/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	160	100	ug/l	6010C	06/12/15	1
Magnesium	BDL	1000	ug/l	6010C	06/12/15	1
Manganese	BDL	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/20/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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Est. 1970

REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-06

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-8

Collected By : Phillip Jones
Collection Date : 06/08/15 18:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	8.8	1.0	ug/l	6200B-1997	06/20/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/20/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methyl tert-butyl ether	35.	1.0	ug/l	6200B-1997	06/20/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
o-Xylene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/20/15	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	6200B-1997	06/20/15	1
Dibromofluoromethane	103.		% Rec.	6200B-1997	06/20/15	1
a,a,a-Trifluorotoluene	100.		% Rec.	6200B-1997	06/20/15	1
4-Bromofluorobenzene	100.		% Rec.	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-07

Date Received : June 11, 2015
Description : Pantry 3031

Site ID :

Sample ID : MW-9

Project # : 02070860.0

Collected By : Phillip Jones
Collection Date : 06/08/15 17:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Sulfate	BDL	5000	ug/l	9056MOD	06/19/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	210	100	ug/l	6010C	06/12/15	1
Magnesium	2000	1000	ug/l	6010C	06/12/15	1
Manganese	10.	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/20/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-07

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-9

Collected By : Phillip Jones
Collection Date : 06/08/15 17:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	1.1	1.0	ug/l	6200B-1997	06/20/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/20/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methyl tert-butyl ether	46.	1.0	ug/l	6200B-1997	06/20/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
1,2,4-Trimethylbenzene	3.7	1.0	ug/l	6200B-1997	06/20/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
o-Xylene	2.9	1.0	ug/l	6200B-1997	06/20/15	1
m&p-Xylenes	3.5	2.0	ug/l	6200B-1997	06/20/15	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	6200B-1997	06/20/15	1
Dibromofluoromethane	101.		% Rec.	6200B-1997	06/20/15	1
a,a,a-Trifluorotoluene	100.		% Rec.	6200B-1997	06/20/15	1
4-Bromofluorobenzene	103.		% Rec.	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-08

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-10

Collected By : Phillip Jones
Collection Date : 06/08/15 15:45

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Sulfate	BDL	5000	ug/l	9056MOD	06/19/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	280	100	ug/l	6010C	06/12/15	1
Magnesium	BDL	1000	ug/l	6010C	06/12/15	1
Manganese	32.	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/20/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-08

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-10

Collected By : Phillip Jones
Collection Date : 06/08/15 15:45

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	2.6	1.0	ug/l	6200B-1997	06/20/15	1
Ethylbenzene	11.	1.0	ug/l	6200B-1997	06/20/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Isopropylbenzene	3.7	1.0	ug/l	6200B-1997	06/20/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/20/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methyl tert-butyl ether	68.	1.0	ug/l	6200B-1997	06/20/15	1
Naphthalene	71.	5.0	ug/l	6200B-1997	06/20/15	1
n-Propylbenzene	8.1	1.0	ug/l	6200B-1997	06/20/15	1
Styrene	1.4	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
1,2,4-Trimethylbenzene	74.	1.0	ug/l	6200B-1997	06/20/15	1
1,3,5-Trimethylbenzene	11.	1.0	ug/l	6200B-1997	06/20/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
o-Xylene	8.3	1.0	ug/l	6200B-1997	06/20/15	1
m&p-Xylenes	30.	2.0	ug/l	6200B-1997	06/20/15	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	6200B-1997	06/20/15	1
Dibromofluoromethane	99.6		% Rec.	6200B-1997	06/20/15	1
a,a,a-Trifluorotoluene	101.		% Rec.	6200B-1997	06/20/15	1
4-Bromofluorobenzene	99.6		% Rec.	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Reported: 06/23/15 15:36 Printed: 06/23/15 16:32

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-09

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-11

Collected By : Phillip Jones
Collection Date : 06/09/15 08:45

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Sulfate	BDL	5000	ug/l	9056MOD	06/19/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	240	100	ug/l	6010C	06/12/15	1
Magnesium	1100	1000	ug/l	6010C	06/12/15	1
Manganese	700	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/20/15	1
Benzene	5.6	1.0	ug/l	6200B-1997	06/20/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-09

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-11

Collected By : Phillip Jones
Collection Date : 06/09/15 08:45

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	15.	1.0	ug/l	6200B-1997	06/20/15	1
Ethylbenzene	3.3	1.0	ug/l	6200B-1997	06/20/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Isopropylbenzene	1.0	1.0	ug/l	6200B-1997	06/20/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/20/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methyl tert-butyl ether	100	1.0	ug/l	6200B-1997	06/20/15	1
Naphthalene	20.	5.0	ug/l	6200B-1997	06/20/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Styrene	1.5	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
1,2,4-Trimethylbenzene	1.0	1.0	ug/l	6200B-1997	06/20/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
o-Xylene	9.6	1.0	ug/l	6200B-1997	06/20/15	1
m&p-Xylenes	3.1	2.0	ug/l	6200B-1997	06/20/15	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	6200B-1997	06/20/15	1
Dibromofluoromethane	102.		% Rec.	6200B-1997	06/20/15	1
a,a,a-Trifluorotoluene	101.		% Rec.	6200B-1997	06/20/15	1
4-Bromofluorobenzene	100.		% Rec.	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-10

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-12

Collected By : Phillip Jones
Collection Date : 06/09/15 14:25

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Nitrate	2400	100	ug/l	9056MOD	06/20/15	1
Sulfate	BDL	5000	ug/l	9056MOD	06/20/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	3600	100	ug/l	6010C	06/12/15	1
Magnesium	2000	1000	ug/l	6010C	06/12/15	1
Manganese	BDL	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/20/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-10

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-12

Collected By : Phillip Jones
Collection Date : 06/09/15 14:25

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Di-isopropyl ether	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/20/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methyl tert-butyl ether	1.5	1.0	ug/l	6200B-1997	06/20/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
o-Xylene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/20/15	1
Surrogate Recovery						
Toluene-d8	101.		% Rec.	6200B-1997	06/20/15	1
Dibromofluoromethane	99.6		% Rec.	6200B-1997	06/20/15	1
a,a,a-Trifluorotoluene	101.		% Rec.	6200B-1997	06/20/15	1
4-Bromofluorobenzene	99.1		% Rec.	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-11

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-13

Collected By : Phillip Jones
Collection Date : 06/10/15 12:15

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Nitrate	BDL	100	ug/l	9056MOD	06/13/15	1
Sulfate	BDL	5000	ug/l	9056MOD	06/13/15	1
Alkalinity	22000	20000	ug/l	2320 B-201	06/16/15	1
Iron	5600	100	ug/l	6010C	06/12/15	1
Magnesium	BDL	1000	ug/l	6010C	06/12/15	1
Manganese	19.	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	1200	ug/l	6200B-1997	06/20/15	25
Acrolein	BDL	1200	ug/l	6200B-1997	06/20/15	25
Acrylonitrile	BDL	250	ug/l	6200B-1997	06/20/15	25
Benzene	150	25.	ug/l	6200B-1997	06/20/15	25
Bromobenzene	BDL	25.	ug/l	6200B-1997	06/20/15	25
Bromodichloromethane	BDL	25.	ug/l	6200B-1997	06/20/15	25
Bromoform	BDL	25.	ug/l	6200B-1997	06/20/15	25
Bromomethane	BDL	120	ug/l	6200B-1997	06/20/15	25
n-Butylbenzene	BDL	25.	ug/l	6200B-1997	06/20/15	25
sec-Butylbenzene	BDL	25.	ug/l	6200B-1997	06/20/15	25
tert-Butylbenzene	BDL	25.	ug/l	6200B-1997	06/20/15	25
Carbon tetrachloride	BDL	25.	ug/l	6200B-1997	06/20/15	25
Chlorobenzene	BDL	25.	ug/l	6200B-1997	06/20/15	25
Chlorodibromomethane	BDL	25.	ug/l	6200B-1997	06/20/15	25
Chloroethane	BDL	120	ug/l	6200B-1997	06/20/15	25
Chloroform	BDL	120	ug/l	6200B-1997	06/20/15	25
Chloromethane	BDL	62.	ug/l	6200B-1997	06/20/15	25
2-Chlorotoluene	BDL	25.	ug/l	6200B-1997	06/20/15	25
4-Chlorotoluene	BDL	25.	ug/l	6200B-1997	06/20/15	25
1,2-Dibromo-3-Chloropropane	BDL	120	ug/l	6200B-1997	06/20/15	25
1,2-Dibromoethane	BDL	25.	ug/l	6200B-1997	06/20/15	25
Dibromomethane	BDL	25.	ug/l	6200B-1997	06/20/15	25
1,2-Dichlorobenzene	BDL	25.	ug/l	6200B-1997	06/20/15	25
1,3-Dichlorobenzene	BDL	25.	ug/l	6200B-1997	06/20/15	25
1,4-Dichlorobenzene	BDL	25.	ug/l	6200B-1997	06/20/15	25
Dichlorodifluoromethane	BDL	120	ug/l	6200B-1997	06/20/15	25
1,1-Dichloroethane	BDL	25.	ug/l	6200B-1997	06/20/15	25
1,2-Dichloroethane	BDL	25.	ug/l	6200B-1997	06/20/15	25
1,1-Dichloroethene	BDL	25.	ug/l	6200B-1997	06/20/15	25
cis-1,2-Dichloroethene	BDL	25.	ug/l	6200B-1997	06/20/15	25
trans-1,2-Dichloroethene	BDL	25.	ug/l	6200B-1997	06/20/15	25
1,2-Dichloropropane	BDL	25.	ug/l	6200B-1997	06/20/15	25
1,1-Dichloropropene	BDL	25.	ug/l	6200B-1997	06/20/15	25
1,3-Dichloropropane	BDL	25.	ug/l	6200B-1997	06/20/15	25

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-11

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-13

Collected By : Phillip Jones
Collection Date : 06/10/15 12:15

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	25.	ug/l	6200B-1997	06/20/15	25
Di-isopropyl ether	66.	25.	ug/l	6200B-1997	06/20/15	25
Ethylbenzene	630	25.	ug/l	6200B-1997	06/20/15	25
Hexachloro-1,3-butadiene	BDL	25.	ug/l	6200B-1997	06/20/15	25
Isopropylbenzene	34.	25.	ug/l	6200B-1997	06/20/15	25
p-Isopropyltoluene	BDL	25.	ug/l	6200B-1997	06/20/15	25
2-Butanone (MEK)	BDL	250	ug/l	6200B-1997	06/20/15	25
Methylene Chloride	BDL	120	ug/l	6200B-1997	06/20/15	25
4-Methyl-2-pentanone (MIBK)	BDL	250	ug/l	6200B-1997	06/20/15	25
Methyl tert-butyl ether	540	25.	ug/l	6200B-1997	06/20/15	25
Naphthalene	720	120	ug/l	6200B-1997	06/20/15	25
n-Propylbenzene	110	25.	ug/l	6200B-1997	06/20/15	25
Styrene	140	25.	ug/l	6200B-1997	06/20/15	25
1,1,1,2-Tetrachloroethane	BDL	25.	ug/l	6200B-1997	06/20/15	25
1,1,2,2-Tetrachloroethane	BDL	25.	ug/l	6200B-1997	06/20/15	25
Tetrachloroethene	BDL	25.	ug/l	6200B-1997	06/20/15	25
Toluene	1400	120	ug/l	6200B-1997	06/20/15	25
1,2,3-Trichlorobenzene	BDL	25.	ug/l	6200B-1997	06/20/15	25
1,2,4-Trichlorobenzene	BDL	25.	ug/l	6200B-1997	06/20/15	25
1,1,1-Trichloroethane	BDL	25.	ug/l	6200B-1997	06/20/15	25
1,1,2-Trichloroethane	BDL	25.	ug/l	6200B-1997	06/20/15	25
Trichloroethene	BDL	25.	ug/l	6200B-1997	06/20/15	25
Trichlorofluoromethane	BDL	120	ug/l	6200B-1997	06/20/15	25
1,2,3-Trichloropropane	BDL	62.	ug/l	6200B-1997	06/20/15	25
1,2,4-Trimethylbenzene	1700	25.	ug/l	6200B-1997	06/20/15	25
1,3,5-Trimethylbenzene	530	25.	ug/l	6200B-1997	06/20/15	25
Vinyl chloride	BDL	25.	ug/l	6200B-1997	06/20/15	25
o-Xylene	2800	25.	ug/l	6200B-1997	06/20/15	25
m&p-Xylenes	3300	50.	ug/l	6200B-1997	06/20/15	25
Surrogate Recovery						
Toluene-d8	102.		% Rec.	6200B-1997	06/20/15	1
Dibromofluoromethane	95.9		% Rec.	6200B-1997	06/20/15	1
a,a,a-Trifluorotoluene	103.		% Rec.	6200B-1997	06/20/15	1
4-Bromofluorobenzene	101.		% Rec.	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-12

Date Received : June 11, 2015
Description : Pantry 3031

Site ID :

Sample ID : MW-14

Project # : 02070860.0

Collected By : Phillip Jones
Collection Date : 06/08/15 17:10

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Sulfate	BDL	5000	ug/l	9056MOD	06/19/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	230	100	ug/l	6010C	06/12/15	1
Magnesium	1600	1000	ug/l	6010C	06/12/15	1
Manganese	BDL	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/20/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-12

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-14

Collected By : Phillip Jones
Collection Date : 06/08/15 17:10

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/20/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methyl tert-butyl ether	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
o-Xylene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/20/15	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	6200B-1997	06/20/15	1
Dibromofluoromethane	98.7		% Rec.	6200B-1997	06/20/15	1
a,a,a-Trifluorotoluene	102.		% Rec.	6200B-1997	06/20/15	1
4-Bromofluorobenzene	98.9		% Rec.	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-13

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-15

Collected By : Phillip Jones
Collection Date : 06/08/15 15:10

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Sulfate	BDL	5000	ug/l	9056MOD	06/19/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	440	100	ug/l	6010C	06/12/15	1
Magnesium	1300	1000	ug/l	6010C	06/12/15	1
Manganese	19.	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/20/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-13

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-15

Collected By : Phillip Jones
Collection Date : 06/08/15 15:10

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/20/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methyl tert-butyl ether	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
o-Xylene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/20/15	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	6200B-1997	06/20/15	1
Dibromofluoromethane	101.		% Rec.	6200B-1997	06/20/15	1
a,a,a-Trifluorotoluene	100.		% Rec.	6200B-1997	06/20/15	1
4-Bromofluorobenzene	100.		% Rec.	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-14

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-16

Collected By : Phillip Jones
Collection Date : 06/09/15 09:15

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Sulfate	BDL	5000	ug/l	9056MOD	06/19/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	850	100	ug/l	6010C	06/12/15	1
Magnesium	BDL	1000	ug/l	6010C	06/12/15	1
Manganese	550	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/20/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/20/15	1
Benzene	13.	1.0	ug/l	6200B-1997	06/20/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/20/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-14

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-16

Collected By : Phillip Jones
Collection Date : 06/09/15 09:15

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	19.	1.0	ug/l	6200B-1997	06/20/15	1
Ethylbenzene	32.	1.0	ug/l	6200B-1997	06/20/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Isopropylbenzene	2.6	1.0	ug/l	6200B-1997	06/20/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/20/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/20/15	1
Methyl tert-butyl ether	160	1.0	ug/l	6200B-1997	06/20/15	1
Naphthalene	51.	5.0	ug/l	6200B-1997	06/20/15	1
n-Propylbenzene	3.0	1.0	ug/l	6200B-1997	06/20/15	1
Styrene	9.1	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Toluene	30.	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/20/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/20/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/20/15	1
1,2,4-Trimethylbenzene	2.1	1.0	ug/l	6200B-1997	06/20/15	1
1,3,5-Trimethylbenzene	4.1	1.0	ug/l	6200B-1997	06/20/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/20/15	1
o-Xylene	61.	1.0	ug/l	6200B-1997	06/20/15	1
m&p-Xylenes	8.6	2.0	ug/l	6200B-1997	06/20/15	1
Surrogate Recovery						
Toluene-d8	102.		% Rec.	6200B-1997	06/20/15	1
Dibromofluoromethane	104.		% Rec.	6200B-1997	06/20/15	1
a,a,a-Trifluorotoluene	98.3		% Rec.	6200B-1997	06/20/15	1
4-Bromofluorobenzene	97.6		% Rec.	6200B-1997	06/20/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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Est. 1970

REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-15

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-17A

Collected By : Phillip Jones
Collection Date : 06/10/15 09:20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Nitrate	420	100	ug/l	9056MOD	06/13/15	1
Sulfate	BDL	5000	ug/l	9056MOD	06/13/15	1
Alkalinity	21000	20000	ug/l	2320 B-201	06/19/15	1
Iron	6700	100	ug/l	6010C	06/12/15	1
Magnesium	1000	1000	ug/l	6010C	06/12/15	1
Manganese	16.	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	2500	ug/l	6200B-1997	06/23/15	50
Acrolein	BDL	2500	ug/l	6200B-1997	06/23/15	50
Acrylonitrile	BDL	500	ug/l	6200B-1997	06/23/15	50
Benzene	160	50.	ug/l	6200B-1997	06/23/15	50
Bromobenzene	BDL	50.	ug/l	6200B-1997	06/23/15	50
Bromodichloromethane	BDL	50.	ug/l	6200B-1997	06/23/15	50
Bromoform	BDL	50.	ug/l	6200B-1997	06/23/15	50
Bromomethane	BDL	250	ug/l	6200B-1997	06/23/15	50
n-Butylbenzene	BDL	50.	ug/l	6200B-1997	06/23/15	50
sec-Butylbenzene	BDL	50.	ug/l	6200B-1997	06/23/15	50
tert-Butylbenzene	BDL	50.	ug/l	6200B-1997	06/23/15	50
Carbon tetrachloride	BDL	50.	ug/l	6200B-1997	06/23/15	50
Chlorobenzene	BDL	50.	ug/l	6200B-1997	06/23/15	50
Chlorodibromomethane	BDL	50.	ug/l	6200B-1997	06/23/15	50
Chloroethane	BDL	250	ug/l	6200B-1997	06/23/15	50
Chloroform	BDL	250	ug/l	6200B-1997	06/23/15	50
Chloromethane	BDL	120	ug/l	6200B-1997	06/23/15	50
2-Chlorotoluene	BDL	50.	ug/l	6200B-1997	06/23/15	50
4-Chlorotoluene	BDL	50.	ug/l	6200B-1997	06/23/15	50
1,2-Dibromo-3-Chloropropane	BDL	250	ug/l	6200B-1997	06/23/15	50
1,2-Dibromoethane	BDL	50.	ug/l	6200B-1997	06/23/15	50
Dibromomethane	BDL	50.	ug/l	6200B-1997	06/23/15	50
1,2-Dichlorobenzene	BDL	50.	ug/l	6200B-1997	06/23/15	50
1,3-Dichlorobenzene	BDL	50.	ug/l	6200B-1997	06/23/15	50
1,4-Dichlorobenzene	BDL	50.	ug/l	6200B-1997	06/23/15	50
Dichlorodifluoromethane	BDL	250	ug/l	6200B-1997	06/23/15	50
1,1-Dichloroethane	BDL	50.	ug/l	6200B-1997	06/23/15	50
1,2-Dichloroethane	BDL	50.	ug/l	6200B-1997	06/23/15	50
1,1-Dichloroethene	BDL	50.	ug/l	6200B-1997	06/23/15	50
cis-1,2-Dichloroethene	BDL	50.	ug/l	6200B-1997	06/23/15	50
trans-1,2-Dichloroethene	BDL	50.	ug/l	6200B-1997	06/23/15	50
1,2-Dichloropropane	BDL	50.	ug/l	6200B-1997	06/23/15	50
1,1-Dichloropropene	BDL	50.	ug/l	6200B-1997	06/23/15	50
1,3-Dichloropropane	BDL	50.	ug/l	6200B-1997	06/23/15	50

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-15

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-17A

Collected By : Phillip Jones
Collection Date : 06/10/15 09:20

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	50.	ug/l	6200B-1997	06/23/15	50
Di-isopropyl ether	63.	50.	ug/l	6200B-1997	06/23/15	50
Ethylbenzene	210	50.	ug/l	6200B-1997	06/23/15	50
Hexachloro-1,3-butadiene	BDL	50.	ug/l	6200B-1997	06/23/15	50
Isopropylbenzene	BDL	50.	ug/l	6200B-1997	06/23/15	50
p-Isopropyltoluene	BDL	50.	ug/l	6200B-1997	06/23/15	50
2-Butanone (MEK)	BDL	500	ug/l	6200B-1997	06/23/15	50
Methylene Chloride	BDL	250	ug/l	6200B-1997	06/23/15	50
4-Methyl-2-pentanone (MIBK)	BDL	500	ug/l	6200B-1997	06/23/15	50
Methyl tert-butyl ether	63.	50.	ug/l	6200B-1997	06/23/15	50
Naphthalene	BDL	250	ug/l	6200B-1997	06/23/15	50
n-Propylbenzene	BDL	50.	ug/l	6200B-1997	06/23/15	50
Styrene	BDL	50.	ug/l	6200B-1997	06/23/15	50
1,1,1,2-Tetrachloroethane	BDL	50.	ug/l	6200B-1997	06/23/15	50
1,1,2,2-Tetrachloroethane	BDL	50.	ug/l	6200B-1997	06/23/15	50
Tetrachloroethene	BDL	50.	ug/l	6200B-1997	06/23/15	50
Toluene	700	250	ug/l	6200B-1997	06/23/15	50
1,2,3-Trichlorobenzene	BDL	50.	ug/l	6200B-1997	06/23/15	50
1,2,4-Trichlorobenzene	BDL	50.	ug/l	6200B-1997	06/23/15	50
1,1,1-Trichloroethane	BDL	50.	ug/l	6200B-1997	06/23/15	50
1,1,2-Trichloroethane	BDL	50.	ug/l	6200B-1997	06/23/15	50
Trichloroethene	BDL	50.	ug/l	6200B-1997	06/23/15	50
Trichlorofluoromethane	BDL	250	ug/l	6200B-1997	06/23/15	50
1,2,3-Trichloropropane	BDL	120	ug/l	6200B-1997	06/23/15	50
1,2,4-Trimethylbenzene	260	50.	ug/l	6200B-1997	06/23/15	50
1,3,5-Trimethylbenzene	83.	50.	ug/l	6200B-1997	06/23/15	50
Vinyl chloride	BDL	50.	ug/l	6200B-1997	06/23/15	50
o-Xylene	440	50.	ug/l	6200B-1997	06/23/15	50
m&p-Xylenes	890	100	ug/l	6200B-1997	06/23/15	50
Surrogate Recovery						
Toluene-d8	107.		% Rec.	6200B-1997	06/23/15	1
Dibromofluoromethane	116.		% Rec.	6200B-1997	06/23/15	1
a,a,a-Trifluorotoluene	97.8		% Rec.	6200B-1997	06/23/15	1
4-Bromofluorobenzene	100.		% Rec.	6200B-1997	06/23/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-16

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-18

Collected By : Phillip Jones
Collection Date : 06/09/15 18:10

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Nitrate	760	100	ug/l	9056MOD	06/20/15	1
Sulfate	BDL	5000	ug/l	9056MOD	06/20/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	1300	100	ug/l	6010C	06/12/15	1
Magnesium	BDL	1000	ug/l	6010C	06/12/15	1
Manganese	BDL	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/23/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/23/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/23/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/23/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/23/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/23/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-16

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-18

Collected By : Phillip Jones
Collection Date : 06/09/15 18:10

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Di-isopropyl ether	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/23/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/23/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/23/15	1
Methyl tert-butyl ether	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/23/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/23/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/23/15	1
o-Xylene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/23/15	1
Surrogate Recovery						
Toluene-d8	106.		% Rec.	6200B-1997	06/23/15	1
Dibromofluoromethane	114.		% Rec.	6200B-1997	06/23/15	1
a,a,a-Trifluorotoluene	96.7		% Rec.	6200B-1997	06/23/15	1
4-Bromofluorobenzene	98.9		% Rec.	6200B-1997	06/23/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-17

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-19

Collected By : Phillip Jones
Collection Date : 06/10/15 11:35

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Nitrate	2900	100	ug/l	9056MOD	06/13/15	1
Sulfate	BDL	5000	ug/l	9056MOD	06/13/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	8200	100	ug/l	6010C	06/12/15	1
Magnesium	BDL	1000	ug/l	6010C	06/12/15	1
Manganese	20.	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/23/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/23/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/23/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/23/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/23/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/23/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-17

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-19

Collected By : Phillip Jones
Collection Date : 06/10/15 11:35

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Di-isopropyl ether	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/23/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/23/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/23/15	1
Methyl tert-butyl ether	4.9	1.0	ug/l	6200B-1997	06/23/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/23/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/23/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/23/15	1
o-Xylene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/23/15	1
Surrogate Recovery						
Toluene-d8	106.		% Rec.	6200B-1997	06/23/15	1
Dibromofluoromethane	114.		% Rec.	6200B-1997	06/23/15	1
a,a,a-Trifluorotoluene	98.2		% Rec.	6200B-1997	06/23/15	1
4-Bromofluorobenzene	98.4		% Rec.	6200B-1997	06/23/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-18

Date Received : June 11, 2015
Description : Pantry 3031

Site ID :

Sample ID : MW-20

Project # : 02070860.0

Collected By : Phillip Jones
Collection Date : 06/10/15 10:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Nitrate	2900	100	ug/l	9056MOD	06/13/15	1
Sulfate	BDL	5000	ug/l	9056MOD	06/13/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	360	100	ug/l	6010C	06/12/15	1
Magnesium	BDL	1000	ug/l	6010C	06/12/15	1
Manganese	BDL	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/23/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/23/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/23/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/23/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/23/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/23/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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Est. 1970

REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-18

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-20

Collected By : Phillip Jones
Collection Date : 06/10/15 10:50

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Di-isopropyl ether	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/23/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/23/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/23/15	1
Methyl tert-butyl ether	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/23/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/23/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/23/15	1
o-Xylene	1.1	1.0	ug/l	6200B-1997	06/23/15	1
m&p-Xylenes	2.5	2.0	ug/l	6200B-1997	06/23/15	1
Surrogate Recovery						
Toluene-d8	106.		% Rec.	6200B-1997	06/23/15	1
Dibromofluoromethane	114.		% Rec.	6200B-1997	06/23/15	1
a,a,a-Trifluorotoluene	98.6		% Rec.	6200B-1997	06/23/15	1
4-Bromofluorobenzene	96.1		% Rec.	6200B-1997	06/23/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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Est. 1970

REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-19

Date Received : June 11, 2015
Description : Pantry 3031

Site ID :

Sample ID : MW-22

Project # : 02070860.0

Collected By : Phillip Jones
Collection Date : 06/10/15 10:05

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Nitrate	1300	100	ug/l	9056MOD	06/13/15	1
Sulfate	BDL	5000	ug/l	9056MOD	06/13/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	930	100	ug/l	6010C	06/12/15	1
Magnesium	BDL	1000	ug/l	6010C	06/12/15	1
Manganese	BDL	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/23/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/23/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/23/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/23/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/23/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/23/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-19

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-22

Collected By : Phillip Jones
Collection Date : 06/10/15 10:05

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Di-isopropyl ether	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/23/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/23/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/23/15	1
Methyl tert-butyl ether	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/23/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/23/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/23/15	1
o-Xylene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/23/15	1
Surrogate Recovery						
Toluene-d8	104.		% Rec.	6200B-1997	06/23/15	1
Dibromofluoromethane	114.		% Rec.	6200B-1997	06/23/15	1
a,a,a-Trifluorotoluene	95.6		% Rec.	6200B-1997	06/23/15	1
4-Bromofluorobenzene	93.8		% Rec.	6200B-1997	06/23/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Est. 1970

REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-20

Date Received : June 11, 2015
Description : Pantry 3031

Site ID :

Sample ID : MW-23

Project # : 02070860.0

Collected By : Phillip Jones
Collection Date : 06/09/15 17:35

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Nitrate	2600	100	ug/l	9056MOD	06/20/15	1
Sulfate	BDL	5000	ug/l	9056MOD	06/20/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	770	100	ug/l	6010C	06/12/15	1
Magnesium	1200	1000	ug/l	6010C	06/12/15	1
Manganese	BDL	10.	ug/l	6010C	06/12/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/23/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/23/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/23/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/23/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/23/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/23/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-20

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-23

Collected By : Phillip Jones
Collection Date : 06/09/15 17:35

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Di-isopropyl ether	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/23/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/23/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/23/15	1
Methyl tert-butyl ether	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/23/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/23/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/23/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/23/15	1
o-Xylene	BDL	1.0	ug/l	6200B-1997	06/23/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/23/15	1
Surrogate Recovery						
Toluene-d8	106.		% Rec.	6200B-1997	06/23/15	1
Dibromofluoromethane	116.		% Rec.	6200B-1997	06/23/15	1
a,a,a-Trifluorotoluene	97.8		% Rec.	6200B-1997	06/23/15	1
4-Bromofluorobenzene	101.		% Rec.	6200B-1997	06/23/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-21

Date Received : June 11, 2015
Description : Pantry 3031

Site ID :

Sample ID : MW-24

Project # : 02070860.0

Collected By : Phillip Jones
Collection Date : 06/09/15 11:55

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Nitrate	2100	100	ug/l	9056MOD	06/20/15	1
Sulfate	BDL	5000	ug/l	9056MOD	06/20/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	140	100	ug/l	6010C	06/11/15	1
Magnesium	BDL	1000	ug/l	6010C	06/11/15	1
Manganese	BDL	10.	ug/l	6010C	06/11/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/22/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/22/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/22/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/22/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/22/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-21

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-24

Collected By : Phillip Jones
Collection Date : 06/09/15 11:55

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Di-isopropyl ether	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/22/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/22/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/22/15	1
Methyl tert-butyl ether	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/22/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/22/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/22/15	1
o-Xylene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/22/15	1
Surrogate Recovery						
Toluene-d8	106.		% Rec.	6200B-1997	06/22/15	1
Dibromofluoromethane	113.		% Rec.	6200B-1997	06/22/15	1
a,a,a-Trifluorotoluene	97.4		% Rec.	6200B-1997	06/22/15	1
4-Bromofluorobenzene	96.2		% Rec.	6200B-1997	06/22/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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Est. 1970

REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-22

Date Received : June 11, 2015
Description : Pantry 3031

Site ID :

Sample ID : MW-25

Project # : 02070860.0

Collected By : Phillip Jones
Collection Date : 06/08/15 16:28

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Sulfate	BDL	5000	ug/l	9056MOD	06/19/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	260	100	ug/l	6010C	06/11/15	1
Magnesium	1400	1000	ug/l	6010C	06/11/15	1
Manganese	BDL	10.	ug/l	6010C	06/11/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/22/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/22/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/22/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/22/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/22/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-22

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-25

Collected By : Phillip Jones
Collection Date : 06/08/15 16:28

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/22/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/22/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/22/15	1
Methyl tert-butyl ether	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/22/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/22/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/22/15	1
o-Xylene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/22/15	1
Surrogate Recovery						
Toluene-d8	106.		% Rec.	6200B-1997	06/22/15	1
Dibromofluoromethane	114.		% Rec.	6200B-1997	06/22/15	1
a,a,a-Trifluorotoluene	97.0		% Rec.	6200B-1997	06/22/15	1
4-Bromofluorobenzene	96.4		% Rec.	6200B-1997	06/22/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-23

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-26

Collected By : Phillip Jones
Collection Date : 06/09/15 09:55

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Sulfate	BDL	5000	ug/l	9056MOD	06/19/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	1800	100	ug/l	6010C	06/11/15	1
Magnesium	BDL	1000	ug/l	6010C	06/11/15	1
Manganese	BDL	10.	ug/l	6010C	06/11/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/22/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/22/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/22/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/22/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/22/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-23

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-26

Collected By : Phillip Jones
Collection Date : 06/09/15 09:55

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/22/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/22/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/22/15	1
Methyl tert-butyl ether	5.6	1.0	ug/l	6200B-1997	06/22/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/22/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/22/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/22/15	1
o-Xylene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/22/15	1
Surrogate Recovery						
Toluene-d8	106.		% Rec.	6200B-1997	06/22/15	1
Dibromofluoromethane	112.		% Rec.	6200B-1997	06/22/15	1
a,a,a-Trifluorotoluene	97.8		% Rec.	6200B-1997	06/22/15	1
4-Bromofluorobenzene	96.9		% Rec.	6200B-1997	06/22/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-24

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-27

Collected By : Phillip Jones
Collection Date : 06/08/15 12:35

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Sulfate	BDL	5000	ug/l	9056MOD	06/20/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	BDL	100	ug/l	6010C	06/11/15	1
Magnesium	BDL	1000	ug/l	6010C	06/11/15	1
Manganese	15.	10.	ug/l	6010C	06/11/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/22/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/22/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/22/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/22/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/22/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-24

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-27

Collected By : Phillip Jones
Collection Date : 06/08/15 12:35

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	1.1	1.0	ug/l	6200B-1997	06/22/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/22/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/22/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/22/15	1
Methyl tert-butyl ether	1.2	1.0	ug/l	6200B-1997	06/22/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/22/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/22/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/22/15	1
o-Xylene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/22/15	1
Surrogate Recovery						
Toluene-d8	106.		% Rec.	6200B-1997	06/22/15	1
Dibromofluoromethane	112.		% Rec.	6200B-1997	06/22/15	1
a,a,a-Trifluorotoluene	98.4		% Rec.	6200B-1997	06/22/15	1
4-Bromofluorobenzene	97.9		% Rec.	6200B-1997	06/22/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-25

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-28

Collected By : Phillip Jones
Collection Date : 06/08/15 13:32

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Sulfate	BDL	5000	ug/l	9056MOD	06/20/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	140	100	ug/l	6010C	06/11/15	1
Magnesium	BDL	1000	ug/l	6010C	06/11/15	1
Manganese	BDL	10.	ug/l	6010C	06/11/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/22/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/22/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/22/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/22/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/22/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-25

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-28

Collected By : Phillip Jones
Collection Date : 06/08/15 13:32

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/22/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/22/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/22/15	1
Methyl tert-butyl ether	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/22/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/22/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/22/15	1
o-Xylene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/22/15	1
Surrogate Recovery						
Toluene-d8	105.		% Rec.	6200B-1997	06/22/15	1
Dibromofluoromethane	114.		% Rec.	6200B-1997	06/22/15	1
a,a,a-Trifluorotoluene	97.6		% Rec.	6200B-1997	06/22/15	1
4-Bromofluorobenzene	100.		% Rec.	6200B-1997	06/22/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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Est. 1970

REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-26

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-29

Collected By : Phillip Jones
Collection Date : 06/08/15 14:25

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Sulfate	BDL	5000	ug/l	9056MOD	06/20/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	130	100	ug/l	6010C	06/11/15	1
Magnesium	BDL	1000	ug/l	6010C	06/11/15	1
Manganese	22.	10.	ug/l	6010C	06/11/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/22/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/22/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/22/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/22/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/22/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-26

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-29

Collected By : Phillip Jones
Collection Date : 06/08/15 14:25

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/22/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/22/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/22/15	1
Methyl tert-butyl ether	2.5	1.0	ug/l	6200B-1997	06/22/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/22/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/22/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/22/15	1
o-Xylene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/22/15	1
Surrogate Recovery						
Toluene-d8	106.		% Rec.	6200B-1997	06/22/15	1
Dibromofluoromethane	112.		% Rec.	6200B-1997	06/22/15	1
a,a,a-Trifluorotoluene	97.3		% Rec.	6200B-1997	06/22/15	1
4-Bromofluorobenzene	98.8		% Rec.	6200B-1997	06/22/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.
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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-27

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-30

Collected By : Phillip Jones
Collection Date : 06/08/15 12:05

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Sulfate	BDL	5000	ug/l	9056MOD	06/20/15	1
Alkalinity	BDL	20000	ug/l	2320 B-201	06/16/15	1
Iron	110	100	ug/l	6010C	06/11/15	1
Magnesium	2000	1000	ug/l	6010C	06/11/15	1
Manganese	BDL	10.	ug/l	6010C	06/11/15	1
Volatile Organics						
Acetone	BDL	50.	ug/l	6200B-1997	06/22/15	1
Acrolein	BDL	50.	ug/l	6200B-1997	06/22/15	1
Acrylonitrile	BDL	10.	ug/l	6200B-1997	06/22/15	1
Benzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromodichloromethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromoform	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Bromomethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
n-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
sec-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
tert-Butylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Carbon tetrachloride	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chlorodibromomethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Chloroethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
Chloroform	BDL	5.0	ug/l	6200B-1997	06/22/15	1
Chloromethane	BDL	2.5	ug/l	6200B-1997	06/22/15	1
2-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
4-Chlorotoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dibromo-3-Chloropropane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2-Dibromoethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Dibromomethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,4-Dichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Dichlorodifluoromethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
cis-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
trans-1,2-Dichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1-Dichloropropene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
2,2-Dichloropropane	BDL	1.0	ug/l	6200B-1997	06/22/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)

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REPORT OF ANALYSIS

Matt James
Withers & Ravenel Eng. - Standard
115 MacKenan Drive
Cary, NC 27511

June 23,2015

ESC Sample # : L770436-27

Site ID :

Project # : 02070860.0

Date Received : June 11, 2015
Description : Pantry 3031

Sample ID : MW-30

Collected By : Phillip Jones
Collection Date : 06/08/15 12:05

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Di-isopropyl ether	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Ethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Hexachloro-1,3-butadiene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Isopropylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
p-Isopropyltoluene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
2-Butanone (MEK)	BDL	10.	ug/l	6200B-1997	06/22/15	1
Methylene Chloride	BDL	5.0	ug/l	6200B-1997	06/22/15	1
4-Methyl-2-pentanone (MIBK)	BDL	10.	ug/l	6200B-1997	06/22/15	1
Methyl tert-butyl ether	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Naphthalene	BDL	5.0	ug/l	6200B-1997	06/22/15	1
n-Propylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Styrene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,1,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,2,2-Tetrachloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Tetrachloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Toluene	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2,3-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,2,4-Trichlorobenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,1-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,1,2-Trichloroethane	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Trichloroethene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Trichlorofluoromethane	BDL	5.0	ug/l	6200B-1997	06/22/15	1
1,2,3-Trichloropropane	BDL	2.5	ug/l	6200B-1997	06/22/15	1
1,2,4-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
1,3,5-Trimethylbenzene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
Vinyl chloride	BDL	1.0	ug/l	6200B-1997	06/22/15	1
o-Xylene	BDL	1.0	ug/l	6200B-1997	06/22/15	1
m&p-Xylenes	BDL	2.0	ug/l	6200B-1997	06/22/15	1
Surrogate Recovery						
Toluene-d8	105.		% Rec.	6200B-1997	06/22/15	1
Dibromofluoromethane	114.		% Rec.	6200B-1997	06/22/15	1
a,a,a-Trifluorotoluene	97.2		% Rec.	6200B-1997	06/22/15	1
4-Bromofluorobenzene	99.8		% Rec.	6200B-1997	06/22/15	1

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
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Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L770436-01	WG795244	SAMP	Methyl tert-butyl ether	R3045006	J6
L770436-02	WG795244	SAMP	2-Butanone (MEK)	R3045006	J3
	WG795244	SAMP	4-Methyl-2-pentanone (MIBK)	R3045006	J3
L770436-03	WG795244	SAMP	2-Butanone (MEK)	R3045006	J3
	WG795244	SAMP	4-Methyl-2-pentanone (MIBK)	R3045006	J3
L770436-04	WG795244	SAMP	2-Butanone (MEK)	R3045006	J3
	WG795244	SAMP	4-Methyl-2-pentanone (MIBK)	R3045006	J3
L770436-05	WG795244	SAMP	2-Butanone (MEK)	R3045006	J3
	WG795244	SAMP	4-Methyl-2-pentanone (MIBK)	R3045006	J3
L770436-06	WG795244	SAMP	2-Butanone (MEK)	R3045006	J3
	WG795244	SAMP	4-Methyl-2-pentanone (MIBK)	R3045006	J3
L770436-07	WG795244	SAMP	2-Butanone (MEK)	R3045006	J3
	WG795244	SAMP	4-Methyl-2-pentanone (MIBK)	R3045006	J3
L770436-08	WG795244	SAMP	2-Butanone (MEK)	R3045006	J3
	WG795244	SAMP	4-Methyl-2-pentanone (MIBK)	R3045006	J3
L770436-09	WG795244	SAMP	2-Butanone (MEK)	R3045006	J3
	WG795244	SAMP	4-Methyl-2-pentanone (MIBK)	R3045006	J3
L770436-10	WG795244	SAMP	2-Butanone (MEK)	R3045006	J3
	WG795244	SAMP	4-Methyl-2-pentanone (MIBK)	R3045006	J3
L770436-11	WG795244	SAMP	2-Butanone (MEK)	R3045006	J3
	WG795244	SAMP	4-Methyl-2-pentanone (MIBK)	R3045006	J3
L770436-12	WG795244	SAMP	2-Butanone (MEK)	R3045006	J3
	WG795244	SAMP	4-Methyl-2-pentanone (MIBK)	R3045006	J3
L770436-13	WG795244	SAMP	2-Butanone (MEK)	R3045006	J3
	WG795244	SAMP	4-Methyl-2-pentanone (MIBK)	R3045006	J3
L770436-14	WG795244	SAMP	2-Butanone (MEK)	R3045006	J3
	WG795244	SAMP	4-Methyl-2-pentanone (MIBK)	R3045006	J3
L770436-16	WG797519	SAMP	Trichlorofluoromethane	R3045172	J3

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods,it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

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Mt. Juliet, TN 37122
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Cary, NC 27511

Quality Assurance Report
Level II

L770436

June 23, 2015

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Iron	< .1	mg/l			WG795091	06/11/15 19:15
Magnesium	< 1	mg/l			WG795091	06/11/15 19:15
Manganese	< .01	mg/l			WG795091	06/11/15 19:15
Iron	< .1	mg/l			WG795092	06/12/15 01:54
Magnesium	< 1	mg/l			WG795092	06/12/15 01:54
Manganese	< .01	mg/l			WG795092	06/12/15 01:54
Nitrate	< .1	mg/l			WG795039	06/10/15 23:21
Sulfate	< 5	mg/l			WG795039	06/10/15 23:21
Nitrate	< .1	mg/l			WG795605	06/13/15 16:34
Sulfate	< 5	mg/l			WG795605	06/13/15 16:34
Sulfate	< 5	mg/l			WG796634	06/19/15 08:34
Sulfate	< 5	mg/l			WG796958	06/20/15 09:05
Alkalinity	< 20	mg/l			WG795951	06/16/15 19:49
Nitrate	< .1	mg/l			WG796690	06/20/15 14:20
Sulfate	< 5	mg/l			WG796690	06/20/15 14:20
Alkalinity	< 20	mg/l			WG795952	06/16/15 14:14
Alkalinity	< 20	mg/l			WG795953	06/19/15 22:03
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG797232	06/22/15 00:54
1,1,1-Trichloroethane	< .001	mg/l			WG797232	06/22/15 00:54
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG797232	06/22/15 00:54
1,1,2-Trichloroethane	< .001	mg/l			WG797232	06/22/15 00:54
1,1-Dichloroethane	< .001	mg/l			WG797232	06/22/15 00:54
1,1-Dichloroethene	< .001	mg/l			WG797232	06/22/15 00:54
1,1-Dichloropropene	< .001	mg/l			WG797232	06/22/15 00:54
1,2,3-Trichlorobenzene	< .001	mg/l			WG797232	06/22/15 00:54
1,2,3-Trichloropropane	< .001	mg/l			WG797232	06/22/15 00:54
1,2,4-Trichlorobenzene	< .001	mg/l			WG797232	06/22/15 00:54
1,2,4-Trimethylbenzene	< .001	mg/l			WG797232	06/22/15 00:54
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG797232	06/22/15 00:54
1,2-Dibromoethane	< .001	mg/l			WG797232	06/22/15 00:54
1,2-Dichlorobenzene	< .001	mg/l			WG797232	06/22/15 00:54
1,2-Dichloroethane	< .001	mg/l			WG797232	06/22/15 00:54
1,2-Dichloropropane	< .001	mg/l			WG797232	06/22/15 00:54
1,3,5-Trimethylbenzene	< .001	mg/l			WG797232	06/22/15 00:54
1,3-Dichlorobenzene	< .001	mg/l			WG797232	06/22/15 00:54
1,3-Dichloropropane	< .001	mg/l			WG797232	06/22/15 00:54
1,4-Dichlorobenzene	< .001	mg/l			WG797232	06/22/15 00:54
2,2-Dichloropropane	< .001	mg/l			WG797232	06/22/15 00:54
2-Butanone (MEK)	< .01	mg/l			WG797232	06/22/15 00:54

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Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
2-Chlorotoluene	< .001	mg/l			WG797232	06/22/15 00:54
4-Chlorotoluene	< .001	mg/l			WG797232	06/22/15 00:54
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG797232	06/22/15 00:54
Acetone	< .05	mg/l			WG797232	06/22/15 00:54
Acrolein	< .025	mg/l			WG797232	06/22/15 00:54
Acrylonitrile	< .01	mg/l			WG797232	06/22/15 00:54
Benzene	< .001	mg/l			WG797232	06/22/15 00:54
Bromobenzene	< .001	mg/l			WG797232	06/22/15 00:54
Bromodichloromethane	< .001	mg/l			WG797232	06/22/15 00:54
Bromoform	< .001	mg/l			WG797232	06/22/15 00:54
Bromomethane	< .005	mg/l			WG797232	06/22/15 00:54
Carbon tetrachloride	< .001	mg/l			WG797232	06/22/15 00:54
Chlorobenzene	< .001	mg/l			WG797232	06/22/15 00:54
Chlorodibromomethane	< .001	mg/l			WG797232	06/22/15 00:54
Chloroethane	< .005	mg/l			WG797232	06/22/15 00:54
Chloroform	< .005	mg/l			WG797232	06/22/15 00:54
Chloromethane	< .0025	mg/l			WG797232	06/22/15 00:54
cis-1,2-Dichloroethene	< .001	mg/l			WG797232	06/22/15 00:54
Di-isopropyl ether	< .001	mg/l			WG797232	06/22/15 00:54
Dibromomethane	< .001	mg/l			WG797232	06/22/15 00:54
Dichlorodifluoromethane	< .005	mg/l			WG797232	06/22/15 00:54
Ethylbenzene	< .001	mg/l			WG797232	06/22/15 00:54
Hexachloro-1,3-butadiene	< .001	mg/l			WG797232	06/22/15 00:54
Isopropylbenzene	< .001	mg/l			WG797232	06/22/15 00:54
m&p-Xylenes	< .002	mg/l			WG797232	06/22/15 00:54
Methyl tert-butyl ether	< .001	mg/l			WG797232	06/22/15 00:54
Methylene Chloride	< .005	mg/l			WG797232	06/22/15 00:54
n-Butylbenzene	< .001	mg/l			WG797232	06/22/15 00:54
n-Propylbenzene	< .001	mg/l			WG797232	06/22/15 00:54
Naphthalene	< .005	mg/l			WG797232	06/22/15 00:54
o-Xylene	< .001	mg/l			WG797232	06/22/15 00:54
p-Isopropyltoluene	< .001	mg/l			WG797232	06/22/15 00:54
sec-Butylbenzene	< .001	mg/l			WG797232	06/22/15 00:54
Styrene	< .001	mg/l			WG797232	06/22/15 00:54
tert-Butylbenzene	< .001	mg/l			WG797232	06/22/15 00:54
Tetrachloroethene	< .001	mg/l			WG797232	06/22/15 00:54
Toluene	< .005	mg/l			WG797232	06/22/15 00:54
trans-1,2-Dichloroethene	< .001	mg/l			WG797232	06/22/15 00:54
Trichloroethene	< .001	mg/l			WG797232	06/22/15 00:54
Trichlorofluoromethane	< .005	mg/l			WG797232	06/22/15 00:54
Vinyl chloride	< .001	mg/l			WG797232	06/22/15 00:54
4-Bromofluorobenzene		% Rec.	98.70	80.1-120	WG797232	06/22/15 00:54
Dibromofluoromethane		% Rec.	111.0	79-121	WG797232	06/22/15 00:54
Toluene-d8		% Rec.	106.0	90-115	WG797232	06/22/15 00:54
a,a,a-Trifluorotoluene		% Rec.	98.70	90.4-116	WG797232	06/22/15 00:54
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG795244	06/20/15 03:03
1,1,1-Trichloroethane	< .001	mg/l			WG795244	06/20/15 03:03
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG795244	06/20/15 03:03
1,1,2-Trichloroethane	< .001	mg/l			WG795244	06/20/15 03:03
1,1-Dichloroethane	< .001	mg/l			WG795244	06/20/15 03:03
1,1-Dichloroethene	< .001	mg/l			WG795244	06/20/15 03:03
1,1-Dichloropropene	< .001	mg/l			WG795244	06/20/15 03:03
1,2,3-Trichlorobenzene	< .001	mg/l			WG795244	06/20/15 03:03
1,2,3-Trichloropropane	< .001	mg/l			WG795244	06/20/15 03:03
1,2,4-Trichlorobenzene	< .001	mg/l			WG795244	06/20/15 03:03
1,2,4-Trimethylbenzene	< .001	mg/l			WG795244	06/20/15 03:03
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG795244	06/20/15 03:03

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June 23, 2015

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Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
1,2-Dibromoethane	< .001	mg/l			WG795244	06/20/15 03:03
1,2-Dichlorobenzene	< .001	mg/l			WG795244	06/20/15 03:03
1,2-Dichloroethane	< .001	mg/l			WG795244	06/20/15 03:03
1,2-Dichloropropane	< .001	mg/l			WG795244	06/20/15 03:03
1,3,5-Trimethylbenzene	< .001	mg/l			WG795244	06/20/15 03:03
1,3-Dichlorobenzene	< .001	mg/l			WG795244	06/20/15 03:03
1,3-Dichloropropane	< .001	mg/l			WG795244	06/20/15 03:03
1,4-Dichlorobenzene	< .001	mg/l			WG795244	06/20/15 03:03
2,2-Dichloropropane	< .001	mg/l			WG795244	06/20/15 03:03
2-Butanone (MEK)	< .01	mg/l			WG795244	06/20/15 03:03
2-Chlorotoluene	< .001	mg/l			WG795244	06/20/15 03:03
4-Chlorotoluene	< .001	mg/l			WG795244	06/20/15 03:03
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG795244	06/20/15 03:03
Acetone	< .05	mg/l			WG795244	06/20/15 03:03
Acrolein	< .025	mg/l			WG795244	06/20/15 03:03
Acrylonitrile	< .01	mg/l			WG795244	06/20/15 03:03
Benzene	< .001	mg/l			WG795244	06/20/15 03:03
Bromobenzene	< .001	mg/l			WG795244	06/20/15 03:03
Bromodichloromethane	< .001	mg/l			WG795244	06/20/15 03:03
Bromoform	< .001	mg/l			WG795244	06/20/15 03:03
Bromomethane	< .005	mg/l			WG795244	06/20/15 03:03
Carbon tetrachloride	< .001	mg/l			WG795244	06/20/15 03:03
Chlorobenzene	< .001	mg/l			WG795244	06/20/15 03:03
Chlorodibromomethane	< .001	mg/l			WG795244	06/20/15 03:03
Chloroethane	< .005	mg/l			WG795244	06/20/15 03:03
Chloroform	< .005	mg/l			WG795244	06/20/15 03:03
Chloromethane	< .0025	mg/l			WG795244	06/20/15 03:03
cis-1,2-Dichloroethene	< .001	mg/l			WG795244	06/20/15 03:03
Di-isopropyl ether	< .001	mg/l			WG795244	06/20/15 03:03
Dibromomethane	< .001	mg/l			WG795244	06/20/15 03:03
Dichlorodifluoromethane	< .005	mg/l			WG795244	06/20/15 03:03
Ethylbenzene	< .001	mg/l			WG795244	06/20/15 03:03
Hexachloro-1,3-butadiene	< .001	mg/l			WG795244	06/20/15 03:03
Isopropylbenzene	< .001	mg/l			WG795244	06/20/15 03:03
m&p-Xylenes	< .002	mg/l			WG795244	06/20/15 03:03
Methyl tert-butyl ether	< .001	mg/l			WG795244	06/20/15 03:03
Methylene Chloride	< .005	mg/l			WG795244	06/20/15 03:03
n-Butylbenzene	< .001	mg/l			WG795244	06/20/15 03:03
n-Propylbenzene	< .001	mg/l			WG795244	06/20/15 03:03
Naphthalene	< .005	mg/l			WG795244	06/20/15 03:03
o-Xylene	< .001	mg/l			WG795244	06/20/15 03:03
p-Isopropyltoluene	< .001	mg/l			WG795244	06/20/15 03:03
sec-Butylbenzene	< .001	mg/l			WG795244	06/20/15 03:03
Styrene	< .001	mg/l			WG795244	06/20/15 03:03
tert-Butylbenzene	< .001	mg/l			WG795244	06/20/15 03:03
Tetrachloroethene	< .001	mg/l			WG795244	06/20/15 03:03
Toluene	< .005	mg/l			WG795244	06/20/15 03:03
trans-1,2-Dichloroethene	< .001	mg/l			WG795244	06/20/15 03:03
Trichloroethene	< .001	mg/l			WG795244	06/20/15 03:03
Trichlorofluoromethane	< .005	mg/l			WG795244	06/20/15 03:03
Vinyl chloride	< .001	mg/l			WG795244	06/20/15 03:03
4-Bromofluorobenzene		% Rec.	98.90	80.1-120	WG795244	06/20/15 03:03
Dibromofluoromethane		% Rec.	97.70	79-121	WG795244	06/20/15 03:03
Toluene-d8		% Rec.	102.0	90-115	WG795244	06/20/15 03:03
a,a,a-Trifluorotoluene		% Rec.	102.0	90.4-116	WG795244	06/20/15 03:03
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG797519	06/23/15 02:28
1,1,1-Trichloroethane	< .001	mg/l			WG797519	06/23/15 02:28

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Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG797519	06/23/15 02:28
1,1,2-Trichloroethane	< .001	mg/l			WG797519	06/23/15 02:28
1,1-Dichloroethane	< .001	mg/l			WG797519	06/23/15 02:28
1,1-Dichloroethene	< .001	mg/l			WG797519	06/23/15 02:28
1,1-Dichloropropene	< .001	mg/l			WG797519	06/23/15 02:28
1,2,3-Trichlorobenzene	< .001	mg/l			WG797519	06/23/15 02:28
1,2,3-Trichloropropane	< .001	mg/l			WG797519	06/23/15 02:28
1,2,4-Trichlorobenzene	< .001	mg/l			WG797519	06/23/15 02:28
1,2,4-Trimethylbenzene	< .001	mg/l			WG797519	06/23/15 02:28
1,2-Dibromo-3-Chloropropane	< .005	mg/l			WG797519	06/23/15 02:28
1,2-Dibromoethane	< .001	mg/l			WG797519	06/23/15 02:28
1,2-Dichlorobenzene	< .001	mg/l			WG797519	06/23/15 02:28
1,2-Dichloroethane	< .001	mg/l			WG797519	06/23/15 02:28
1,2-Dichloropropane	< .001	mg/l			WG797519	06/23/15 02:28
1,3,5-Trimethylbenzene	< .001	mg/l			WG797519	06/23/15 02:28
1,3-Dichlorobenzene	< .001	mg/l			WG797519	06/23/15 02:28
1,3-Dichloropropane	< .001	mg/l			WG797519	06/23/15 02:28
1,4-Dichlorobenzene	< .001	mg/l			WG797519	06/23/15 02:28
2,2-Dichloropropane	< .001	mg/l			WG797519	06/23/15 02:28
2-Butanone (MEK)	< .01	mg/l			WG797519	06/23/15 02:28
2-Chlorotoluene	< .001	mg/l			WG797519	06/23/15 02:28
4-Chlorotoluene	< .001	mg/l			WG797519	06/23/15 02:28
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG797519	06/23/15 02:28
Acetone	< .05	mg/l			WG797519	06/23/15 02:28
Acrylonitrile	< .01	mg/l			WG797519	06/23/15 02:28
Benzene	< .001	mg/l			WG797519	06/23/15 02:28
Bromobenzene	< .001	mg/l			WG797519	06/23/15 02:28
Bromodichloromethane	< .001	mg/l			WG797519	06/23/15 02:28
Bromoform	< .001	mg/l			WG797519	06/23/15 02:28
Bromomethane	< .005	mg/l			WG797519	06/23/15 02:28
Carbon tetrachloride	< .001	mg/l			WG797519	06/23/15 02:28
Chlorobenzene	< .001	mg/l			WG797519	06/23/15 02:28
Chlorodibromomethane	< .001	mg/l			WG797519	06/23/15 02:28
Chloroethane	< .005	mg/l			WG797519	06/23/15 02:28
Chloroform	< .005	mg/l			WG797519	06/23/15 02:28
Chloromethane	< .0025	mg/l			WG797519	06/23/15 02:28
cis-1,2-Dichloroethene	< .001	mg/l			WG797519	06/23/15 02:28
Di-isopropyl ether	< .001	mg/l			WG797519	06/23/15 02:28
Dibromomethane	< .001	mg/l			WG797519	06/23/15 02:28
Dichlorodifluoromethane	< .005	mg/l			WG797519	06/23/15 02:28
Ethylbenzene	< .001	mg/l			WG797519	06/23/15 02:28
Hexachloro-1,3-butadiene	< .001	mg/l			WG797519	06/23/15 02:28
Isopropylbenzene	< .001	mg/l			WG797519	06/23/15 02:28
m&p-Xylenes	< .002	mg/l			WG797519	06/23/15 02:28
Methyl tert-butyl ether	< .001	mg/l			WG797519	06/23/15 02:28
Methylene Chloride	< .005	mg/l			WG797519	06/23/15 02:28
n-Butylbenzene	< .001	mg/l			WG797519	06/23/15 02:28
n-Propylbenzene	< .001	mg/l			WG797519	06/23/15 02:28
Naphthalene	< .005	mg/l			WG797519	06/23/15 02:28
o-Xylene	< .001	mg/l			WG797519	06/23/15 02:28
p-Isopropyltoluene	< .001	mg/l			WG797519	06/23/15 02:28
sec-Butylbenzene	< .001	mg/l			WG797519	06/23/15 02:28
Styrene	< .001	mg/l			WG797519	06/23/15 02:28
tert-Butylbenzene	< .001	mg/l			WG797519	06/23/15 02:28
Tetrachloroethene	< .001	mg/l			WG797519	06/23/15 02:28
Toluene	< .005	mg/l			WG797519	06/23/15 02:28
trans-1,2-Dichloroethene	< .001	mg/l			WG797519	06/23/15 02:28
Trichloroethene	< .001	mg/l			WG797519	06/23/15 02:28
Trichlorofluoromethane	< .005	mg/l			WG797519	06/23/15 02:28

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Quality Assurance Report
Level II

L770436

June 23, 2015

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Vinyl chloride	< .001	mg/l			WG797519	06/23/15 02:28
4-Bromofluorobenzene		% Rec.	97.80	80.1-120	WG797519	06/23/15 02:28
Dibromofluoromethane		% Rec.	113.0	79-121	WG797519	06/23/15 02:28
Toluene-d8		% Rec.	106.0	90-115	WG797519	06/23/15 02:28
a,a,a-Trifluorotoluene		% Rec.	97.80	90.4-116	WG797519	06/23/15 02:28
Acrolein	< .025	mg/l			WG797688	06/23/15 09:57
4-Bromofluorobenzene		% Rec.	102.0	80.1-120	WG797688	06/23/15 09:57
Dibromofluoromethane		% Rec.	100.0	79-121	WG797688	06/23/15 09:57
Toluene-d8		% Rec.	107.0	90-115	WG797688	06/23/15 09:57
a,a,a-Trifluorotoluene		% Rec.	102.0	90.4-116	WG797688	06/23/15 09:57

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Nitrate	mg/l	2.50	2.46	0.0	20	L770436-21	WG795039
Sulfate	mg/l	0.0	0.393	0.0	20	L770436-21	WG795039
Sulfate	mg/l	49.0	49.1	0.0	20	L769297-01	WG796958
Sulfate	mg/l	0.0	1.16	0.0	20	L770436-24	WG796958
Sulfate	mg/l	0.0	0.201	0.0	20	L770436-06	WG796634
Alkalinity	mg/l	59.0	58.0	1.03	20	L769188-01	WG795951
Alkalinity	mg/l	34.0	35.0	3.78	20	L770436-05	WG795951
Nitrate	mg/l	0.0	0.0	0.0	20	L770058-02	WG796690
Sulfate	mg/l	6.70	6.67	1.00	20	L770058-02	WG796690
Nitrate	mg/l	0.0	0.0	0.0	20	L770627-08	WG796690
Sulfate	mg/l	570.	583.	1.00	20	L770627-08	WG796690
Alkalinity	mg/l	0.0	0.0	0.0	20	L770436-17	WG795952
Alkalinity	mg/l	0.0	0.0	0.0	20	L770436-26	WG795952
Alkalinity	mg/l	520.	480.	7.23	20	L770567-05	WG795953
Alkalinity	mg/l	280.	280.	1.42	20	L770801-01	WG795953
Nitrate	mg/l	2.90	2.90	0.0	20	L770436-18	WG795605
Sulfate	mg/l	0.0	0.242	0.0	20	L770436-18	WG795605

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Iron	mg/l	1	1.02	102.	80-120	WG795091
Magnesium	mg/l	10	10.1	101.	80-120	WG795091
Manganese	mg/l	1	0.999	100.	80-120	WG795091
Iron	mg/l	1	1.02	102.	80-120	WG795092
Magnesium	mg/l	10	10.6	106.	80-120	WG795092
Manganese	mg/l	1	1.04	104.	80-120	WG795092

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Level II

L770436

June 23, 2015

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
Nitrate	mg/l	8	8.13	102.	90-110	WG795039
Sulfate	mg/l	40	40.2	100.	90-110	WG795039
Nitrate	mg/l	8	7.96	99.0	90-110	WG795605
Sulfate	mg/l	40	39.3	98.0	90-110	WG795605
Sulfate	mg/l	40	39.9	100.	90-110	WG796634
Sulfate	mg/l	40	40.7	102.	90-110	WG796958
Alkalinity	mg/l	100	100.	100.	85-115	WG795951
Nitrate	mg/l	8	8.17	102.	90-110	WG796690
Sulfate	mg/l	40	40.4	101.	90-110	WG796690
Alkalinity	mg/l	100	100.	100.	85-115	WG795952
Alkalinity	mg/l	100	100.	100.	85-115	WG795953
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0206	82.4	78.5-125	WG797232
1,1,1-Trichloroethane	mg/l	.025	0.0251	100.	71.1-129	WG797232
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0241	96.4	79.3-123	WG797232
1,1,2-Trichloroethane	mg/l	.025	0.0233	93.3	81.6-120	WG797232
1,1-Dichloroethane	mg/l	.025	0.0288	115.	71.7-127	WG797232
1,1-Dichloroethene	mg/l	.025	0.0311	124.	59.9-137	WG797232
1,1-Dichloropropene	mg/l	.025	0.0278	111.	72.5-127	WG797232
1,2,3-Trichlorobenzene	mg/l	.025	0.0245	97.9	75.7-134	WG797232
1,2,3-Trichloropropane	mg/l	.025	0.0253	101.	74.9-124	WG797232
1,2,4-Trichlorobenzene	mg/l	.025	0.0249	99.7	76.1-136	WG797232
1,2,4-Trimethylbenzene	mg/l	.025	0.0237	94.7	79-122	WG797232
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0218	87.3	64.8-131	WG797232
1,2-Dibromoethane	mg/l	.025	0.0241	96.2	79.8-122	WG797232
1,2-Dichlorobenzene	mg/l	.025	0.0256	103.	84.7-118	WG797232
1,2-Dichloroethane	mg/l	.025	0.0293	117.	65.3-126	WG797232
1,2-Dichloropropane	mg/l	.025	0.0262	105.	77.4-125	WG797232
1,3,5-Trimethylbenzene	mg/l	.025	0.0242	96.7	81-123	WG797232
1,3-Dichlorobenzene	mg/l	.025	0.0233	93.1	77.6-127	WG797232
1,3-Dichloropropane	mg/l	.025	0.0241	96.2	80.6-115	WG797232
1,4-Dichlorobenzene	mg/l	.025	0.0244	97.6	82.2-114	WG797232
2,2-Dichloropropane	mg/l	.025	0.0220	88.1	61.3-134	WG797232
2-Butanone (MEK)	mg/l	.125	0.148	118.	46.4-155	WG797232
2-Chlorotoluene	mg/l	.025	0.0230	91.9	76.4-125	WG797232
4-Chlorotoluene	mg/l	.025	0.0244	97.8	81.5-121	WG797232
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.147	117.	63.3-138	WG797232
Acetone	mg/l	.125	0.149	119.	28.7-175	WG797232
Acrolein	mg/l	.125	0.143	114.	40.4-172	WG797232
Acrylonitrile	mg/l	.125	0.145	116.	58.2-145	WG797232
Benzene	mg/l	.025	0.0277	111.	73-122	WG797232
Bromobenzene	mg/l	.025	0.0248	99.1	81.5-115	WG797232
Bromodichloromethane	mg/l	.025	0.0238	95.1	75.5-121	WG797232
Bromoform	mg/l	.025	0.0193	77.2	71.5-131	WG797232

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Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
Bromomethane	mg/l	.025	0.0288	115.	22.4-187	WG797232
Carbon tetrachloride	mg/l	.025	0.0223	89.1	70.9-129	WG797232
Chlorobenzene	mg/l	.025	0.0241	96.4	79.7-122	WG797232
Chlorodibromomethane	mg/l	.025	0.0216	86.4	78.2-124	WG797232
Chloroethane	mg/l	.025	0.0279	112.	41.2-153	WG797232
Chloroform	mg/l	.025	0.0279	112.	73.2-125	WG797232
Chloromethane	mg/l	.025	0.0249	99.6	55.8-134	WG797232
cis-1,2-Dichloroethene	mg/l	.025	0.0262	105.	77.3-122	WG797232
Di-isopropyl ether	mg/l	.025	0.0289	115.	65.1-135	WG797232
Dibromomethane	mg/l	.025	0.0259	104.	79.5-118	WG797232
Dichlorodifluoromethane	mg/l	.025	0.0235	93.9	56-134	WG797232
Ethylbenzene	mg/l	.025	0.0241	96.4	80.9-121	WG797232
Hexachloro-1,3-butadiene	mg/l	.025	0.0232	92.9	73.7-133	WG797232
Isopropylbenzene	mg/l	.025	0.0241	96.3	81.6-124	WG797232
m&p-Xylenes	mg/l	.05	0.0472	94.5	78.5-122	WG797232
Methyl tert-butyl ether	mg/l	.025	0.0282	113.	70.1-125	WG797232
Methylene Chloride	mg/l	.025	0.0266	106.	69.5-120	WG797232
n-Butylbenzene	mg/l	.025	0.0270	108.	75.9-134	WG797232
n-Propylbenzene	mg/l	.025	0.0250	100.	81.9-122	WG797232
Naphthalene	mg/l	.025	0.0263	105.	69.7-134	WG797232
o-Xylene	mg/l	.025	0.0234	93.5	79.1-123	WG797232
p-Isopropyltoluene	mg/l	.025	0.0240	96.2	77.6-129	WG797232
sec-Butylbenzene	mg/l	.025	0.0242	97.0	80.6-126	WG797232
Styrene	mg/l	.025	0.0247	98.9	79.9-124	WG797232
tert-Butylbenzene	mg/l	.025	0.0239	95.6	79.3-127	WG797232
Tetrachloroethene	mg/l	.025	0.0219	87.5	73.5-130	WG797232
Toluene	mg/l	.025	0.0252	101.	77.9-116	WG797232
trans-1,2-Dichloroethene	mg/l	.025	0.0257	103.	72.6-125	WG797232
Trichloroethene	mg/l	.025	0.0252	101.	79.5-121	WG797232
Trichlorofluoromethane	mg/l	.025	0.0313	125.	49.1-157	WG797232
Vinyl chloride	mg/l	.025	0.0270	108.	61.5-134	WG797232
4-Bromofluorobenzene				97.70	80.1-120	WG797232
Dibromofluoromethane				111.0	79-121	WG797232
Toluene-d8				105.0	90-115	WG797232
a,a,a-Trifluorotoluene				97.80	90.4-116	WG797232
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0264	105.	78.5-125	WG795244
1,1,1-Trichloroethane	mg/l	.025	0.0249	99.7	71.1-129	WG795244
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0292	117.	79.3-123	WG795244
1,1,2-Trichloroethane	mg/l	.025	0.0269	108.	81.6-120	WG795244
1,1-Dichloroethane	mg/l	.025	0.0262	105.	71.7-127	WG795244
1,1-Dichloroethene	mg/l	.025	0.0253	101.	59.9-137	WG795244
1,1-Dichloropropene	mg/l	.025	0.0255	102.	72.5-127	WG795244
1,2,3-Trichlorobenzene	mg/l	.025	0.0284	114.	75.7-134	WG795244
1,2,3-Trichloropropane	mg/l	.025	0.0303	121.	74.9-124	WG795244
1,2,4-Trichlorobenzene	mg/l	.025	0.0280	112.	76.1-136	WG795244
1,2,4-Trimethylbenzene	mg/l	.025	0.0253	101.	79-122	WG795244
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0303	121.	64.8-131	WG795244
1,2-Dibromoethane	mg/l	.025	0.0272	109.	79.8-122	WG795244
1,2-Dichlorobenzene	mg/l	.025	0.0267	107.	84.7-118	WG795244
1,2-Dichloroethane	mg/l	.025	0.0277	111.	65.3-126	WG795244
1,2-Dichloropropane	mg/l	.025	0.0262	105.	77.4-125	WG795244
1,3,5-Trimethylbenzene	mg/l	.025	0.0260	104.	81-123	WG795244
1,3-Dichlorobenzene	mg/l	.025	0.0267	107.	77.6-127	WG795244
1,3-Dichloropropane	mg/l	.025	0.0270	108.	80.6-115	WG795244
1,4-Dichlorobenzene	mg/l	.025	0.0255	102.	82.2-114	WG795244
2,2-Dichloropropane	mg/l	.025	0.0256	102.	61.3-134	WG795244
2-Butanone (MEK)	mg/l	.125	0.167	134.	46.4-155	WG795244

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Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
2-Chlorotoluene	mg/l	.025	0.0254	102.	76.4-125	WG795244
4-Chlorotoluene	mg/l	.025	0.0257	103.	81.5-121	WG795244
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.153	123.	63.3-138	WG795244
Acetone	mg/l	.125	0.156	125.	28.7-175	WG795244
Acrolein	mg/l	.125	0.148	119.	40.4-172	WG795244
Acrylonitrile	mg/l	.125	0.147	118.	58.2-145	WG795244
Benzene	mg/l	.025	0.0253	101.	73-122	WG795244
Bromobenzene	mg/l	.025	0.0254	101.	81.5-115	WG795244
Bromodichloromethane	mg/l	.025	0.0249	99.7	75.5-121	WG795244
Bromoform	mg/l	.025	0.0297	119.	71.5-131	WG795244
Bromomethane	mg/l	.025	0.0235	94.1	22.4-187	WG795244
Carbon tetrachloride	mg/l	.025	0.0248	99.3	70.9-129	WG795244
Chlorobenzene	mg/l	.025	0.0257	103.	79.7-122	WG795244
Chlorodibromomethane	mg/l	.025	0.0278	111.	78.2-124	WG795244
Chloroethane	mg/l	.025	0.0240	96.1	41.2-153	WG795244
Chloroform	mg/l	.025	0.0253	101.	73.2-125	WG795244
Chloromethane	mg/l	.025	0.0228	91.2	55.8-134	WG795244
cis-1,2-Dichloroethene	mg/l	.025	0.0254	102.	77.3-122	WG795244
Di-isopropyl ether	mg/l	.025	0.0265	106.	65.1-135	WG795244
Dibromomethane	mg/l	.025	0.0271	109.	79.5-118	WG795244
Dichlorodifluoromethane	mg/l	.025	0.0228	91.3	56-134	WG795244
Ethylbenzene	mg/l	.025	0.0251	101.	80.9-121	WG795244
Hexachloro-1,3-butadiene	mg/l	.025	0.0266	106.	73.7-133	WG795244
Isopropylbenzene	mg/l	.025	0.0253	101.	81.6-124	WG795244
m&p-Xylenes	mg/l	.05	0.0494	98.8	78.5-122	WG795244
Methyl tert-butyl ether	mg/l	.025	0.0288	115.	70.1-125	WG795244
Methylene Chloride	mg/l	.025	0.0245	98.1	69.5-120	WG795244
n-Butylbenzene	mg/l	.025	0.0252	101.	75.9-134	WG795244
n-Propylbenzene	mg/l	.025	0.0252	101.	81.9-122	WG795244
Naphthalene	mg/l	.025	0.0300	120.	69.7-134	WG795244
o-Xylene	mg/l	.025	0.0256	102.	79.1-123	WG795244
p-Isopropyltoluene	mg/l	.025	0.0261	104.	77.6-129	WG795244
sec-Butylbenzene	mg/l	.025	0.0255	102.	80.6-126	WG795244
Styrene	mg/l	.025	0.0266	106.	79.9-124	WG795244
tert-Butylbenzene	mg/l	.025	0.0258	103.	79.3-127	WG795244
Tetrachloroethene	mg/l	.025	0.0250	100.	73.5-130	WG795244
Toluene	mg/l	.025	0.0248	99.2	77.9-116	WG795244
trans-1,2-Dichloroethene	mg/l	.025	0.0246	98.4	72.6-125	WG795244
Trichloroethene	mg/l	.025	0.0257	103.	79.5-121	WG795244
Trichlorofluoromethane	mg/l	.025	0.0248	99.2	49.1-157	WG795244
Vinyl chloride	mg/l	.025	0.0237	94.7	61.5-134	WG795244
4-Bromofluorobenzene				101.0	80.1-120	WG795244
Dibromofluoromethane				101.0	79-121	WG795244
Toluene-d8				101.0	90-115	WG795244
a,a,a-Trifluorotoluene				100.0	90.4-116	WG795244
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0215	86.1	78.5-125	WG797519
1,1,1-Trichloroethane	mg/l	.025	0.0255	102.	71.1-129	WG797519
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0233	93.3	79.3-123	WG797519
1,1,2-Trichloroethane	mg/l	.025	0.0236	94.3	81.6-120	WG797519
1,1-Dichloroethane	mg/l	.025	0.0281	113.	71.7-127	WG797519
1,1-Dichloroethene	mg/l	.025	0.0313	125.	59.9-137	WG797519
1,1-Dichloropropene	mg/l	.025	0.0280	112.	72.5-127	WG797519
1,2,3-Trichlorobenzene	mg/l	.025	0.0243	97.0	75.7-134	WG797519
1,2,3-Trichloropropane	mg/l	.025	0.0247	98.7	74.9-124	WG797519
1,2,4-Trichlorobenzene	mg/l	.025	0.0245	98.0	76.1-136	WG797519
1,2,4-Trimethylbenzene	mg/l	.025	0.0240	95.8	79-122	WG797519
1,2-Dibromo-3-Chloropropane	mg/l	.025	0.0223	89.1	64.8-131	WG797519

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Tax I.D. 62-0814289

Est. 1970

Withers & Ravenel Eng. - Standard
Matt James
115 MacKenan Drive

Cary, NC 27511

Quality Assurance Report
Level II

L770436

June 23, 2015

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
1,2-Dibromoethane	mg/l	.025	0.0243	97.2	79.8-122	WG797519
1,2-Dichlorobenzene	mg/l	.025	0.0254	101.	84.7-118	WG797519
1,2-Dichloroethane	mg/l	.025	0.0294	118.	65.3-126	WG797519
1,2-Dichloropropane	mg/l	.025	0.0254	102.	77.4-125	WG797519
1,3,5-Trimethylbenzene	mg/l	.025	0.0247	98.9	81-123	WG797519
1,3-Dichlorobenzene	mg/l	.025	0.0235	93.8	77.6-127	WG797519
1,3-Dichloropropane	mg/l	.025	0.0238	95.3	80.6-115	WG797519
1,4-Dichlorobenzene	mg/l	.025	0.0248	99.3	82.2-114	WG797519
2,2-Dichloropropane	mg/l	.025	0.0212	84.7	61.3-134	WG797519
2-Butanone (MEK)	mg/l	.125	0.135	108.	46.4-155	WG797519
2-Chlorotoluene	mg/l	.025	0.0239	95.8	76.4-125	WG797519
4-Chlorotoluene	mg/l	.025	0.0243	97.1	81.5-121	WG797519
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.136	109.	63.3-138	WG797519
Acetone	mg/l	.125	0.135	108.	28.7-175	WG797519
Acrylonitrile	mg/l	.125	0.136	109.	58.2-145	WG797519
Benzene	mg/l	.025	0.0275	110.	73-122	WG797519
Bromobenzene	mg/l	.025	0.0248	99.2	81.5-115	WG797519
Bromodichloromethane	mg/l	.025	0.0240	95.9	75.5-121	WG797519
Bromoform	mg/l	.025	0.0208	83.1	71.5-131	WG797519
Bromomethane	mg/l	.025	0.0287	115.	22.4-187	WG797519
Carbon tetrachloride	mg/l	.025	0.0236	94.5	70.9-129	WG797519
Chlorobenzene	mg/l	.025	0.0245	97.9	79.7-122	WG797519
Chlorodibromomethane	mg/l	.025	0.0232	92.8	78.2-124	WG797519
Chloroethane	mg/l	.025	0.0275	110.	41.2-153	WG797519
Chloroform	mg/l	.025	0.0279	112.	73.2-125	WG797519
Chloromethane	mg/l	.025	0.0261	104.	55.8-134	WG797519
cis-1,2-Dichloroethene	mg/l	.025	0.0259	103.	77.3-122	WG797519
Di-isopropyl ether	mg/l	.025	0.0273	109.	65.1-135	WG797519
Dibromomethane	mg/l	.025	0.0258	103.	79.5-118	WG797519
Dichlorodifluoromethane	mg/l	.025	0.0277	111.	56-134	WG797519
Ethylbenzene	mg/l	.025	0.0244	97.6	80.9-121	WG797519
Hexachloro-1,3-butadiene	mg/l	.025	0.0236	94.4	73.7-133	WG797519
Isopropylbenzene	mg/l	.025	0.0242	97.0	81.6-124	WG797519
m&p-Xylenes	mg/l	.05	0.0481	96.1	78.5-122	WG797519
Methyl tert-butyl ether	mg/l	.025	0.0267	107.	70.1-125	WG797519
Methylene Chloride	mg/l	.025	0.0259	104.	69.5-120	WG797519
n-Butylbenzene	mg/l	.025	0.0272	109.	75.9-134	WG797519
n-Propylbenzene	mg/l	.025	0.0252	101.	81.9-122	WG797519
Naphthalene	mg/l	.025	0.0256	102.	69.7-134	WG797519
o-Xylene	mg/l	.025	0.0237	94.7	79.1-123	WG797519
p-Isopropyltoluene	mg/l	.025	0.0244	97.5	77.6-129	WG797519
sec-Butylbenzene	mg/l	.025	0.0246	98.5	80.6-126	WG797519
Styrene	mg/l	.025	0.0257	103.	79.9-124	WG797519
tert-Butylbenzene	mg/l	.025	0.0243	97.2	79.3-127	WG797519
Tetrachloroethene	mg/l	.025	0.0217	86.9	73.5-130	WG797519
Toluene	mg/l	.025	0.0250	100.	77.9-116	WG797519
trans-1,2-Dichloroethene	mg/l	.025	0.0263	105.	72.6-125	WG797519
Trichloroethene	mg/l	.025	0.0250	99.9	79.5-121	WG797519
Trichlorofluoromethane	mg/l	.025	0.0326	130.	49.1-157	WG797519
Vinyl chloride	mg/l	.025	0.0281	113.	61.5-134	WG797519
4-Bromofluorobenzene				98.20	80.1-120	WG797519
Dibromofluoromethane				113.0	79-121	WG797519
Toluene-d8				105.0	90-115	WG797519
a,a,a-Trifluorotoluene				97.80	90.4-116	WG797519
Acrolein	mg/l	.125	0.122	97.9	40.4-172	WG797688
4-Bromofluorobenzene				100.0	80.1-120	WG797688
Dibromofluoromethane				103.0	79-121	WG797688

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Quality Assurance Report
Level II

L770436

June 23, 2015

Analyte	Units	Laboratory Control Sample Result	Ref	%Rec	Limit	RPD	Limit	Batch
Toluene-d8					107.0		90-115	
a,a,a-Trifluorotoluene					102.0		90.4-116	

Analyte	Units	Laboratory Control Sample Result	Ref	%Rec	Limit	RPD	Limit	Batch
Iron	mg/l	1.02	1.02	102.	80-120	1.00	20	WG795091
Magnesium	mg/l	9.99	10.1	100.	80-120	1.00	20	WG795091
Manganese	mg/l	0.992	0.999	99.0	80-120	1.00	20	WG795091
Iron	mg/l	1.04	1.02	104.	80-120	2.00	20	WG795092
Magnesium	mg/l	10.6	10.6	106.	80-120	0.0	20	WG795092
Manganese	mg/l	1.05	1.04	105.	80-120	1.00	20	WG795092
Nitrate	mg/l	8.14	8.13	102.	90-110	0.0	20	WG795039
Sulfate	mg/l	40.1	40.2	100.	90-110	0.0	20	WG795039
Nitrate	mg/l	8.01	7.96	100.	90-110	1.00	20	WG795605
Sulfate	mg/l	39.5	39.3	99.0	90-110	1.00	20	WG795605
Sulfate	mg/l	39.9	39.9	100.	90-110	0.0	20	WG796634
Sulfate	mg/l	41.1	40.7	103.	90-110	1.00	20	WG796958
Alkalinity	mg/l	100.	100.	100.	85-115	0.0	20	WG795951
Nitrate	mg/l	8.16	8.17	102.	90-110	0.0	20	WG796690
Sulfate	mg/l	40.3	40.4	101.	90-110	0.0	20	WG796690
Alkalinity	mg/l	100.	100.	100.	85-115	0.0	20	WG795952
Alkalinity	mg/l	100.	100.	100.	85-115	0.0	20	WG795953
1,1,1,2-Tetrachloroethane	mg/l	0.0206	0.0206	82.0	78.5-125	0.120	20	WG797232
1,1,1-Trichloroethane	mg/l	0.0250	0.0251	100.	71.1-129	0.330	20	WG797232
1,1,2,2-Tetrachloroethane	mg/l	0.0236	0.0241	94.0	79.3-123	2.06	20	WG797232
1,1,2-Trichloroethane	mg/l	0.0235	0.0233	94.0	81.6-120	0.780	20	WG797232
1,1-Dichloroethane	mg/l	0.0279	0.0288	112.	71.7-127	3.27	20	WG797232
1,1-Dichloroethene	mg/l	0.0306	0.0311	122.	59.9-137	1.56	20	WG797232
1,1-Dichloropropene	mg/l	0.0273	0.0278	109.	72.5-127	1.55	20	WG797232
1,2,3-Trichlorobenzene	mg/l	0.0248	0.0245	99.0	75.7-134	1.21	20	WG797232
1,2,3-Trichloropropane	mg/l	0.0248	0.0253	99.0	74.9-124	2.09	20	WG797232
1,2,4-Trichlorobenzene	mg/l	0.0247	0.0249	99.0	76.1-136	1.09	20	WG797232
1,2,4-Trimethylbenzene	mg/l	0.0238	0.0237	95.0	79-122	0.360	20	WG797232
1,2-Dibromo-3-Chloropropane	mg/l	0.0221	0.0218	88.0	64.8-131	1.05	20	WG797232
1,2-Dibromoethane	mg/l	0.0240	0.0241	96.0	79.8-122	0.420	20	WG797232
1,2-Dichlorobenzene	mg/l	0.0256	0.0256	102.	84.7-118	0.200	20	WG797232
1,2-Dichloroethane	mg/l	0.0288	0.0293	115.	65.3-126	1.75	20	WG797232
1,2-Dichloropropane	mg/l	0.0261	0.0262	104.	77.4-125	0.460	20	WG797232

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June 23, 2015

		Laboratory Control Sample Duplicate						
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
1,3,5-Trimethylbenzene	mg/l	0.0243	0.0242	97.0	81-123	0.650	20	WG797232
1,3-Dichlorobenzene	mg/l	0.0235	0.0233	94.0	77.6-127	1.00	20	WG797232
1,3-Dichloropropane	mg/l	0.0237	0.0241	95.0	80.6-115	1.58	20	WG797232
1,4-Dichlorobenzene	mg/l	0.0243	0.0244	97.0	82.2-114	0.360	20	WG797232
2,2-Dichloropropane	mg/l	0.0209	0.0220	83.0	61.3-134	5.41	20	WG797232
2-Butanone (MEK)	mg/l	0.147	0.148	118.	46.4-155	0.170	20	WG797232
2-Chlorotoluene	mg/l	0.0238	0.0230	95.0	76.4-125	3.73	20	WG797232
4-Chlorotoluene	mg/l	0.0242	0.0244	97.0	81.5-121	0.940	20	WG797232
4-Methyl-2-pentanone (MIBK)	mg/l	0.144	0.147	115.	63.3-138	2.01	20	WG797232
Acetone	mg/l	0.148	0.149	118.	28.7-175	0.350	20.9	WG797232
Acrolein	mg/l	0.145	0.143	116.	40.4-172	2.00	20	WG797232
Acrylonitrile	mg/l	0.142	0.145	114.	58.2-145	1.55	20	WG797232
Benzene	mg/l	0.0271	0.0277	108.	73-122	2.17	20	WG797232
Bromobenzene	mg/l	0.0247	0.0248	99.0	81.5-115	0.360	20	WG797232
Bromodichloromethane	mg/l	0.0235	0.0238	94.0	75.5-121	0.950	20	WG797232
Bromoform	mg/l	0.0196	0.0193	78.0	71.5-131	1.35	20	WG797232
Bromomethane	mg/l	0.0283	0.0288	113.	22.4-187	1.78	20	WG797232
Carbon tetrachloride	mg/l	0.0222	0.0223	89.0	70.9-129	0.140	20	WG797232
Chlorobenzene	mg/l	0.0240	0.0241	96.0	79.7-122	0.270	20	WG797232
Chlorodibromomethane	mg/l	0.0224	0.0216	90.0	78.2-124	3.51	20	WG797232
Chloroethane	mg/l	0.0274	0.0279	109.	41.2-153	1.89	20	WG797232
Chloroform	mg/l	0.0276	0.0279	110.	73.2-125	1.11	20	WG797232
Chloromethane	mg/l	0.0241	0.0249	96.0	55.8-134	3.05	20	WG797232
cis-1,2-Dichloroethene	mg/l	0.0255	0.0262	102.	77.3-122	2.46	20	WG797232
Di-isopropyl ether	mg/l	0.0281	0.0289	112.	65.1-135	2.58	20	WG797232
Dibromomethane	mg/l	0.0264	0.0259	105.	79.5-118	1.57	20	WG797232
Dichlorodifluoromethane	mg/l	0.0232	0.0235	93.0	56-134	1.31	20	WG797232
Ethylbenzene	mg/l	0.0240	0.0241	96.0	80.9-121	0.590	20	WG797232
Hexachloro-1,3-butadiene	mg/l	0.0238	0.0232	95.0	73.7-133	2.59	20	WG797232
Isopropylbenzene	mg/l	0.0241	0.0241	96.0	81.6-124	0.0900	20	WG797232
m&p-Xylenes	mg/l	0.0475	0.0472	95.0	78.5-122	0.540	20	WG797232
Methyl tert-butyl ether	mg/l	0.0273	0.0282	109.	70.1-125	3.27	20	WG797232
Methylene Chloride	mg/l	0.0261	0.0266	104.	69.5-120	1.96	20	WG797232
n-Butylbenzene	mg/l	0.0268	0.0270	107.	75.9-134	0.770	20	WG797232
n-Propylbenzene	mg/l	0.0250	0.0250	100.	81.9-122	0.0700	20	WG797232
Naphthalene	mg/l	0.0262	0.0263	105.	69.7-134	0.510	20	WG797232
o-Xylene	mg/l	0.0236	0.0234	94.0	79.1-123	0.900	20	WG797232
p-Isopropyltoluene	mg/l	0.0246	0.0240	98.0	77.6-129	2.18	20	WG797232
sec-Butylbenzene	mg/l	0.0246	0.0242	98.0	80.6-126	1.63	20	WG797232
Styrene	mg/l	0.0247	0.0247	99.0	79.9-124	0.150	20	WG797232
tert-Butylbenzene	mg/l	0.0241	0.0239	96.0	79.3-127	0.910	20	WG797232
Tetrachloroethene	mg/l	0.0214	0.0219	86.0	73.5-130	1.96	20	WG797232
Toluene	mg/l	0.0250	0.0252	100.	77.9-116	0.810	20	WG797232
trans-1,2-Dichloroethene	mg/l	0.0256	0.0257	102.	72.6-125	0.430	20	WG797232
Trichloroethene	mg/l	0.0246	0.0252	98.0	79.5-121	2.49	20	WG797232
Trichlorofluoromethane	mg/l	0.0311	0.0313	124.	49.1-157	0.780	20	WG797232
Vinyl chloride	mg/l	0.0265	0.0270	106.	61.5-134	1.61	20	WG797232
4-Bromofluorobenzene				98.50	80.1-120			WG797232
Dibromofluoromethane				110.0	79-121			WG797232
Toluene-d8				106.0	90-115			WG797232
a,a,a-Trifluorotoluene				98.50	90.4-116			WG797232
1,1,1,2-Tetrachloroethane	mg/l	0.0270	0.0264	108.	78.5-125	2.30	20	WG795244
1,1,1-Trichloroethane	mg/l	0.0269	0.0249	108.	71.1-129	7.59	20	WG795244
1,1,2,2-Tetrachloroethane	mg/l	0.0255	0.0292	102.	79.3-123	13.4	20	WG795244
1,1,2-Trichloroethane	mg/l	0.0248	0.0269	99.0	81.6-120	7.97	20	WG795244
1,1-Dichloroethane	mg/l	0.0273	0.0262	109.	71.7-127	4.25	20	WG795244
1,1-Dichloroethene	mg/l	0.0268	0.0253	107.	59.9-137	5.80	20	WG795244

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Quality Assurance Report
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Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
1,1-Dichloropropene	mg/l	0.0273	0.0255	109.	72.5-127	7.08	20	WG795244
1,2,3-Trichlorobenzene	mg/l	0.0270	0.0284	108.	75.7-134	5.18	20	WG795244
1,2,3-Trichloropropane	mg/l	0.0258	0.0303	103.	74.9-124	16.1	20	WG795244
1,2,4-Trichlorobenzene	mg/l	0.0273	0.0280	109.	76.1-136	2.60	20	WG795244
1,2,4-Trimethylbenzene	mg/l	0.0265	0.0253	106.	79-122	4.34	20	WG795244
1,2-Dibromo-3-Chloropropane	mg/l	0.0249	0.0303	100.	64.8-131	19.5	20	WG795244
1,2-Dibromoethane	mg/l	0.0249	0.0272	100.	79.8-122	8.74	20	WG795244
1,2-Dichlorobenzene	mg/l	0.0269	0.0267	108.	84.7-118	0.720	20	WG795244
1,2-Dichloroethane	mg/l	0.0263	0.0277	105.	65.3-126	4.96	20	WG795244
1,2-Dichloropropane	mg/l	0.0259	0.0262	104.	77.4-125	1.06	20	WG795244
1,3,5-Trimethylbenzene	mg/l	0.0275	0.0260	110.	81-123	5.63	20	WG795244
1,3-Dichlorobenzene	mg/l	0.0272	0.0267	109.	77.6-127	1.92	20	WG795244
1,3-Dichloropropane	mg/l	0.0250	0.0270	100.	80.6-115	7.43	20	WG795244
1,4-Dichlorobenzene	mg/l	0.0261	0.0255	104.	82.2-114	2.36	20	WG795244
2,2-Dichloropropane	mg/l	0.0275	0.0256	110.	61.3-134	7.10	20	WG795244
2-Butanone (MEK)	mg/l	0.131	0.167	105.	46.4-155	24.0*	20	WG795244
2-Chlorotoluene	mg/l	0.0268	0.0254	107.	76.4-125	5.37	20	WG795244
4-Chlorotoluene	mg/l	0.0270	0.0257	108.	81.5-121	4.98	20	WG795244
4-Methyl-2-pentanone (MIBK)	mg/l	0.124	0.153	99.0	63.3-138	21.2*	20	WG795244
Acetone	mg/l	0.126	0.156	101.	28.7-175	20.9	20.9	WG795244
Acrolein	mg/l	0.141	0.148	113.	40.4-172	4.88	20	WG795244
Acrylonitrile	mg/l	0.126	0.147	100.	58.2-145	15.8	20	WG795244
Benzene	mg/l	0.0260	0.0253	104.	73-122	3.00	20	WG795244
Bromobenzene	mg/l	0.0257	0.0254	103.	81.5-115	1.26	20	WG795244
Bromodichloromethane	mg/l	0.0243	0.0249	97.0	75.5-121	2.49	20	WG795244
Bromoform	mg/l	0.0261	0.0297	104.	71.5-131	13.1	20	WG795244
Bromomethane	mg/l	0.0250	0.0235	100.	22.4-187	6.10	20	WG795244
Carbon tetrachloride	mg/l	0.0266	0.0248	106.	70.9-129	6.85	20	WG795244
Chlorobenzene	mg/l	0.0264	0.0257	106.	79.7-122	3.04	20	WG795244
Chlorodibromomethane	mg/l	0.0261	0.0278	104.	78.2-124	6.13	20	WG795244
Chloroethane	mg/l	0.0262	0.0240	105.	41.2-153	8.69	20	WG795244
Chloroform	mg/l	0.0260	0.0253	104.	73.2-125	2.87	20	WG795244
Chloromethane	mg/l	0.0242	0.0228	97.0	55.8-134	6.11	20	WG795244
cis-1,2-Dichloroethene	mg/l	0.0266	0.0254	106.	77.3-122	4.63	20	WG795244
Di-isopropyl ether	mg/l	0.0261	0.0265	104.	65.1-135	1.66	20	WG795244
Dibromomethane	mg/l	0.0253	0.0271	101.	79.5-118	7.09	20	WG795244
Dichlorodifluoromethane	mg/l	0.0244	0.0228	98.0	56-134	6.71	20	WG795244
Ethylbenzene	mg/l	0.0265	0.0251	106.	80.9-121	5.31	20	WG795244
Hexachloro-1,3-butadiene	mg/l	0.0286	0.0266	114.	73.7-133	7.30	20	WG795244
Isopropylbenzene	mg/l	0.0272	0.0253	109.	81.6-124	7.50	20	WG795244
m&p-Xylenes	mg/l	0.0517	0.0494	103.	78.5-122	4.52	20	WG795244
Methyl tert-butyl ether	mg/l	0.0250	0.0288	100.	70.1-125	14.2	20	WG795244
Methylene Chloride	mg/l	0.0248	0.0245	99.0	69.5-120	0.910	20	WG795244
n-Butylbenzene	mg/l	0.0272	0.0252	109.	75.9-134	7.79	20	WG795244
n-Propylbenzene	mg/l	0.0273	0.0252	109.	81.9-122	7.90	20	WG795244
Naphthalene	mg/l	0.0257	0.0300	103.	69.7-134	15.4	20	WG795244
o-Xylene	mg/l	0.0266	0.0256	106.	79.1-123	4.07	20	WG795244
p-Isopropyltoluene	mg/l	0.0276	0.0261	110.	77.6-129	5.86	20	WG795244
sec-Butylbenzene	mg/l	0.0273	0.0255	109.	80.6-126	6.68	20	WG795244
Styrene	mg/l	0.0271	0.0266	108.	79.9-124	1.94	20	WG795244
tert-Butylbenzene	mg/l	0.0276	0.0258	110.	79.3-127	6.69	20	WG795244
Tetrachloroethene	mg/l	0.0264	0.0250	105.	73.5-130	5.32	20	WG795244
Toluene	mg/l	0.0252	0.0248	101.	77.9-116	1.51	20	WG795244
trans-1,2-Dichloroethene	mg/l	0.0252	0.0246	101.	72.6-125	2.21	20	WG795244
Trichloroethene	mg/l	0.0259	0.0257	104.	79.5-121	0.590	20	WG795244
Trichlorofluoromethane	mg/l	0.0269	0.0248	108.	49.1-157	8.28	20	WG795244
Vinyl chloride	mg/l	0.0251	0.0237	100.	61.5-134	5.82	20	WG795244
4-Bromofluorobenzene				99.50	80.1-120			WG795244
Dibromofluoromethane				99.30	79-121			WG795244

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Cary, NC 27511

Quality Assurance Report
Level II

L770436

June 23, 2015

Analyte	Units	Laboratory Control Sample Result	Ref	%Rec	Limit	Duplicate RPD	Limit	Batch
Toluene-d8				99.80	90-115			
a,a,a-Trifluorotoluene				101.0	90.4-116			
1,1,1,2-Tetrachloroethane	mg/l	0.0222	0.0215	89.0	78.5-125	2.90	20	WG797519
1,1,1-Trichloroethane	mg/l	0.0261	0.0255	104.	71.1-129	2.43	20	WG797519
1,1,2,2-Tetrachloroethane	mg/l	0.0245	0.0233	98.0	79.3-123	4.73	20	WG797519
1,1,2-Trichloroethane	mg/l	0.0245	0.0236	98.0	81.6-120	3.65	20	WG797519
1,1-Dichloroethane	mg/l	0.0283	0.0281	113.	71.7-127	0.490	20	WG797519
1,1-Dichloroethene	mg/l	0.0313	0.0313	125.	59.9-137	0.120	20	WG797519
1,1-Dichloropropene	mg/l	0.0278	0.0280	111.	72.5-127	0.450	20	WG797519
1,2,3-Trichlorobenzene	mg/l	0.0245	0.0243	98.0	75.7-134	0.870	20	WG797519
1,2,3-Trichloropropane	mg/l	0.0259	0.0247	104.	74.9-124	4.75	20	WG797519
1,2,4-Trichlorobenzene	mg/l	0.0249	0.0245	100.	76.1-136	1.70	20	WG797519
1,2,4-Trimethylbenzene	mg/l	0.0240	0.0240	96.0	79-122	0.380	20	WG797519
1,2-Dibromo-3-Chloropropane	mg/l	0.0238	0.0223	95.0	64.8-131	6.60	20	WG797519
1,2-Dibromoethane	mg/l	0.0251	0.0243	100.	79.8-122	3.41	20	WG797519
1,2-Dichlorobenzene	mg/l	0.0258	0.0254	103.	84.7-118	1.57	20	WG797519
1,2-Dichloroethane	mg/l	0.0298	0.0294	119.	65.3-126	1.45	20	WG797519
1,2-Dichloropropane	mg/l	0.0254	0.0254	102.	77.4-125	0.150	20	WG797519
1,3,5-Trimethylbenzene	mg/l	0.0249	0.0247	100.	81-123	0.920	20	WG797519
1,3-Dichlorobenzene	mg/l	0.0237	0.0235	95.0	77.6-127	0.950	20	WG797519
1,3-Dichloropropane	mg/l	0.0248	0.0238	99.0	80.6-115	4.14	20	WG797519
1,4-Dichlorobenzene	mg/l	0.0249	0.0248	100.	82.2-114	0.260	20	WG797519
2,2-Dichloropropane	mg/l	0.0215	0.0212	86.0	61.3-134	1.68	20	WG797519
2-Butanone (MEK)	mg/l	0.145	0.135	116.	46.4-155	6.62	20	WG797519
2-Chlorotoluene	mg/l	0.0241	0.0239	96.0	76.4-125	0.870	20	WG797519
4-Chlorotoluene	mg/l	0.0246	0.0243	98.0	81.5-121	1.40	20	WG797519
4-Methyl-2-pentanone (MIBK)	mg/l	0.142	0.136	113.	63.3-138	4.24	20	WG797519
Acetone	mg/l	0.129	0.135	103.	28.7-175	4.51	20.9	WG797519
Acrylonitrile	mg/l	0.142	0.136	113.	58.2-145	3.99	20	WG797519
Benzene	mg/l	0.0277	0.0275	111.	73-122	0.580	20	WG797519
Bromobenzene	mg/l	0.0250	0.0248	100.	81.5-115	0.650	20	WG797519
Bromodichloromethane	mg/l	0.0242	0.0240	97.0	75.5-121	0.890	20	WG797519
Bromoform	mg/l	0.0215	0.0208	86.0	71.5-131	3.38	20	WG797519
Bromomethane	mg/l	0.0278	0.0287	111.	22.4-187	3.03	20	WG797519
Carbon tetrachloride	mg/l	0.0241	0.0236	96.0	70.9-129	2.03	20	WG797519
Chlorobenzene	mg/l	0.0248	0.0245	99.0	79.7-122	1.36	20	WG797519
Chlorodibromomethane	mg/l	0.0238	0.0232	95.0	78.2-124	2.75	20	WG797519
Chloroethane	mg/l	0.0269	0.0275	107.	41.2-153	2.12	20	WG797519
Chloroform	mg/l	0.0280	0.0279	112.	73.2-125	0.380	20	WG797519
Chloromethane	mg/l	0.0261	0.0261	104.	55.8-134	0.110	20	WG797519
cis-1,2-Dichloroethene	mg/l	0.0267	0.0259	107.	77.3-122	3.11	20	WG797519
Di-isopropyl ether	mg/l	0.0279	0.0273	112.	65.1-135	2.19	20	WG797519
Dibromomethane	mg/l	0.0262	0.0258	105.	79.5-118	1.40	20	WG797519
Dichlorodifluoromethane	mg/l	0.0282	0.0277	113.	56-134	1.80	20	WG797519
Ethylbenzene	mg/l	0.0248	0.0244	99.0	80.9-121	1.50	20	WG797519
Hexachloro-1,3-butadiene	mg/l	0.0232	0.0236	93.0	73.7-133	1.66	20	WG797519
Isopropylbenzene	mg/l	0.0245	0.0242	98.0	81.6-124	1.24	20	WG797519
m&p-Xylenes	mg/l	0.0485	0.0481	97.0	78.5-122	0.920	20	WG797519
Methyl tert-butyl ether	mg/l	0.0275	0.0267	110.	70.1-125	2.89	20	WG797519
Methylene Chloride	mg/l	0.0260	0.0259	104.	69.5-120	0.130	20	WG797519
n-Butylbenzene	mg/l	0.0277	0.0272	111.	75.9-134	1.73	20	WG797519
n-Propylbenzene	mg/l	0.0255	0.0252	102.	81.9-122	0.900	20	WG797519
Naphthalene	mg/l	0.0265	0.0256	106.	69.7-134	3.59	20	WG797519
o-Xylene	mg/l	0.0236	0.0237	94.0	79.1-123	0.180	20	WG797519
p-Isopropyltoluene	mg/l	0.0247	0.0244	99.0	77.6-129	1.31	20	WG797519
sec-Butylbenzene	mg/l	0.0250	0.0246	100.	80.6-126	1.57	20	WG797519
Styrene	mg/l	0.0262	0.0257	105.	79.9-124	1.79	20	WG797519
tert-Butylbenzene	mg/l	0.0245	0.0243	98.0	79.3-127	0.810	20	WG797519
Tetrachloroethene	mg/l	0.0224	0.0217	89.0	73.5-130	2.90	20	WG797519

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June 23, 2015

		Laboratory Control Sample Duplicate						
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Toluene	mg/l	0.0253	0.0250	101.	77.9-116	1.22	20	WG797519
trans-1,2-Dichloroethene	mg/l	0.0267	0.0263	107.	72.6-125	1.74	20	WG797519
Trichloroethene	mg/l	0.0247	0.0250	99.0	79.5-121	0.930	20	WG797519
Trichlorofluoromethane	mg/l	0.0329	0.0326	132.	49.1-157	1.06	20	WG797519
Vinyl chloride	mg/l	0.0287	0.0281	115.	61.5-134	1.89	20	WG797519
4-Bromofluorobenzene				97.60	80.1-120			WG797519
Dibromofluoromethane				113.0	79-121			WG797519
Toluene-d8				104.0	90-115			WG797519
a,a,a-Trifluorotoluene				96.40	90.4-116			WG797519
Acrolein	mg/l	0.121	0.122	96.0	40.4-172	1.48	20	WG797688
4-Bromofluorobenzene				102.0	80.1-120			WG797688
Dibromofluoromethane				103.0	79-121			WG797688
Toluene-d8				107.0	90-115			WG797688
a,a,a-Trifluorotoluene				103.0	90.4-116			WG797688

		Matrix Spike						
Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Iron	mg/l	1.16	0.143	1	100.	75-125	L770436-21	WG795091
Magnesium	mg/l	11.1	0.969	10	100.	75-125	L770436-21	WG795091
Manganese	mg/l	1.01	0.00145	1	100.	75-125	L770436-21	WG795091
Iron	mg/l	1.90	0.857	1	100.	75-125	L770436-01	WG795092
Magnesium	mg/l	11.7	1.13	10	110.	75-125	L770436-01	WG795092
Manganese	mg/l	1.08	0.0394	1	100.	75-125	L770436-01	WG795092
Nitrate	mg/l	5.43	0.395	5	100.	80-120	L770436-01	WG795039
Sulfate	mg/l	53.3	1.75	50	100.	80-120	L770436-01	WG795039
Sulfate	mg/l	108.	65.1	50	85.0	80-120	L769297-02	WG796958
Sulfate	mg/l	51.2	0.190	50	100.	80-120	L770436-07	WG796634
Alkalinity	mg/l	110.	0.0	100	110.	80-120	L770436-01	WG795951
Nitrate	mg/l	5.31	0.327	5	100.	80-120	L770436-01	WG796690
Sulfate	mg/l	52.4	1.53	50	100.	80-120	L770436-01	WG796690
Alkalinity	mg/l	100.	0.0	100	100.	80-120	L770436-16	WG795952
1,1,1,2-Tetrachloroethane	mg/l	0.0232	0.0	.025	93.0	70.5-132	L770291-08	WG797232
1,1,1-Trichloroethane	mg/l	0.0275	0.0	.025	110.	58.7-134	L770291-08	WG797232
1,1,2,2-Tetrachloroethane	mg/l	0.0299	0.0	.025	120.	64.9-145	L770291-08	WG797232
1,1,2-Trichloroethane	mg/l	0.0275	0.0	.025	110.	74.1-130	L770291-08	WG797232
1,1-Dichloroethane	mg/l	0.0307	0.0	.025	120.	64-134	L770291-08	WG797232
1,1-Dichloroethene	mg/l	0.0335	0.0	.025	130.	48.8-144	L770291-08	WG797232
1,1-Dichloropropene	mg/l	0.0297	0.0	.025	120.	61.5-136	L770291-08	WG797232
1,2,3-Trichlorobenzene	mg/l	0.0277	0.0	.025	110.	65.7-143	L770291-08	WG797232
1,2,3-Trichloropropane	mg/l	0.0306	0.0	.025	120.	71.5-134	L770291-08	WG797232

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Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1,2,4-Trichlorobenzene	mg/l	0.0279	0.0	.025	110.	67-146	L770291-08	WG797232
1,2,4-Trimethylbenzene	mg/l	0.0267	0.0	.025	110.	60.5-137	L770291-08	WG797232
1,2-Dibromo-3-Chloropropane	mg/l	0.0270	0.0	.025	110.	63.9-142	L770291-08	WG797232
1,2-Dibromoethane	mg/l	0.0283	0.0	.025	110.	73.8-131	L770291-08	WG797232
1,2-Dichlorobenzene	mg/l	0.0287	0.0	.025	120.	77.4-127	L770291-08	WG797232
1,2-Dichloroethane	mg/l	0.0323	0.0	.025	130.	60.7-132	L770291-08	WG797232
1,2-Dichloropropane	mg/l	0.0289	0.0	.025	120.	69.7-130	L770291-08	WG797232
1,3,5-Trimethylbenzene	mg/l	0.0274	0.0	.025	110.	67.9-134	L770291-08	WG797232
1,3-Dichlorobenzene	mg/l	0.0268	0.0	.025	110.	67.9-136	L770291-08	WG797232
1,3-Dichloropropane	mg/l	0.0276	0.0	.025	110.	74.3-123	L770291-08	WG797232
1,4-Dichlorobenzene	mg/l	0.0273	0.0	.025	110.	74.4-123	L770291-08	WG797232
2,2-Dichloropropane	mg/l	0.0231	0.0	.025	93.0	54.9-142	L770291-08	WG797232
2-Butanone (MEK)	mg/l	0.153	0.0	.125	120.	45-156	L770291-08	WG797232
2-Chlorotoluene	mg/l	0.0264	0.0	.025	100.	66.9-134	L770291-08	WG797232
4-Chlorotoluene	mg/l	0.0274	0.0	.025	110.	66.8-134	L770291-08	WG797232
4-Methyl-2-pentanone (MIBK)	mg/l	0.180	0.0	.125	140.	60.7-150	L770291-08	WG797232
Acetone	mg/l	0.111	0.000808	.125	88.0	25-156	L770291-08	WG797232
Acrolein	mg/l	0.186	0.0	.125	150.	34-194	L770291-08	WG797232
Acrylonitrile	mg/l	0.175	0.0	.125	140.	55.9-161	L770291-08	WG797232
Benzene	mg/l	0.0310	0.00207	.025	120.	58.6-133	L770291-08	WG797232
Bromobenzene	mg/l	0.0279	0.0	.025	110.	70.6-125	L770291-08	WG797232
Bromodichloromethane	mg/l	0.0266	0.0	.025	110.	69.2-127	L770291-08	WG797232
Bromoform	mg/l	0.0229	0.0	.025	92.0	66.3-140	L770291-08	WG797232
Bromomethane	mg/l	0.0299	0.0	.025	120.	16.6-183	L770291-08	WG797232
Carbon tetrachloride	mg/l	0.0241	0.0	.025	96.0	60.6-139	L770291-08	WG797232
Chlorobenzene	mg/l	0.0268	0.0	.025	110.	70.1-130	L770291-08	WG797232
Chlorodibromomethane	mg/l	0.0254	0.0	.025	100.	71.6-132	L770291-08	WG797232
Chloroethane	mg/l	0.0296	0.0	.025	120.	33.3-155	L770291-08	WG797232
Chloroform	mg/l	0.0307	0.0	.025	120.	66.1-133	L770291-08	WG797232
Chloromethane	mg/l	0.0260	0.0	.025	100.	40.7-139	L770291-08	WG797232
cis-1,2-Dichloroethene	mg/l	0.0286	0.0	.025	110.	60.6-136	L770291-08	WG797232
Di-isopropyl ether	mg/l	0.0320	0.000526	.025	130.	59.9-140	L770291-08	WG797232
Dibromomethane	mg/l	0.0293	0.0	.025	120.	72.8-127	L770291-08	WG797232
Dichlorodifluoromethane	mg/l	0.0258	0.0	.025	100.	42.2-146	L770291-08	WG797232
Ethylbenzene	mg/l	0.0265	0.0	.025	110.	62.7-136	L770291-08	WG797232
Hexachloro-1,3-butadiene	mg/l	0.0261	0.0	.025	100.	61.1-144	L770291-08	WG797232
Isopropylbenzene	mg/l	0.0268	0.0	.025	110.	67.4-136	L770291-08	WG797232
m&p-Xylenes	mg/l	0.0527	0.00	.05	105.	64.1-133	L770291-08	WG797232
Methyl tert-butyl ether	mg/l	0.0326	0.00149	.025	120.	61.4-136	L770291-08	WG797232
Methylene Chloride	mg/l	0.0295	0.000400	.025	120.	61.5-125	L770291-08	WG797232
n-Butylbenzene	mg/l	0.0303	0.0	.025	120.	64.8-145	L770291-08	WG797232
n-Propylbenzene	mg/l	0.0281	0.0	.025	110.	63.2-139	L770291-08	WG797232
Naphthalene	mg/l	0.0302	0.000318	.025	120.	61.8-143	L770291-08	WG797232
o-Xylene	mg/l	0.0265	0.00	.025	106.	67.1-133	L770291-08	WG797232
p-Isopropyltoluene	mg/l	0.0274	0.0	.025	110.	62.8-143	L770291-08	WG797232
sec-Butylbenzene	mg/l	0.0277	0.0	.025	110.	66.8-139	L770291-08	WG797232
Styrene	mg/l	0.0283	0.0	.025	110.	68.2-133	L770291-08	WG797232
tert-Butylbenzene	mg/l	0.0268	0.0	.025	110.	67.1-138	L770291-08	WG797232
Tetrachloroethene	mg/l	0.0239	0.0	.025	96.0	57.4-141	L770291-08	WG797232
Toluene	mg/l	0.0277	0.0	.025	110.	67.8-124	L770291-08	WG797232
trans-1,2-Dichloroethene	mg/l	0.0278	0.0	.025	110.	61-132	L770291-08	WG797232
Trichloroethene	mg/l	0.0272	0.000771	.025	110.	48.9-148	L770291-08	WG797232
Trichlorofluoromethane	mg/l	0.0334	0.0	.025	130.	39.9-165	L770291-08	WG797232
Vinyl chloride	mg/l	0.0291	0.0	.025	120.	44.3-143	L770291-08	WG797232
4-Bromofluorobenzene					99.00	80.1-120		WG797232
Dibromofluoromethane					111.0	79-121		WG797232
Toluene-d8					105.0	90-115		WG797232
a,a,a-Trifluorotoluene					97.80	90.4-116		WG797232

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Tax I.D. 62-0814289

Est. 1970

Withers & Ravenel Eng. - Standard
Matt James
115 MacKenan Drive

Cary, NC 27511

Quality Assurance Report
Level II

L770436

June 23, 2015

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1,1,1,2-Tetrachloroethane	mg/l	0.0247	0.0	.025	99.0	70.5-132	L770436-01	WG795244
1,1,1-Trichloroethane	mg/l	0.0246	0.0	.025	98.0	58.7-134	L770436-01	WG795244
1,1,2,2-Tetrachloroethane	mg/l	0.0265	0.0	.025	110.	64.9-145	L770436-01	WG795244
1,1,2-Trichloroethane	mg/l	0.0243	0.0	.025	97.0	74.1-130	L770436-01	WG795244
1,1-Dichloroethane	mg/l	0.0256	0.0	.025	100.	64-134	L770436-01	WG795244
1,1-Dichloroethene	mg/l	0.0245	0.0	.025	98.0	48.8-144	L770436-01	WG795244
1,1-Dichloropropene	mg/l	0.0256	0.0	.025	100.	61.5-136	L770436-01	WG795244
1,2,3-Trichlorobenzene	mg/l	0.0256	0.0	.025	100.	65.7-143	L770436-01	WG795244
1,2,3-Trichloropropane	mg/l	0.0257	0.0	.025	100.	71.5-134	L770436-01	WG795244
1,2,4-Trichlorobenzene	mg/l	0.0256	0.0	.025	100.	67-146	L770436-01	WG795244
1,2,4-Trimethylbenzene	mg/l	0.0243	0.000301	.025	96.0	60.5-137	L770436-01	WG795244
1,2-Dibromo-3-Chloropropane	mg/l	0.0262	0.0	.025	100.	63.9-142	L770436-01	WG795244
1,2-Dibromoethane	mg/l	0.0247	0.0	.025	99.0	73.8-131	L770436-01	WG795244
1,2-Dichlorobenzene	mg/l	0.0249	0.0	.025	100.	77.4-127	L770436-01	WG795244
1,2-Dichloroethane	mg/l	0.0265	0.0	.025	110.	60.7-132	L770436-01	WG795244
1,2-Dichloropropane	mg/l	0.0246	0.0	.025	98.0	69.7-130	L770436-01	WG795244
1,3,5-Trimethylbenzene	mg/l	0.0250	0.0	.025	100.	67.9-134	L770436-01	WG795244
1,3-Dichlorobenzene	mg/l	0.0250	0.0	.025	100.	67.9-136	L770436-01	WG795244
1,3-Dichloropropane	mg/l	0.0246	0.0	.025	98.0	74.3-123	L770436-01	WG795244
1,4-Dichlorobenzene	mg/l	0.0238	0.0	.025	95.0	74.4-123	L770436-01	WG795244
2,2-Dichloropropane	mg/l	0.0249	0.0	.025	100.	54.9-142	L770436-01	WG795244
2-Butanone (MEK)	mg/l	0.119	0.0	.125	95.0	45-156	L770436-01	WG795244
2-Chlorotoluene	mg/l	0.0241	0.0	.025	96.0	66.9-134	L770436-01	WG795244
4-Chlorotoluene	mg/l	0.0249	0.0	.025	100.	66.8-134	L770436-01	WG795244
4-Methyl-2-pentanone (MIBK)	mg/l	0.131	0.0	.125	100.	60.7-150	L770436-01	WG795244
Acetone	mg/l	0.0856	0.00194	.125	67.0	25-156	L770436-01	WG795244
Acrolein	mg/l	0.202	0.0	.125	160.	34-194	L770436-01	WG795244
Acrylonitrile	mg/l	0.132	0.0	.125	110.	55.9-161	L770436-01	WG795244
Benzene	mg/l	0.0278	0.00466	.025	93.0	58.6-133	L770436-01	WG795244
Bromobenzene	mg/l	0.0236	0.0	.025	94.0	70.6-125	L770436-01	WG795244
Bromodichloromethane	mg/l	0.0233	0.0	.025	93.0	69.2-127	L770436-01	WG795244
Bromoform	mg/l	0.0258	0.0	.025	100.	66.3-140	L770436-01	WG795244
Bromomethane	mg/l	0.0221	0.0	.025	88.0	16.6-183	L770436-01	WG795244
Carbon tetrachloride	mg/l	0.0244	0.0	.025	98.0	60.6-139	L770436-01	WG795244
Chlorobenzene	mg/l	0.0239	0.0	.025	96.0	70.1-130	L770436-01	WG795244
Chlorodibromomethane	mg/l	0.0256	0.0	.025	100.	71.6-132	L770436-01	WG795244
Chloroethane	mg/l	0.0231	0.0	.025	92.0	33.3-155	L770436-01	WG795244
Chloroform	mg/l	0.0245	0.0	.025	98.0	66.1-133	L770436-01	WG795244
Chloromethane	mg/l	0.0226	0.0	.025	90.0	40.7-139	L770436-01	WG795244
cis-1,2-Dichloroethene	mg/l	0.0249	0.0	.025	99.0	60.6-136	L770436-01	WG795244
Di-isopropyl ether	mg/l	0.0342	0.0117	.025	90.0	59.9-140	L770436-01	WG795244
Dibromomethane	mg/l	0.0248	0.0	.025	99.0	72.8-127	L770436-01	WG795244
Dichlorodifluoromethane	mg/l	0.0231	0.0	.025	92.0	42.2-146	L770436-01	WG795244
Ethylbenzene	mg/l	0.0262	0.00350	.025	91.0	62.7-136	L770436-01	WG795244
Hexachloro-1,3-butadiene	mg/l	0.0252	0.0	.025	100.	61.1-144	L770436-01	WG795244
Isopropylbenzene	mg/l	0.0245	0.000416	.025	96.0	67.4-136	L770436-01	WG795244
m&p-Xylenes	mg/l	0.0477	0.00138	.05	92.6	64.1-133	L770436-01	WG795244
Methyl tert-butyl ether	mg/l	0.0828	0.0696	.025	53.0*	61.4-136	L770436-01	WG795244
Methylene Chloride	mg/l	0.0245	0.0	.025	98.0	61.5-125	L770436-01	WG795244
n-Butylbenzene	mg/l	0.0242	0.0	.025	97.0	64.8-145	L770436-01	WG795244
n-Propylbenzene	mg/l	0.0247	0.000382	.025	97.0	63.2-139	L770436-01	WG795244
Naphthalene	mg/l	0.0322	0.00708	.025	100.	61.8-143	L770436-01	WG795244
o-Xylene	mg/l	0.0290	0.00602	.025	92.1	67.1-133	L770436-01	WG795244
p-Isopropyltoluene	mg/l	0.0249	0.0	.025	100.	62.8-143	L770436-01	WG795244
sec-Butylbenzene	mg/l	0.0245	0.0	.025	98.0	66.8-139	L770436-01	WG795244
Styrene	mg/l	0.0264	0.00104	.025	100.	68.2-133	L770436-01	WG795244
tert-Butylbenzene	mg/l	0.0248	0.0	.025	99.0	67.1-138	L770436-01	WG795244
Tetrachloroethene	mg/l	0.0234	0.0	.025	94.0	57.4-141	L770436-01	WG795244

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Quality Assurance Report
Level II

L770436

June 23, 2015

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Toluene	mg/l	0.0239	0.000715	.025	93.0	67.8-124	L770436-01	WG795244
trans-1,2-Dichloroethene	mg/l	0.0234	0.0	.025	94.0	61-132	L770436-01	WG795244
Trichloroethene	mg/l	0.0248	0.0	.025	99.0	48.9-148	L770436-01	WG795244
Trichlorofluoromethane	mg/l	0.0236	0.0	.025	94.0	39.9-165	L770436-01	WG795244
Vinyl chloride	mg/l	0.0231	0.0	.025	92.0	44.3-143	L770436-01	WG795244
4-Bromofluorobenzene					98.40	80.1-120		WG795244
Dibromofluoromethane					100.0	79-121		WG795244
Toluene-d8					100.0	90-115		WG795244
a,a,a-Trifluorotoluene					99.30	90.4-116		WG795244
Alkalinity	mg/l	110.	21.0	100	89.0	80-120	L770436-15	WG795953
1,1,1,2-Tetrachloroethane	mg/l	0.0208	0.0	.025	83.0	70.5-132	L770436-16	WG797519
1,1,1-Trichloroethane	mg/l	0.0247	0.0	.025	99.0	58.7-134	L770436-16	WG797519
1,1,2,2-Tetrachloroethane	mg/l	0.0253	0.0	.025	100.	64.9-145	L770436-16	WG797519
1,1,2-Trichloroethane	mg/l	0.0238	0.0	.025	95.0	74.1-130	L770436-16	WG797519
1,1-Dichloroethane	mg/l	0.0273	0.0	.025	110.	64-134	L770436-16	WG797519
1,1-Dichloroethene	mg/l	0.0292	0.0	.025	120.	48.8-144	L770436-16	WG797519
1,1-Dichloropropene	mg/l	0.0260	0.0	.025	100.	61.5-136	L770436-16	WG797519
1,2,3-Trichlorobenzene	mg/l	0.0242	0.0	.025	97.0	65.7-143	L770436-16	WG797519
1,2,3-Trichloropropane	mg/l	0.0262	0.0	.025	100.	71.5-134	L770436-16	WG797519
1,2,4-Trichlorobenzene	mg/l	0.0243	0.0	.025	97.0	67-146	L770436-16	WG797519
1,2,4-Trimethylbenzene	mg/l	0.0231	0.0	.025	92.0	60.5-137	L770436-16	WG797519
1,2-Dibromo-3-Chloropropane	mg/l	0.0243	0.0	.025	97.0	63.9-142	L770436-16	WG797519
1,2-Dibromoethane	mg/l	0.0247	0.0	.025	99.0	73.8-131	L770436-16	WG797519
1,2-Dichlorobenzene	mg/l	0.0249	0.0	.025	100.	77.4-127	L770436-16	WG797519
1,2-Dichloroethane	mg/l	0.0288	0.0	.025	120.	60.7-132	L770436-16	WG797519
1,2-Dichloropropane	mg/l	0.0251	0.0	.025	100.	69.7-130	L770436-16	WG797519
1,3,5-Trimethylbenzene	mg/l	0.0240	0.0	.025	96.0	67.9-134	L770436-16	WG797519
1,3-Dichlorobenzene	mg/l	0.0235	0.0	.025	94.0	67.9-136	L770436-16	WG797519
1,3-Dichloropropane	mg/l	0.0238	0.0	.025	95.0	74.3-123	L770436-16	WG797519
1,4-Dichlorobenzene	mg/l	0.0241	0.0	.025	96.0	74.4-123	L770436-16	WG797519
2,2-Dichloropropane	mg/l	0.0191	0.0	.025	76.0	54.9-142	L770436-16	WG797519
2-Butanone (MEK)	mg/l	0.127	0.0	.125	100.	45-156	L770436-16	WG797519
2-Chlorotoluene	mg/l	0.0232	0.0	.025	93.0	66.9-134	L770436-16	WG797519
4-Chlorotoluene	mg/l	0.0239	0.0	.025	96.0	66.8-134	L770436-16	WG797519
4-Methyl-2-pentanone (MIBK)	mg/l	0.150	0.0	.125	120.	60.7-150	L770436-16	WG797519
Acetone	mg/l	0.0935	0.00115	.125	74.0	25-156	L770436-16	WG797519
Acrylonitrile	mg/l	0.148	0.0	.125	120.	55.9-161	L770436-16	WG797519
Benzene	mg/l	0.0259	0.0	.025	100.	58.6-133	L770436-16	WG797519
Bromobenzene	mg/l	0.0241	0.0	.025	96.0	70.6-125	L770436-16	WG797519
Bromodichloromethane	mg/l	0.0240	0.0	.025	96.0	69.2-127	L770436-16	WG797519
Bromoform	mg/l	0.0211	0.0	.025	84.0	66.3-140	L770436-16	WG797519
Bromomethane	mg/l	0.0229	0.0	.025	92.0	16.6-183	L770436-16	WG797519
Carbon tetrachloride	mg/l	0.0227	0.0	.025	91.0	60.6-139	L770436-16	WG797519
Chlorobenzene	mg/l	0.0235	0.0	.025	94.0	70.1-130	L770436-16	WG797519
Chlorodibromomethane	mg/l	0.0231	0.0	.025	92.0	71.6-132	L770436-16	WG797519
Chloroethane	mg/l	0.0228	0.0	.025	91.0	33.3-155	L770436-16	WG797519
Chloroform	mg/l	0.0274	0.0	.025	110.	66.1-133	L770436-16	WG797519
Chloromethane	mg/l	0.0218	0.0	.025	87.0	40.7-139	L770436-16	WG797519
cis-1,2-Dichloroethene	mg/l	0.0256	0.0	.025	100.	60.6-136	L770436-16	WG797519
Di-isopropyl ether	mg/l	0.0269	0.0	.025	110.	59.9-140	L770436-16	WG797519
Dibromomethane	mg/l	0.0261	0.0	.025	100.	72.8-127	L770436-16	WG797519
Dichlorodifluoromethane	mg/l	0.0221	0.0	.025	88.0	42.2-146	L770436-16	WG797519
Ethylbenzene	mg/l	0.0229	0.0	.025	92.0	62.7-136	L770436-16	WG797519
Hexachloro-1,3-butadiene	mg/l	0.0226	0.0	.025	90.0	61.1-144	L770436-16	WG797519
Isopropylbenzene	mg/l	0.0232	0.0	.025	93.0	67.4-136	L770436-16	WG797519

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Quality Assurance Report
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June 23, 2015

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
m&p-Xylenes	mg/l	0.0460	0.00	.05	91.9	64.1-133	L770436-16	WG797519
Methyl tert-butyl ether	mg/l	0.0273	0.0	.025	110.	61.4-136	L770436-16	WG797519
Methylene Chloride	mg/l	0.0253	0.0	.025	100.	61.5-125	L770436-16	WG797519
n-Butylbenzene	mg/l	0.0268	0.0	.025	110.	64.8-145	L770436-16	WG797519
n-Propylbenzene	mg/l	0.0243	0.0	.025	97.0	63.2-139	L770436-16	WG797519
Naphthalene	mg/l	0.0267	0.0	.025	110.	61.8-143	L770436-16	WG797519
o-Xylene	mg/l	0.0231	0.00	.025	92.3	67.1-133	L770436-16	WG797519
p-Isopropyltoluene	mg/l	0.0237	0.0	.025	95.0	62.8-143	L770436-16	WG797519
sec-Butylbenzene	mg/l	0.0238	0.0	.025	95.0	66.8-139	L770436-16	WG797519
Styrene	mg/l	0.0247	0.0	.025	99.0	68.2-133	L770436-16	WG797519
tert-Butylbenzene	mg/l	0.0234	0.0	.025	93.0	67.1-138	L770436-16	WG797519
Tetrachloroethene	mg/l	0.0203	0.0	.025	81.0	57.4-141	L770436-16	WG797519
Toluene	mg/l	0.0244	0.0	.025	98.0	67.8-124	L770436-16	WG797519
trans-1,2-Dichloroethene	mg/l	0.0240	0.0	.025	96.0	61-132	L770436-16	WG797519
Trichloroethene	mg/l	0.0234	0.0	.025	93.0	48.9-148	L770436-16	WG797519
Trichlorofluoromethane	mg/l	0.0290	0.0	.025	120.	39.9-165	L770436-16	WG797519
Vinyl chloride	mg/l	0.0239	0.0	.025	96.0	44.3-143	L770436-16	WG797519
4-Bromofluorobenzene					98.70	80.1-120		WG797519
Dibromofluoromethane					114.0	79-121		WG797519
Toluene-d8					106.0	90-115		WG797519
a,a,a-Trifluorotoluene					97.80	90.4-116		WG797519

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Iron	mg/l	1.19	1.16	105.	75-125	2.00	20	L770436-21	WG795091
Magnesium	mg/l	11.1	11.1	101.	75-125	0.0	20	L770436-21	WG795091
Manganese	mg/l	1.00	1.01	100.	75-125	0.0	20	L770436-21	WG795091
Iron	mg/l	1.88	1.90	102.	75-125	1.00	20	L770436-01	WG795092
Magnesium	mg/l	11.6	11.7	105.	75-125	1.00	20	L770436-01	WG795092
Manganese	mg/l	1.09	1.08	105.	75-125	1.00	20	L770436-01	WG795092
Nitrate	mg/l	5.44	5.43	101.	80-120	0.0	20	L770436-01	WG795039
Sulfate	mg/l	53.5	53.3	104.	80-120	0.0	20	L770436-01	WG795039
Sulfate	mg/l	109.	108.	88.4	80-120	1.00	20	L769297-02	WG796958
Sulfate	mg/l	51.2	51.2	102.	80-120	0.0	20	L770436-07	WG796634
Alkalinity	mg/l	110.	110.	110.	80-120	0.0	20	L770436-01	WG795951
Nitrate	mg/l	5.47	5.31	103.	80-120	3.00	20	L770436-01	WG796690
Sulfate	mg/l	52.4	52.4	102.	80-120	0.0	20	L770436-01	WG796690
Alkalinity	mg/l	110.	100.	110.	80-120	9.52	20	L770436-16	WG795952
1,1,1,2-Tetrachloroethane	mg/l	0.0220	0.0232	87.9	70.5-132	5.40	20	L770291-08	WG797232
1,1,1-Trichloroethane	mg/l	0.0264	0.0275	106.	58.7-134	4.11	20	L770291-08	WG797232
1,1,2,2-Tetrachloroethane	mg/l	0.0261	0.0299	104.	64.9-145	13.8	20	L770291-08	WG797232
1,1,2-Trichloroethane	mg/l	0.0248	0.0275	99.4	74.1-130	10.3	20	L770291-08	WG797232

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12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Withers & Ravenel Eng. - Standard
Matt James
115 MacKenan Drive

Cary, NC 27511

Quality Assurance Report
Level II

L770436

June 23, 2015

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
1,1-Dichloroethane	mg/l	0.0295	0.0307	118.	64-134	3.85	20	L770291-08	WG797232
1,1-Dichloroethene	mg/l	0.0321	0.0335	128.	48.8-144	4.06	20	L770291-08	WG797232
1,1-Dichloropropene	mg/l	0.0283	0.0297	113.	61.5-136	4.72	20	L770291-08	WG797232
1,2,3-Trichlorobenzene	mg/l	0.0263	0.0277	105.	65.7-143	5.16	20	L770291-08	WG797232
1,2,3-Trichloropropane	mg/l	0.0263	0.0306	105.	71.5-134	15.1	20	L770291-08	WG797232
1,2,4-Trichlorobenzene	mg/l	0.0266	0.0279	106.	67-146	4.92	20	L770291-08	WG797232
1,2,4-Trimethylbenzene	mg/l	0.0248	0.0267	99.1	60.5-137	7.58	20	L770291-08	WG797232
1,2-Dibromo-3-Chloropropane	mg/l	0.0236	0.0270	94.3	63.9-142	13.6	20.2	L770291-08	WG797232
1,2-Dibromoethane	mg/l	0.0258	0.0283	103.	73.8-131	9.21	20	L770291-08	WG797232
1,2-Dichlorobenzene	mg/l	0.0268	0.0287	107.	77.4-127	6.95	20	L770291-08	WG797232
1,2-Dichloroethane	mg/l	0.0305	0.0323	122.	60.7-132	5.62	20	L770291-08	WG797232
1,2-Dichloropropane	mg/l	0.0276	0.0289	110.	69.7-130	4.58	20	L770291-08	WG797232
1,3,5-Trimethylbenzene	mg/l	0.0252	0.0274	101.	67.9-134	8.24	20	L770291-08	WG797232
1,3-Dichlorobenzene	mg/l	0.0248	0.0268	99.3	67.9-136	7.61	20	L770291-08	WG797232
1,3-Dichloropropane	mg/l	0.0257	0.0276	103.	74.3-123	7.29	20	L770291-08	WG797232
1,4-Dichlorobenzene	mg/l	0.0263	0.0273	105.	74.4-123	3.72	20	L770291-08	WG797232
2,2-Dichloropropane	mg/l	0.0226	0.0231	90.4	54.9-142	2.40	20	L770291-08	WG797232
2-Butanone (MEK)	mg/l	0.134	0.153	107.	45-156	13.5	20.8	L770291-08	WG797232
2-Chlorotoluene	mg/l	0.0246	0.0264	98.4	66.9-134	6.87	20	L770291-08	WG797232
4-Chlorotoluene	mg/l	0.0254	0.0274	102.	66.8-134	7.69	20	L770291-08	WG797232
4-Methyl-2-pentanone (MIBK)	mg/l	0.161	0.180	129.	60.7-150	10.8	20	L770291-08	WG797232
Acetone	mg/l	0.0960	0.111	76.2	25-156	14.2	21.5	L770291-08	WG797232
Acrolein	mg/l	0.166	0.186	132.	34-194	11.4	21.5	L770291-08	WG797232
Acrylonitrile	mg/l	0.157	0.175	125.	55.9-161	11.1	20	L770291-08	WG797232
Benzene	mg/l	0.0299	0.0310	111.	58.6-133	3.62	20	L770291-08	WG797232
Bromobenzene	mg/l	0.0258	0.0279	103.	70.6-125	7.69	20	L770291-08	WG797232
Bromodichloromethane	mg/l	0.0253	0.0266	101.	69.2-127	4.89	20	L770291-08	WG797232
Bromoform	mg/l	0.0207	0.0229	82.7	66.3-140	10.2	20	L770291-08	WG797232
Bromomethane	mg/l	0.0279	0.0299	112.	16.6-183	6.89	20.5	L770291-08	WG797232
Carbon tetrachloride	mg/l	0.0233	0.0241	93.1	60.6-139	3.32	20	L770291-08	WG797232
Chlorobenzene	mg/l	0.0250	0.0268	100.	70.1-130	6.88	20	L770291-08	WG797232
Chlorodibromomethane	mg/l	0.0231	0.0254	92.4	71.6-132	9.55	20	L770291-08	WG797232
Chloroethane	mg/l	0.0284	0.0296	114.	33.3-155	3.87	20	L770291-08	WG797232
Chloroform	mg/l	0.0290	0.0307	116.	66.1-133	5.53	20	L770291-08	WG797232
Chloromethane	mg/l	0.0245	0.0260	98.1	40.7-139	5.94	20	L770291-08	WG797232
cis-1,2-Dichloroethene	mg/l	0.0272	0.0286	109.	60.6-136	4.72	20	L770291-08	WG797232
Di-isopropyl ether	mg/l	0.0304	0.0320	120.	59.9-140	5.12	20	L770291-08	WG797232
Dibromomethane	mg/l	0.0279	0.0293	112.	72.8-127	4.93	20	L770291-08	WG797232
Dichlorodifluoromethane	mg/l	0.0252	0.0258	101.	42.2-146	2.24	20	L770291-08	WG797232
Ethylbenzene	mg/l	0.0251	0.0265	100.	62.7-136	5.61	20	L770291-08	WG797232
Hexachloro-1,3-butadiene	mg/l	0.0246	0.0261	98.2	61.1-144	6.18	20.1	L770291-08	WG797232
Isopropylbenzene	mg/l	0.0247	0.0268	98.8	67.4-136	8.31	20	L770291-08	WG797232
m&p-Xylenes	mg/l	0.0487	0.0527	97.5	64.1-133	7.75	20	L770291-08	WG797232
Methyl tert-butyl ether	mg/l	0.0307	0.0326	117.	61.4-136	6.02	20	L770291-08	WG797232
Methylene Chloride	mg/l	0.0277	0.0295	109.	61.5-125	6.36	20	L770291-08	WG797232
n-Butylbenzene	mg/l	0.0286	0.0303	114.	64.8-145	5.81	20	L770291-08	WG797232
n-Propylbenzene	mg/l	0.0258	0.0281	103.	63.2-139	8.31	20	L770291-08	WG797232
Naphthalene	mg/l	0.0287	0.0302	114.	61.8-143	5.16	20	L770291-08	WG797232
o-Xylene	mg/l	0.0244	0.0265	97.7	67.1-133	8.29	20	L770291-08	WG797232
p-Isopropyltoluene	mg/l	0.0252	0.0274	101.	62.8-143	8.36	20	L770291-08	WG797232
sec-Butylbenzene	mg/l	0.0255	0.0277	102.	66.8-139	8.22	20	L770291-08	WG797232
Styrene	mg/l	0.0269	0.0283	108.	68.2-133	4.93	20	L770291-08	WG797232
tert-Butylbenzene	mg/l	0.0249	0.0268	99.8	67.1-138	7.20	20	L770291-08	WG797232
Tetrachloroethene	mg/l	0.0222	0.0239	88.7	57.4-141	7.63	20	L770291-08	WG797232
Toluene	mg/l	0.0268	0.0277	107.	67.8-124	3.53	20	L770291-08	WG797232
trans-1,2-Dichloroethene	mg/l	0.0264	0.0278	106.	61-132	5.08	20	L770291-08	WG797232
Trichloroethene	mg/l	0.0258	0.0272	100.	48.9-148	5.36	20	L770291-08	WG797232
Trichlorofluoromethane	mg/l	0.0323	0.0334	129.	39.9-165	3.55	20	L770291-08	WG797232
Vinyl chloride	mg/l	0.0271	0.0291	108.	44.3-143	7.05	20	L770291-08	WG797232

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Quality Assurance Report
Level II

L770436

June 23, 2015

Analyte	Units	Matrix Spike MSD	Duplicate Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
4-Bromofluorobenzene				96.80	80.1-120				
Dibromofluoromethane				110.0	79-121				
Toluene-d8				106.0	90-115				
a,a,a-Trifluorotoluene				98.70	90.4-116				
1,1,1,2-Tetrachloroethane	mg/l	0.0266	0.0247	106.	70.5-132	7.14	20	L770436-01	WG795244
1,1,1-Trichloroethane	mg/l	0.0262	0.0246	105.	58.7-134	6.39	20	L770436-01	WG795244
1,1,2,2-Tetrachloroethane	mg/l	0.0280	0.0265	112.	64.9-145	5.68	20	L770436-01	WG795244
1,1,2-Trichloroethane	mg/l	0.0262	0.0243	105.	74.1-130	7.65	20	L770436-01	WG795244
1,1-Dichloroethane	mg/l	0.0271	0.0256	108.	64-134	5.49	20	L770436-01	WG795244
1,1-Dichloroethene	mg/l	0.0259	0.0245	103.	48.8-144	5.29	20	L770436-01	WG795244
1,1-Dichloropropene	mg/l	0.0266	0.0256	106.	61.5-136	3.73	20	L770436-01	WG795244
1,2,3-Trichlorobenzene	mg/l	0.0274	0.0256	110.	65.7-143	6.76	20	L770436-01	WG795244
1,2,3-Trichloropropane	mg/l	0.0271	0.0257	108.	71.5-134	5.51	20	L770436-01	WG795244
1,2,4-Trichlorobenzene	mg/l	0.0274	0.0256	110.	67-146	6.82	20	L770436-01	WG795244
1,2,4-Trimethylbenzene	mg/l	0.0260	0.0243	103.	60.5-137	6.65	20	L770436-01	WG795244
1,2-Dibromo-3-Chloropropane	mg/l	0.0284	0.0262	114.	63.9-142	8.16	20.2	L770436-01	WG795244
1,2-Dibromoethane	mg/l	0.0264	0.0247	105.	73.8-131	6.50	20	L770436-01	WG795244
1,2-Dichlorobenzene	mg/l	0.0272	0.0249	109.	77.4-127	8.80	20	L770436-01	WG795244
1,2-Dichloroethane	mg/l	0.0283	0.0265	113.	60.7-132	6.30	20	L770436-01	WG795244
1,2-Dichloropropane	mg/l	0.0262	0.0246	105.	69.7-130	6.37	20	L770436-01	WG795244
1,3,5-Trimethylbenzene	mg/l	0.0265	0.0250	106.	67.9-134	6.03	20	L770436-01	WG795244
1,3-Dichlorobenzene	mg/l	0.0269	0.0250	108.	67.9-136	7.35	20	L770436-01	WG795244
1,3-Dichloropropane	mg/l	0.0260	0.0246	104.	74.3-123	5.72	20	L770436-01	WG795244
1,4-Dichlorobenzene	mg/l	0.0260	0.0238	104.	74.4-123	9.19	20	L770436-01	WG795244
2,2-Dichloropropane	mg/l	0.0262	0.0249	105.	54.9-142	4.81	20	L770436-01	WG795244
2-Butanone (MEK)	mg/l	0.124	0.119	99.1	45-156	4.14	20.8	L770436-01	WG795244
2-Chlorotoluene	mg/l	0.0264	0.0241	105.	66.9-134	8.98	20	L770436-01	WG795244
4-Chlorotoluene	mg/l	0.0268	0.0249	107.	66.8-134	7.47	20	L770436-01	WG795244
4-Methyl-2-pentanone (MIBK)	mg/l	0.139	0.131	111.	60.7-150	6.02	20	L770436-01	WG795244
Acetone	mg/l	0.0910	0.0856	71.2	25-156	6.10	21.5	L770436-01	WG795244
Acrolein	mg/l	0.210	0.202	168.	34-194	3.91	21.5	L770436-01	WG795244
Acrylonitrile	mg/l	0.138	0.132	110.	55.9-161	4.43	20	L770436-01	WG795244
Benzene	mg/l	0.0293	0.0278	98.4	58.6-133	5.08	20	L770436-01	WG795244
Bromobenzene	mg/l	0.0256	0.0236	102.	70.6-125	8.19	20	L770436-01	WG795244
Bromodichloromethane	mg/l	0.0250	0.0233	100.	69.2-127	7.11	20	L770436-01	WG795244
Bromoform	mg/l	0.0277	0.0258	111.	66.3-140	6.96	20	L770436-01	WG795244
Bromomethane	mg/l	0.0243	0.0221	97.3	16.6-183	9.56	20.5	L770436-01	WG795244
Carbon tetrachloride	mg/l	0.0259	0.0244	103.	60.6-139	5.91	20	L770436-01	WG795244
Chlorobenzene	mg/l	0.0257	0.0239	103.	70.1-130	7.25	20	L770436-01	WG795244
Chlorodibromomethane	mg/l	0.0267	0.0256	107.	71.6-132	4.23	20	L770436-01	WG795244
Chloroethane	mg/l	0.0246	0.0231	98.6	33.3-155	6.53	20	L770436-01	WG795244
Chloroform	mg/l	0.0263	0.0245	105.	66.1-133	6.94	20	L770436-01	WG795244
Chloromethane	mg/l	0.0241	0.0226	96.4	40.7-139	6.62	20	L770436-01	WG795244
cis-1,2-Dichloroethene	mg/l	0.0259	0.0249	104.	60.6-136	4.12	20	L770436-01	WG795244
Di-isopropyl ether	mg/l	0.0365	0.0342	98.9	59.9-140	6.40	20	L770436-01	WG795244
Dibromomethane	mg/l	0.0264	0.0248	106.	72.8-127	6.40	20	L770436-01	WG795244
Dichlorodifluoromethane	mg/l	0.0234	0.0231	93.5	42.2-146	1.32	20	L770436-01	WG795244
Ethylbenzene	mg/l	0.0288	0.0262	101.	62.7-136	9.53	20	L770436-01	WG795244
Hexachloro-1,3-butadiene	mg/l	0.0270	0.0252	108.	61.1-144	6.92	20.1	L770436-01	WG795244
Isopropylbenzene	mg/l	0.0263	0.0245	103.	67.4-136	6.91	20	L770436-01	WG795244
m&p-Xylenes	mg/l	0.0512	0.0477	99.6	64.1-133	7.13	20	L770436-01	WG795244
Methyl tert-butyl ether	mg/l	0.0867	0.0828	68.4	61.4-136	4.53	20	L770436-01	WG795244
Methylene Chloride	mg/l	0.0256	0.0245	102.	61.5-125	4.54	20	L770436-01	WG795244
n-Butylbenzene	mg/l	0.0265	0.0242	106.	64.8-145	8.79	20	L770436-01	WG795244
n-Propylbenzene	mg/l	0.0263	0.0247	104.	63.2-139	6.53	20	L770436-01	WG795244
Naphthalene	mg/l	0.0349	0.0322	111.	61.8-143	8.07	20	L770436-01	WG795244
o-Xylene	mg/l	0.0309	0.0290	99.6	67.1-133	6.26	20	L770436-01	WG795244
p-Isopropyltoluene	mg/l	0.0267	0.0249	107.	62.8-143	6.95	20	L770436-01	WG795244
sec-Butylbenzene	mg/l	0.0263	0.0245	105.	66.8-139	6.72	20	L770436-01	WG795244

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Quality Assurance Report
Level II

L770436

June 23, 2015

		Matrix Spike Duplicate							
Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Styrene	mg/l	0.0278	0.0264	107.	68.2-133	5.07	20	L770436-01	WG795244
tert-Butylbenzene	mg/l	0.0263	0.0248	105.	67.1-138	5.69	20	L770436-01	WG795244
Tetrachloroethene	mg/l	0.0253	0.0234	101.	57.4-141	7.82	20	L770436-01	WG795244
Toluene	mg/l	0.0259	0.0239	101.	67.8-124	8.02	20	L770436-01	WG795244
trans-1,2-Dichloroethene	mg/l	0.0249	0.0234	99.8	61-132	6.32	20	L770436-01	WG795244
Trichloroethene	mg/l	0.0259	0.0248	104.	48.9-148	4.58	20	L770436-01	WG795244
Trichlorofluoromethane	mg/l	0.0256	0.0236	102.	39.9-165	8.08	20	L770436-01	WG795244
Vinyl chloride	mg/l	0.0242	0.0231	97.0	44.3-143	4.80	20	L770436-01	WG795244
4-Bromofluorobenzene				97.60	80.1-120				WG795244
Dibromofluoromethane				99.00	79-121				WG795244
Toluene-d8				101.0	90-115				WG795244
a,a,a-Trifluorotoluene				99.70	90.4-116				WG795244
Alkalinity	mg/l	110.	110.	89.0	80-120	0.0	20	L770436-15	WG795953
1,1,1,2-Tetrachloroethane	mg/l	0.0233	0.0208	93.0	70.5-132	11.1	20	L770436-16	WG797519
1,1,1-Trichloroethane	mg/l	0.0270	0.0247	108.	58.7-134	8.86	20	L770436-16	WG797519
1,1,2,2-Tetrachloroethane	mg/l	0.0278	0.0253	111.	64.9-145	9.26	20	L770436-16	WG797519
1,1,2-Trichloroethane	mg/l	0.0261	0.0238	104.	74.1-130	9.10	20	L770436-16	WG797519
1,1-Dichloroethane	mg/l	0.0292	0.0273	117.	64-134	6.73	20	L770436-16	WG797519
1,1-Dichloroethene	mg/l	0.0315	0.0292	126.	48.8-144	7.37	20	L770436-16	WG797519
1,1-Dichloropropene	mg/l	0.0284	0.0260	113.	61.5-136	8.70	20	L770436-16	WG797519
1,2,3-Trichlorobenzene	mg/l	0.0257	0.0242	103.	65.7-143	5.85	20	L770436-16	WG797519
1,2,3-Trichloropropane	mg/l	0.0294	0.0262	118.	71.5-134	11.7	20	L770436-16	WG797519
1,2,4-Trichlorobenzene	mg/l	0.0263	0.0243	105.	67-146	7.79	20	L770436-16	WG797519
1,2,4-Trimethylbenzene	mg/l	0.0258	0.0231	103.	60.5-137	10.9	20	L770436-16	WG797519
1,2-Dibromo-3-Chloropropane	mg/l	0.0258	0.0243	103.	63.9-142	6.32	20.2	L770436-16	WG797519
1,2-Dibromoethane	mg/l	0.0271	0.0247	108.	73.8-131	9.35	20	L770436-16	WG797519
1,2-Dichlorobenzene	mg/l	0.0270	0.0249	108.	77.4-127	7.87	20	L770436-16	WG797519
1,2-Dichloroethane	mg/l	0.0311	0.0288	124.	60.7-132	7.69	20	L770436-16	WG797519
1,2-Dichloropropane	mg/l	0.0265	0.0251	106.	69.7-130	5.37	20	L770436-16	WG797519
1,3,5-Trimethylbenzene	mg/l	0.0264	0.0240	105.	67.9-134	9.24	20	L770436-16	WG797519
1,3-Dichlorobenzene	mg/l	0.0257	0.0235	103.	67.9-136	9.05	20	L770436-16	WG797519
1,3-Dichloropropane	mg/l	0.0265	0.0238	106.	74.3-123	10.9	20	L770436-16	WG797519
1,4-Dichlorobenzene	mg/l	0.0260	0.0241	104.	74.4-123	7.87	20	L770436-16	WG797519
2,2-Dichloropropane	mg/l	0.0218	0.0191	87.4	54.9-142	13.6	20	L770436-16	WG797519
2-Butanone (MEK)	mg/l	0.134	0.127	107.	45-156	5.17	20.8	L770436-16	WG797519
2-Chlorotoluene	mg/l	0.0256	0.0232	102.	66.9-134	9.88	20	L770436-16	WG797519
4-Chlorotoluene	mg/l	0.0261	0.0239	104.	66.8-134	8.80	20	L770436-16	WG797519
4-Methyl-2-pentanone (MIBK)	mg/l	0.155	0.150	124.	60.7-150	3.27	20	L770436-16	WG797519
Acetone	mg/l	0.0954	0.0935	75.4	25-156	2.01	21.5	L770436-16	WG797519
Acrylonitrile	mg/l	0.156	0.148	124.	55.9-161	4.99	20	L770436-16	WG797519
Benzene	mg/l	0.0279	0.0259	112.	58.6-133	7.34	20	L770436-16	WG797519
Bromobenzene	mg/l	0.0268	0.0241	107.	70.6-125	10.5	20	L770436-16	WG797519
Bromodichloromethane	mg/l	0.0255	0.0240	102.	69.2-127	6.12	20	L770436-16	WG797519
Bromoform	mg/l	0.0235	0.0211	93.8	66.3-140	10.5	20	L770436-16	WG797519
Bromomethane	mg/l	0.0247	0.0229	98.8	16.6-183	7.44	20.5	L770436-16	WG797519
Carbon tetrachloride	mg/l	0.0249	0.0227	99.5	60.6-139	9.32	20	L770436-16	WG797519
Chlorobenzene	mg/l	0.0260	0.0235	104.	70.1-130	9.94	20	L770436-16	WG797519
Chlorodibromomethane	mg/l	0.0260	0.0231	104.	71.6-132	11.8	20	L770436-16	WG797519
Chloroethane	mg/l	0.0255	0.0228	102.	33.3-155	11.2	20	L770436-16	WG797519
Chloroform	mg/l	0.0296	0.0274	118.	66.1-133	7.78	20	L770436-16	WG797519
Chloromethane	mg/l	0.0224	0.0218	89.6	40.7-139	2.53	20	L770436-16	WG797519
cis-1,2-Dichloroethene	mg/l	0.0271	0.0256	108.	60.6-136	5.61	20	L770436-16	WG797519
Di-isopropyl ether	mg/l	0.0289	0.0269	115.	59.9-140	6.91	20	L770436-16	WG797519
Dibromomethane	mg/l	0.0273	0.0261	109.	72.8-127	4.67	20	L770436-16	WG797519
Dichlorodifluoromethane	mg/l	0.0232	0.0221	92.7	42.2-146	4.83	20	L770436-16	WG797519

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

ESC LAB SCIENCES
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1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Withers & Ravenel Eng. - Standard
Matt James
115 MacKenan Drive

Cary, NC 27511

Quality Assurance Report
Level II

L770436

June 23, 2015

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Ethylbenzene	mg/l	0.0259	0.0229	103.	62.7-136	12.0	20	L770436-16	WG797519
Hexachloro-1,3-butadiene	mg/l	0.0242	0.0226	96.8	61.1-144	6.71	20.1	L770436-16	WG797519
Isopropylbenzene	mg/l	0.0260	0.0232	104.	67.4-136	11.6	20	L770436-16	WG797519
m&p-Xylenes	mg/l	0.0510	0.0460	102.	64.1-133	10.3	20	L770436-16	WG797519
Methyl tert-butyl ether	mg/l	0.0287	0.0273	115.	61.4-136	5.19	20	L770436-16	WG797519
Methylene Chloride	mg/l	0.0267	0.0253	107.	61.5-125	5.56	20	L770436-16	WG797519
n-Butylbenzene	mg/l	0.0291	0.0268	116.	64.8-145	8.38	20	L770436-16	WG797519
n-Propylbenzene	mg/l	0.0271	0.0243	108.	63.2-139	11.2	20	L770436-16	WG797519
Naphthalene	mg/l	0.0287	0.0267	115.	61.8-143	7.13	20	L770436-16	WG797519
o-Xylene	mg/l	0.0253	0.0231	101.	67.1-133	9.32	20	L770436-16	WG797519
p-Isopropyltoluene	mg/l	0.0265	0.0237	106.	62.8-143	11.2	20	L770436-16	WG797519
sec-Butylbenzene	mg/l	0.0267	0.0238	107.	66.8-139	11.6	20	L770436-16	WG797519
Styrene	mg/l	0.0274	0.0247	110.	68.2-133	10.5	20	L770436-16	WG797519
tert-Butylbenzene	mg/l	0.0259	0.0234	104.	67.1-138	10.5	20	L770436-16	WG797519
Tetrachloroethene	mg/l	0.0228	0.0203	91.4	57.4-141	11.8	20	L770436-16	WG797519
Toluene	mg/l	0.0263	0.0244	105.	67.8-124	7.21	20	L770436-16	WG797519
trans-1,2-Dichloroethene	mg/l	0.0262	0.0240	105.	61-132	8.49	20	L770436-16	WG797519
Trichloroethene	mg/l	0.0248	0.0234	99.4	48.9-148	6.19	20	L770436-16	WG797519
Trichlorofluoromethane	mg/l	0.0148	0.0290	59.1	39.9-165	64.9*	20	L770436-16	WG797519
Vinyl chloride	mg/l	0.0257	0.0239	103.	44.3-143	7.34	20	L770436-16	WG797519
4-Bromofluorobenzene				99.00	80.1-120				WG797519
Dibromofluoromethane				111.0	79-121				WG797519
Toluene-d8				105.0	90-115				WG797519
a,a,a-Trifluorotoluene				94.30	90.4-116				WG797519

Serial Dilution

Batch number /Run number / Sample number cross reference

WG795091: R3042939: L770436-21 22 23 24 25 26 27
WG795092: R3042952: L770436-01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20
WG795039: R3043229: L770436-01 03
WG795605: R3044241: L770436-02 11 15 17 18 19
WG796634: R3044580: L770436-06 07 08 09 12 13 14 22 23
WG796958: R3044851: L770436-24 25 26 27
WG795951: R3044867: L770436-01 02 03 04 05 06 07 08 09 10 11 12 13 14
WG795952: R3044870: L770436-16 17 18 19 20 21 22 23 24 25 26 27
WG796690: R3044871: L770436-01 04 05 10 16 20 21
WG795953: R3044917: L770436-15
WG797232: R3044948: L770436-21 22 23 24 25 26 27
WG795244: R3045006: L770436-01 02 03 04 05 06 07 08 09 10 11 12 13 14
WG797519: R3045172: L770436-05 15 16 17 18 19 20
WG797688: R3045290: L770436-15 16 17 18 19 20

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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Withers & Ravenel Eng. - Standard
Matt James
115 MacKenan Drive

Cary, NC 27511

Quality Assurance Report
Level II

L770436

June 23, 2015

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

Withers & Ravenel Eng.
111 MacKenan Drive
Cary, NC 27511

Alternate billing information:
WITHRAVS - Regular
WITHRAVS - 6200FULL
WITHRAVS - STATELEAD

Report to: MJones@withersravenel.com
Email to:

Analysis/Container/Preservative

Chain of Custody
Page 1 of 1

Prepared by:

ENVIRONMENTAL SCIENCE CORP.
12065 Lebanon Road
Mt. Juliet, TN 37122
Phone (615) 758-5858
Phone (800) 767-5859
FAX (615) 758-5859

D239

Project Description: Dantry 3031
City/Sate Collected: Fayetteville, NC
Phone: (919) 469-3340
FAX:
Client Project #: 20708600
ESC Key: see above
Collected by: Phillip Jones
Site/Facility ID#:
P.O.#:
Collected by (signature):
Packed on Ice N Y

Rush? (Lab MUST Be Notified)
___ Same Day.....200%
___ Next Day.....100%
___ Two Day.....50%
___ Three Day.....25%

Date Results Needed:
Email? __No __Yes
FAX? __No __Yes

CoCode WITHRAVS (lab use only)
Template/Prelogin
Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	6200B	Nitrate	Sulfate	Fe, Mn, Mg	ALKALINITY	Remarks/Contaminant	Sample # (lab only)
MW-1A	Grab	GW		6-9-15	1540	5	X	X					770436-01
MW-3					1050								02
MW-4					1308								03
MW-5					1340								04
MW-6					1630								05
MW-8				6-8-15	1830								06
MW-9					1750								07
MW-10					1545								08
MW-11				6-9-15	0845								09

*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____
Flow _____ Other _____

Remarks:

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☑ SWA	Condition: (lab use only)
	6/10/15	13:25			AS
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.2 / Bottles Received: 13S+2TB	COCSI
Relinquished by: (Signature)	Date: 6/10/15	Time: 18:00	Received for lab by: (Signature)	Date: 6/11/15 / Time: 0830	pH Checked: <2 / NCF: X

Withers & Ravenel Eng.
111 MacKenan Drive
Cary, NC 27511

Alternate billing information:
WITHRAVS - Regular
WITHRAVS - 6200FULL
WITHRAVS - STATELEAD

Report to: @withersravenel.com

Email to:

Project Description: Dandy 3031

City/State Collected: Fayetteville, NC

Phone: (919) 469-3340
FAX:

Client Project #: 2070860.0

ESC Key: see above

Collected by: Phillip Jones

Site/Facility ID#:

P.O.#:

Collected by (signature):

Packed on Ice N (Y)

Rush? (Lab MUST Be Notified)
___ Same Day.....200%
___ Next Day.....100%
___ Two Day.....50%
___ Three Day.....25%

Date Results Needed:

Email? __No X Yes

FAX? __No __Yes

Analysis/Container/Preservative

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	6200B	Nitrate	Sulfate	Ferrous Iron	Alkalinity	Remarks/Contaminant	Sample # (lab only)
MW-12	Grab	GW		6-9-15	1425	5	X	X	X	X	X		770436-10
MW-13				6-10-15	1215								11
MW-14				6-8-15	1710								12
MW-15				↓	1510								13
MW-16				6-9-15	0915								14
MW-17A				6-10-15	0920								15
MW-18				6-9-15	1810								16
MW-19				6-10-15	1135								17
MW-20	↓	↓		↓	1050	↓							18

*Matrix: **SS** - Soil/Solid **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Chain of Custody Page 1 of 1

Prepared by:

ENVIRONMENTAL SCIENCE CORP.
12065 Lebanon Road
Mt. Juliet, TN 37122
Phone (615) 758-5858
Phone (800) 767-5859
FAX (615) 758-5859

CoCode WITHRAVS (lab use only)
Template/Prelogin
Shipped Via:

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date: 6/10/15	Time: 16:00	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☒ SWA

Temp: 3.2 | Bottles Received: 135+2TB

Condition: (lab use only) NS

Date: 6/11/15 | Time: 0830 | pH Checked: <2 | NCF: X

COC52

Withers & Ravenel Eng.
111 MacKenan Drive
Cary, NC 27511

Alternate billing information:
WITHRAVS - Regular
WITHRAVS - 6200FULL
WITHRAVS - STATELEAD

Report to: @withersravenel.com

Email to:

Analysis/Container/Preservative

Chain of Custody Page 1 of 1 (3 3)

Prepared by:

ENVIRONMENTAL SCIENCE CORP.
12065 Lebanon Road
Mt. Juliet, TN 37122
Phone (615) 758-5858
Phone (800) 767-5859
FAX (615) 758-5859

Project Description:

City/Sate Collected

Phone: (919) 469-3340
FAX:

Client Project #:

ESC Key: see above

Collected by:

Site/Facility ID#:

P.O.#:

Collected by (signature):

Packed on Ice N (Y)

Rush? (Lab MUST Be Notified)
____ Same Day.....200%
____ Next Day.....100%
____ Two Day.....50%
____ Three Day.....25%

Date Results Needed:
Email? __No X Yes
FAX? __No__Yes

CoCode WITHRAVS (lab use only)
Template/Prelogin
Shipped Via:

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	6200B	Wildlife	Sulfide	Fe, Mn, Mg	Al Kalinity		Remarks/Contaminant	Sample # (lab only)
MW-22	Grab	GW		6-10-15	1005	5	X	X	X	X	X			L770436-19
MW-23				6-9-15	1735									20
MW-24				6-9-15	1155									21
MW-25				6-8-15	1628									22
MW-26				6-9-15	0955									23
MW-27				6-8-15	1235									24
MW-28				6-8-15	1332									25
MW-29				6-8-15	1425									26
MW-30				6-8-15	1205									27

<2

*Matrix: SS - Soil/Solid GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

pH _____ Temp _____

Flow _____ Other _____

Remarks:

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☒ SWH		Condition: (lab use only)
[signature]	6/10/15	15:25	[signature]			NS
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.7	Bottles Received: 135+2TB	COCSI
[signature]	6/10/15	16:00	[signature]	Date: 6/11/15	Time: 0830	pH Checked: <2 NCF: X

Matt Shacklock

ESC Lab Sciences
Non-Conformance Form

Login #:L770436	Client: WITHRAVS	Date:6/11/15	Evaluated by:Nikki S

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
x	Parameter(s) past holding time		Login Clarification Needed		**If Broken Container:**
	Improper temperature		Chain of custody is incomplete		Insufficient packing material around container
	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	Improper preservation		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Courie
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments: Received Nitrate for several ID's OOH

Client informed by:		Call	x	Email		Voice Mail		Date: 6/11/15	Time: 1025
TSR Initials: jeh	Client Contact: Matt James								

Login Instructions: Analyze the nitrates that are in hold. Do not analyze the out of hold nitrates.

This E-mail and any attached files are confidential, and may be copyright protected. If you are not the addressee, any dissemination of this communication is strictly prohibited. If you have received this message in error, please contact the sender immediately and delete/destroy all information received.

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

Matt James

Well Contractor Name (or well owner personally abandoning well on his/her property)

4164-C

NC Well Contractor Certification Number

WithersRavenel, Inc

Company Name

2. Well Construction Permit #: _____

List all applicable well permits (i e County, State, Variance, Injection, etc) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 12/07-08/2016

5a. Well location:

Former Pantry 3031 — Facility/Owner Name

0-0-0288888 — Facility ID# (if applicable)

8215 Cliffdale Road, Fayetteville, NC 28314 — Physical Address, City, and Zip

Cumberland — County

9487-56-2185 — Parcel Identification No (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35 03' 30" N 79 02' 57" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form

6a. Well ID#: See Attached Table

6b. Total well depth: 45 to 55 (ft.)

6c. Borehole diameter: 4 to 6 (in.)

6d. Water level below ground surface: 40 (ft.)

6e. Outer casing length (if known): 20 to 40 (ft.)

6f. Inner casing/tubing length (if known): N/A (ft.)

6g. Screen length (if known): 10 to 30 (ft.)

For Internal Use ONLY

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 26

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form

7b. Approximate volume of water remaining in well(s): 2 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☐ Neat Cement Grout	☑ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☑ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

up to 2 - 50 lb bag of bentonite pellets

10 to 20 lbs ready mix concrete

7g. Provide a brief description of the abandonment procedure:

bentonite pellets were poured in 1 foot lifts and hydrated until pellets were approximately 1 to 2 ft from the top of casing; the remaining footage was capped with a concrete slurry.

8. Certification:

Signature of Certified Well Contractor or Well Owner — Date: 12/09/16

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

**Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617**

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

**Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636**

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

Matt James

Well Contractor Name (or well owner personally abandoning well on his/her property)

4164-C

NC Well Contractor Certification Number

WithersRavenel, Inc

Company Name

2. Well Construction Permit #: _____

List all applicable well permits (i e County, State, Variance, Injection, etc) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☑Monitoring	☐Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 12/07-08/2016

5a. Well location:

Former Pantry 3031 — Facility/Owner Name

0-0-0288888 — Facility ID# (if applicable)

8215 Cliffdale Road, Fayetteville, NC 28314 — Physical Address, City, and Zip

Cumberland — County

9487-56-2185 — Parcel Identification No (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35 03' 30" N 79 02' 57" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form

6a. Well ID#: See Attached Table

6b. Total well depth: 60 (ft.)

6c. Borehole diameter: 4 to 6 (in.)

6d. Water level below ground surface: 40 (ft.)

6e. Outer casing length (if known): 55 (ft.)

6f. Inner casing/tubing length (if known): N/A (ft.)

6g. Screen length (if known): 5 (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 2

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form

7b. Approximate volume of water remaining in well(s): 3.2 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☐ Neat Cement Grout	☑ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☑ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

up to 2.5 - 50 lb bag of bentonite pellets

10 to 20 lbs ready mix concrete

7g. Provide a brief description of the abandonment procedure:

bentonite pellets were poured in 1 foot lifts and hydrated until pellets were approximately 1 to 2 ft from the top of casing; the remaining footage was capped with a concrete slurry.

8. Certification:

Signature of Certified Well Contractor or Well Owner

12/09/16 — Date

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

**Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617**

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

**Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636**

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

Matt James

Well Contractor Name (or well owner personally abandoning well on his/her property)

4164-C

NC Well Contractor Certification Number

WithersRavenel, Inc

Company Name

2. Well Construction Permit #: _____

List all applicable well permits (i.e County, State, Variance, Injection, etc) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☐Monitoring	☑Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 12/07-08/2016

5a. Well location:

Former Pantry 3031 — Facility/Owner Name

0-0-0288888 — Facility ID# (if applicable)

8215 Cliffdale Road, Fayetteville, NC 28314 — Physical Address, City, and Zip

Cumberland — County

9487-56-2185 — Parcel Identification No (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35 03' 30" N 79 02' 57" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form

6a. Well ID#: See Attached Table

6b. Total well depth: 35 (ft.)

6c. Borehole diameter: 4 to 6 (in.)

6d. Water level below ground surface: Dry (ft.)

6e. Outer casing length (if known): 15 (ft.)

6f. Inner casing/tubing length (if known): N/A (ft.)

6g. Screen length (if known): 20 (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 29

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form

7b. Approximate volume of water remaining in well(s): 0.0 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☐ Neat Cement Grout	☑ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☑ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

up to 2 - 50 lb bag of bentonite pellets

10 to 20 lbs ready mix concrete

7g. Provide a brief description of the abandonment procedure:

bentonite pellets were poured in 1 foot lifts and hydrated until pellets were approximately 1 to 2 ft from the top of casing; the remaining footage was capped with a concrete slurry.

8. Certification:

Signature of Certified Well Contractor or Well Owner — Date: 12/09/16

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:
You may use the back of this page to provide additional well site details or well abandonment details You may also attach additional pages if necessary

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

**Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617**

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

**Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636**

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned

WELL ABANDONMENT RECORD

This form can be used for single or multiple wells

1. Well Contractor Information:

Matt James

Well Contractor Name (or well owner personally abandoning well on his/her property)

4164-C

NC Well Contractor Certification Number

WithersRavenel, Inc

Company Name

2. Well Construction Permit #: _____

List all applicable well permits (i.e. County, State, Variance, Injection, etc.) if known

3. Well use (check well use):

Water Supply Well:	
☐Agricultural	☐Municipal/Public
☐Geothermal (Heating/Cooling Supply)	☐Residential Water Supply (single)
☐Industrial/Commercial	☐Residential Water Supply (shared)
☐Irrigation	
Non-Water Supply Well:	
☐Monitoring	☑Recovery
Injection Well:	
☐Aquifer Recharge	☐Groundwater Remediation
☐Aquifer Storage and Recovery	☐Salinity Barrier
☐Aquifer Test	☐Stormwater Drainage
☐Experimental Technology	☐Subsidence Control
☐Geothermal (Closed Loop)	☐Tracer
☐Geothermal (Heating/Cooling Return)	☐Other (explain under 7g)

4. Date well(s) abandoned: 12/07-08/2016

5a. Well location:

Former Pantry 3031 — Facility/Owner Name

0-0-0288888 — Facility ID# (if applicable)

8215 Cliffdale Road, Fayetteville, NC 28314

Physical Address, City, and Zip

Cumberland — County

9487-56-2185 — Parcel Identification No (PIN)

5b. Latitude and longitude in degrees/minutes/seconds or decimal degrees:
(if well field, one lat/long is sufficient)

35 03' 30" N 79 02' 57" W

CONSTRUCTION DETAILS OF WELL(S) BEING ABANDONED

Attach well construction record(s) if available. For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form

6a. Well ID#: See Attached Table

6b. Total well depth: 60 (ft.)

6c. Borehole diameter: 4 to 6 (in.)

6d. Water level below ground surface: 40 (ft.)

6e. Outer casing length (if known): 55 (ft.)

6f. Inner casing/tubing length (if known): N/A (ft.)

6g. Screen length (if known): 5 (ft.)

For Internal Use ONLY:

WELL ABANDONMENT DETAILS

7a. Number of wells being abandoned: 24

For multiple injection or non-water supply wells ONLY with the same construction abandonment, you can submit one form

7b. Approximate volume of water remaining in well(s): 1 (gal.)

FOR WATER SUPPLY WELLS ONLY:

7c. Type of disinfectant used: _____

7d. Amount of disinfectant used: _____

7e. Sealing materials used (check all that apply):

☐ Neat Cement Grout	☑ Bentonite Chips or Pellets
☐ Sand Cement Grout	☐ Dry Clay
☑ Concrete Grout	☐ Drill Cuttings
☐ Specialty Grout	☐ Gravel
☐ Bentonite Slurry	☐ Other (explain under 7g)

7f. For each material selected above, provide amount of materials used:

0.5 to 1 - 50 lb bag of bentonite pellets

10 to 20 lbs ready mix concrete

7g. Provide a brief description of the abandonment procedure:

bentonite pellets were poured in 1 foot lifts and hydrated until pellets were approximately 1 to 2 ft from the top of casing; the remaining footage was capped with a concrete slurry.

8. Certification:

Signature of Certified Well Contractor or Well Owner — Date: 12/09/16

By signing this form, I hereby certify that the well(s) was (were) abandoned in accordance with 15A NCAC 02C .0100 or 2C .0200 Well Construction Standards and that a copy of this record has been provided to the well owner.

9. Site diagram or additional well details:

You may use the back of this page to provide additional well site details or well abandonment details. You may also attach additional pages if necessary.

SUBMITTAL INSTRUCTIONS

10a. For All Wells: Submit this form within 30 days of completion of well abandonment to the following:

**Division of Water Resources, Information Processing Unit,
1617 Mail Service Center, Raleigh, NC 27699-1617**

10b. For Injection Wells: In addition to sending the form to the address in 10a above, also submit one copy of this form within 30 days of completion of well abandonment to the following:

**Division of Water Resources, Underground Injection Control Program,
1636 Mail Service Center, Raleigh, NC 27699-1636**

10c. For Water Supply & Injection Wells: In addition to sending the form to the address(es) above, also submit one copy of this form within 30 days of completion of well abandonment to the county health department of the county where abandoned

TABLE 1
MONITORING WELL CONSTRUCTION DATA

FORMER PANTRY 3031
FAYETTEVILLE, NORTH CAROLINA
INCIDENT NO. 22150
WITHERS & RAVENEL PROJECT NO. 02070860.00

Well ID	Date Installed	Well Casing Depth (ft-bgs)	Screened Interval (ft-bgs)	Bottom of Well (ft-bgs)	Top of Casing Elevation (ft-rel)	Well Diameter (in.)
Type II Monitoring Wells						
MW-1A	01/18/09	35	35 - 50	50	245.78	2
MW-3	05/15/98	20	20 - 50	50	245.92	2
MW-5	09/09/98	25	25 - 45	45	244.65	2
MW-6	09/09/98	30	30 - 50	50	244.25	2
MW-8	09/09/98	25	25 - 45	45	244.99	2
MW-9	01/21/99	20	20 - 50	50	243.86	2
MW-10	01/21/99	20	20 - 50	50	244.33	2
MW-11	01/21/99	20	20 - 50	50	244.57	2
MW-12	01/22/99	20	20 - 50	50	244.82	2
MW-13	01/22/99	20	20 - 50	50	245.02	2
MW-14	03/10/99	20	20 - 50	50	243.33	2
MW-15	03/10/99	22	22 - 52	52	241.40	2
MW-16	03/11/99	20	20 - 50	50	243.12	2
MW-17A	07/28/09	25	25-50	50	245.53	2
MW-18	03/11/99	20	20 - 50	50	246.10	2
MW-19	03/11/99	20	20 - 50	50	244.51	2
MW-20	09/13/99	25	25 - 50	50	244.58	2
MW-21	09/13/99	40	40 - 50	50	244.62	2
MW-23	10/23/01	20	20 - 50	50	246.04	2
MW-24	10/24/01	20	20 - 50	50	246.96	2
MW-25	07/28/09	20	20-45	45	243.28	2
MW-26	07/29/09	25	25-50	50	244.43	2
MW-27	07/29/09	20	20 - 50	50	244.92	2
MW-28	11/14/11	25	25-55	55	245.16	2
MW-29	11/14/11	25	25-50	50	242.99	2
MW-30	11/14/11	25	25 - 55	55	245.04	2
Type III Monitoring Wells						
MW-4	09/09/98	55	55 - 60	60	244.61	2
MW-22	10/24/01	55	55 - 60	60	244.95	2
Type II Remediation Wells - SVE Wells						
V1	Unknown	15	15 - 35	35	Not Surveyed	2
V2	Unknown	15	15 - 35	35	Not Surveyed	2
V3	Unknown	15	15 - 35	35	Not Surveyed	2
V4	Unknown	15	15 - 35	35	Not Surveyed	2
V5	Unknown	15	15 - 35	35	Not Surveyed	2
V6	Unknown	15	15 - 35	35	Not Surveyed	2
V7	Unknown	15	15 - 35	35	Not Surveyed	2
V8	Unknown	15	15 - 35	35	Not Surveyed	2
V9	Unknown	15	15 - 35	35	Not Surveyed	2
V10	Unknown	15	15 - 35	35	Not Surveyed	2
V11	Unknown	15	15 - 35	35	Not Surveyed	2
V12	Unknown	15	15 - 35	35	Not Surveyed	2
V13	Unknown	15	15 - 35	35	Not Surveyed	2
V14	Unknown	15	15 - 35	35	Not Surveyed	2
V15	Unknown	15	15 - 35	35	Not Surveyed	2
V16	Unknown	15	15 - 35	35	Not Surveyed	2
V17	Unknown	15	15 - 35	35	Not Surveyed	2
V18	Unknown	15	15 - 35	35	Not Surveyed	2
V19	Unknown	15	15 - 35	35	Not Surveyed	2
V20	Unknown	15	15 - 35	35	Not Surveyed	2
V21	06/07/10	15	15 - 35	35	Not Surveyed	2
V22	06/07/10	15	15 - 35	35	Not Surveyed	2
V23	06/08/10	15	15 - 35	35	Not Surveyed	2
V24	06/08/10	15	15 - 35	35	Not Surveyed	2
V25	06/08/10	15	15 - 35	35	Not Surveyed	2
V26	06/10/10	15	15 - 35	35	Not Surveyed	2
V27	06/10/10	15	15 - 35	35	Not Surveyed	2
V28	06/10/10	15	15 - 35	35	Not Surveyed	2
V29	06/10/10	15	15 - 35	35	Not Surveyed	2
Type II Remediation Wells - Air Sparge Wells						
A1	06/10/10	55	55 - 60	60	Not Surveyed	1
A2	Unknown	55	55 - 60	60	Not Surveyed	1
A3	Unknown	55	55 - 60	60	Not Surveyed	1
A4	Unknown	55	55 - 60	60	Not Surveyed	1
A5	Unknown	55	55 - 60	60	Not Surveyed	1
A6	Unknown	55	55 - 60	60	Not Surveyed	1
A7	Unknown	55	55 - 60	60	Not Surveyed	1
A8	Unknown	55	55 - 60	60	Not Surveyed	1
A9	Unknown	55	55 - 60	60	Not Surveyed	1
A10	Unknown	55	55 - 60	60	Not Surveyed	1
A11	Unknown	55	55 - 60	60	Not Surveyed	1
A12	Unknown	55	55 - 60	60	Not Surveyed	1
A13	Unknown	55	55 - 60	60	Not Surveyed	1
A14	Unknown	55	55 - 60	60	Not Surveyed	1
S15	06/10/10	55	55 - 60	60	Not Surveyed	1
S16	06/09/10	55	55 - 60	60	Not Surveyed	1
S17	06/09/10	55	55 - 60	60	Not Surveyed	1
S18	06/09/10	55	55 - 60	60	Not Surveyed	1
S19	06/09/10	55	55 - 60	60	Not Surveyed	1
S20	06/08/10	55	55 - 60	60	Not Surveyed	1
S21	06/08/10	55	55 - 60	60	Not Surveyed	1
S22	06/07/10	55	55 - 60	60	Not Surveyed	1
S23	06/07/10	55	55 - 60	60	Not Surveyed	1
S24	06/07/10	55	55 - 60	60	Not Surveyed	1

Total Footage (ft.)	Total Cost @ $6.00 per foot
3,872	**$23,232.00**

Waste Management
ENVIRONMENTAL QUALITY

PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

MICHAEL SCOTT
Director

December 23, 2016

The Pantry, Inc
Brent Puzak
305 Gregson Drive
Cary, NC 27512

Re: Notice of No Further Action
15A NCAC 2L .0407(d)
Risk-based Assessment and Corrective Action
for Petroleum Underground Storage Tanks

Pantry 3031
8215 Cliffdale Road
Fayetteville, Cumberland County
Incident Number: 22150
Risk Classification: Low
Ranking: LOL

Dear Mr. Puzak:

The Active Remediation Monitoring Report/ Site Closure Request received by the UST Section, Division of Waste Management, Fayetteville Regional Office on July 29, 2015, has been reviewed. The review indicates that groundwater contamination meets the cleanup requirements for a low-risk site but exceeds the groundwater quality standards established in Title 15A NCAC 2L .0202.

The UST Section determines that no further action is warranted for this incident. All required actions have been completed. On September 6, 2016, the UST Section received a certified copy of the Notice of Residual Petroleum which is filed with the Register of Deeds. On December 12, 2016, the UST Section was provided with proof of receipt of the conditional Notice of No Further Action letter or of refusal by the addressee to accept delivery of the letter or with a description of the manner in which the letter was posted.

This determination shall apply unless the UST Section later finds that the discharge or release poses an unacceptable risk or a potentially unacceptable risk to human health or the environment. Pursuant to Title 15A NCAC 2L .0407(a) you have a continuing obligation to notify the Department of Environmental Quality of any changes that might affect the risk or land use classifications that have been assigned.

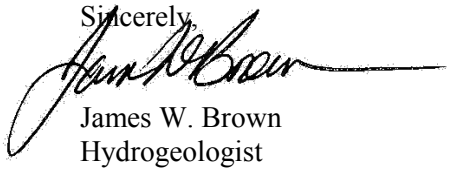
Be advised that as groundwater contamination exceeds the groundwater quality standards established in Title 15A NCAC 2L .0202, groundwater within the area of contamination or within the area where groundwater contamination is expected to migrate is not suitable for use as a water supply.

Interested parties may examine the Active Remediation Monitoring Report/ Site Closure Request by contacting this regional office and may submit comments on the site to the regional office at the address or telephone number listed below.

This No Further Action determination applies only to the subject incident; for any other incidents at the subject site, the responsible party must continue to address contamination as required.

If you have any questions regarding this notice, please contact me at the address or telephone number listed below.

Sincerely,



James W. Brown
Hydrogeologist
Fayetteville Regional Office
UST Section, Division of Waste Management, NCDEQ

cc: Chan Bryant – WithersRavenel *(electronic)*

Waste Management
ENVIRONMENTAL QUALITY

PAT MCCRORY
Governor

DONALD R. VAN DER VAART
Secretary

MICHAEL SCOTT
Director

July 21, 2016

The Pantry, Inc
Brent Puzak
305 Gregson Drive
Cary, NC 27512

Re: Conditional Notice of No Further Action
15A NCAC 2L .0407(d)
Risk-based Assessment and Corrective Action
for Petroleum Underground Storage Tanks

Pantry 3031
8215 Cliffdale Road
Fayetteville, Cumberland County
Incident Number: 22150
Risk Classification: Low
Ranking: L0L

Dear Mr. Puzzak:

The Active Remediation Monitoring Report/ Site Closure Request received by the UST Section, Division of Waste Management, Fayetteville Regional Office on July 29, 2015, and the Notice of Residual Petroleum received on J have been reviewed. The review indicates that groundwater contamination meets the cleanup requirements for a low-risk site but exceeds the groundwater quality standards established in Title 15A NCAC 2L .0202.

The UST Section determines the subject incident to be eligible conditionally for no further action status. However, final approval of no further action status is contingent on the filing of the approved NRP (attached) with the Register of Deeds in the county in which the release is located, verified by the receipt of a certified copy of the filed NRP by this office; and on receipt of confirmation that public notice requirements have been completed, as described in the following paragraphs.

Be advised that as groundwater contamination exceeds the groundwater quality standards established in Title 15A NCAC 2L .0202, groundwater within the area of contamination or within the area where groundwater contamination is expected to migrate is not suitable for use as a water supply.

As groundwater contamination exceeds the groundwater quality standards established in Title 15A NCAC 2L .0202, pursuant to NCGS 143B-279.9 and 143B-279.11, you must file the approved Notice of Residual Petroleum (attached) with the Register of Deeds in the county in which the release is located and submit a certified copy to the UST Section within 30 days of receipt of this letter.

As groundwater contamination exceeds the groundwater quality standards established in Title 15A NCAC 2L .0202, public notice in accordance with 15A NCAC 2L .0409(b) also is required. Thus, within 30 days of receipt of this letter, a copy of the letter must be provided by certified mail, or by

posting in a prominent place, if certified mail is impractical, to the local health director, the chief administrative officer of each political jurisdiction in which the contamination occurs, all property owners and occupants within or contiguous to the area containing contamination, and all property owners and occupants within or contiguous to the area where the contamination is expected to migrate. Within 60 days of receiving this letter, this office must be provided with proof of receipt of the copy of the letter or of refusal by the addressee to accept delivery of the copy of the letter or with a description of the manner in which the letter was posted. Interested parties may examine the Soil Cleanup Report/ Site Closure Request by contacting this regional office and may submit comments on the site to the regional office at the address or telephone number listed below.

This conditional No Further Action determination will not become valid until the UST Section receives a certified copy of the Notice of Residual Petroleum which is filed with the Register of Deeds and until public notice requirements are completed.

If you have any questions regarding this notice, please contact me at the address or telephone number listed below.

Sincerely,

Wayne Randolph
Regional Supervisor
Fayetteville Regional Office
UST Section, Division of Waste Management, NCDEQ

Attachments: Notice of Residual Petroleum
cc: Cumberland County Health Department
Chan Bryant – Withers & Ravenel *(electronic)*

The Pantry #3031
8215 Cliffdale Road
Fayetteville, Cumberland County, NC

Incident Number: 22150
Priority Ranking: H160D

Background

The Pantry #3031 is currently used as a car wash facility located at the southwest quadrant of the intersection of Cliffdale Road and Rim Road (8215 Cliffdale Road) in Fayetteville, North Carolina. The subject property formerly served as a convenience store with retail petroleum sales. Three 12,000-gallon underground storage tanks (USTs) were previously located on the site property.

In 1998, LaGrange Waterworks detected petroleum compounds in two public water supply wells located in the vicinity of the site. In April 1998, the NCDWM-UST Section directed The Pantry, Inc. to conduct a subsurface investigation of the Pantry #456 property located west of the site across Rim Road. Subsurface assessment activities performed by SPATCO Engineering and Geological Services, P.C. (SPATCO) concluded that the probable contaminant source was the subject property (Pantry #3031) and not Pantry #456.

A Corrective Action Plan (CAP) was completed in February 2000 by SPATCO that recommended air sparging/soil vapor extraction (AS/SVE) be utilized at the site to remediate soil and groundwater contamination. In November 2002, an AS/SVE remediation system began operating at the site property. The system was shut down in December 2004 as result of NC Session Law 2004-124 and an assigned Risk Ranking of H140D.

In response to a Notice of Regulatory Requirements (NORR) dated March 13, 2008, the AS/SVE remediation system will be re-started.

Proposed Scope of Work (July 2008 through October 2008)

1. Conduct system maintenance that will include a full day of maintenance for the each of three (3) consecutive months.
2. Replace system components, such as filters, as necessary to ensure operation of the remediation system. During this quarter, the annual blower compressor service will be performed by a manufacturer-authorized representative to validate the warranties.
3. Pay utility costs (i.e., power and telephone) for the operation of the remediation system.
4. Perform quarterly groundwater monitoring event.
5. Collect air samples from the effluent stream of the SVE system.

WithersRavenel
Our People. Your Success.

November 3, 2015

Certified Mail Receipt No. 7015 1660 0000 78916 3822
Return Receipt Requested

Ruth Pate Bunn
PO Box 717
Clarkesville, GA 30523

Subject: Public Notice (15A NCAC 2L .0409(b))
Notice of Request for Approval for Notice of No Further Action
Pantry #3031
8215 Cliffdale Road
Fayetteville, Cumberland County, North Carolina
Incident # 22150
WithersRavenel Project No. 02070860.00

To Whom It May Concern:

This letter is to inform you that the North Carolina Division of Waste Management has approved a request for No Further Action regarding a release from a petroleum underground storage tank system located in your area. Soil samples collected onsite do not exceed the residential maximum soil contaminant concentrations (MSCCs) as established in Title 15A NCAC 2L .0411. The State rules governing groundwater classifications and standards (15A NCAC 2L .0202), require that you be informed of this information. Groundwater samples collected on site indicates that groundwater contamination meets the cleanup requirements for a low-risk site but exceeds the groundwater quality standards established by Title 15A NCAC 2L .0202.

WithersRavenel, on behalf of the responsible party, The Pantry Inc., is providing this No Further Action determination information to you. The source area of the contamination is located at 8215 Cliffdale Road, Fayetteville, Cumberland County, North Carolina. Please see the attached map showing the location of the source area. The Pantry Inc. has satisfied the UST Section's requirements for the assessment and delineation of the property in accordance with the applicable provisions of the Department's risk based corrective action guidelines. As such, the UST Section classified the risk associated with the release as "Low".

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In addition, comments may be submitted to the regional office. Any written comments concerning this request should be submitted to the following address within thirty (30) days of the date that this letter was addressed:

NCDENR - UST Section
Fayetteville Regional Office
Attn: Mr. James W. Brown
Systel Building
225 Green Street; Suite 714
Fayetteville, North Carolina 28301
(910) 433-3300

Notification of this No Further Action determination letter is also being made by certified mail to Mr. Ted Voorhees, the City of Fayetteville City Manager, Mr. Buck Wilson, the Cumberland County Health Director, and property owners and occupants within or contiguous to the source area of the release or property owners and occupants within or contiguous to the area where the contamination is expected to migrate.

Please contact me at (919) 469-3340 with any questions or comments in this matter.

Sincerely,
WithersRavenel

Matt James, P.G.
Project Manager

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Ar

Ruth Pate Bunn
PO Box 717
Clarkesville, GA 30523

9590 9403 0626 5183 7263 95

2. Article Number *(Transfer from service label)*
15 1660 0000 7916 3822

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* L. D. BUNN JR

C. Date of Delivery 11-13-15

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☒ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Insured Mail
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☒ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

PS Form 3811, April 2015 PSN 7530-02-000-9053 Domestic Return Receipt

WithersRavenel
Our People. Your Success.

November 3, 2015

Certified Mail Receipt No. 7015 1660 0000 7916 3839
Return Receipt Requested

Ted Voorhees
Office of the City Manager
433 Hay Street
Fayetteville, NC 28301

Subject: Public Notice (15A NCAC 2L .0409(b))
Notice of Request for Approval for Notice of No Further Action
Pantry #3031
8215 Cliffdale Road
Fayetteville, Cumberland County, North Carolina
Incident # 22150
WithersRavenel Project No. 02070860.00

To Whom It May Concern:

This letter is to inform you that the North Carolina Division of Waste Management has approved a request for No Further Action regarding a release from a petroleum underground storage tank system located in your area. Soil samples collected onsite do not exceed the residential maximum soil contaminant concentrations (MSCCs) as established in Title 15A NCAC 2L .0411. The State rules governing groundwater classifications and standards (15A NCAC 2L .0202), require that you be informed of this information. Groundwater samples collected on site indicates that groundwater contamination meets the cleanup requirements for a low-risk site but exceeds the groundwater quality standards established by Title 15A NCAC 2L .0202.

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Attn: Mr. James W. Brown
Systel Building
225 Green Street; Suite 714
Fayetteville, North Carolina 28301
(910) 433-3300

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Please contact me at (919) 469-3340 with any questions or comments in this matter.

Sincerely,
WithersRavenel

Matt James, P.G.
Project Manager

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Ar

Ted Voorhees
Office of the City Manager
433 Hay Street
Fayetteville, NC 28301

9590 9403 0626 5183 7264 01

2. Article Number *(Transfer from service label)*
7160 0000 7916 3839

COMPLETE THIS SECTION ON DELIVERY

A. Signature
Jean Diehl ☒ Agent ☐ Addressee

B. Received by *(Printed Name)* Jean Diehl | C. Date of Delivery 11/6/15

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☒ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Insured Mail
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

PS Form 3811, April 2015 PSN 7530-02-000-9053 Domestic Return Receipt

WithersRavenel
Our People. Your Success.

November 3, 2015

Certified Mail Receipt No. 7015 1660 0000 7916 3846
Return Receipt Requested

H&G Properties of Fayetteville, LLC
PO Box 548
Hope Mills, NC 28348

Subject: Public Notice (15A NCAC 2L .0409(b))
Notice of Request for Approval for Notice of No Further Action
Pantry #3031
8215 Cliffdale Road
Fayetteville, Cumberland County, North Carolina
Incident # 22150
WithersRavenel Project No. 02070860.00

To Whom It May Concern:

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Fayetteville Regional Office
Attn: Mr. James W. Brown
Systel Building
225 Green Street; Suite 714
Fayetteville, North Carolina 28301
(910) 433-3300

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Please contact me at (919) 469-3340 with any questions or comments in this matter.

Sincerely,
WithersRavenel

Matt James, P.G.
Project Manager

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

[redacted]

&G Properties of Fayetteville, LLC
O Box 548
ope Mills, NC 28348

9590 9403 0626 5183 7264 18

2. Article Number *(Transfer from service label)*
015 1660 0000 7916 3846

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X [signature] ☒ Agent ☐ Addressee

B. Received by *(Printed Name)* Greg A. [illegible]
C. Date of Delivery 11/9/15

elivery address different from item 1? ☐ Yes
ES, enter delivery address below: ☐ No

3. Service Type
- ☐ Adult Signature
- ☒ Adult Signature Restricted Delivery
- ☑ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Insured Mail
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

PS Form 3811, April 2015 PSN 7530-02-000-9053 Domestic Return Receipt

WithersRavenel
Our People. Your Success.

November 3, 2015

Certified Mail Receipt No. 7015 1660 0000 7916 3853
Return Receipt Requested

Robert K. and Barbara J. Hughes
1201 Radcliffe Drive
Sanford, NC 27330

Subject: Public Notice (15A NCAC 2L .0409(b))
Notice of Request for Approval for Notice of No Further Action
Pantry #3031
8215 Cliffdale Road
Fayetteville, Cumberland County, North Carolina
Incident # 22150
WithersRavenel Project No. 02070860.00

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Fayetteville Regional Office
Attn: Mr. James W. Brown
Systel Building
225 Green Street; Suite 714
Fayetteville, North Carolina 28301
(910) 433-3300

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Please contact me at (919) 469-3340 with any questions or comments in this matter.

Sincerely,
WithersRavenel

Matt James, P.G.
Project Manager

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

Robert K. and Barbara J. Hughes
1201 Radcliffe Drive
Sanford, NC 27330

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Barbara J. Hughes ☐ Agent ☐ Addressee

B. Received by (Printed Name) BARBARA J. Hughes C. Date of Delivery 11/6/18

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

9590 9403 0626 5183 7264 25

2. Article Number (*Transfer from service label*)
015 1660 0000 7916 3853

3. Service Type

- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☐ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Insured Mail
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

PS Form 3811, April 2015 PSN 7530-02-000-9053 Domestic Return Receipt

WithersRavenel
Our People. Your Success.

November 3, 2015

Certified Mail Receipt No. 7015 1660 0000 7916 3860
Return Receipt Requested

McCauley & McDonald Investments, Inc.
PO Box 361
Fayetteville, NC 28302

Subject: Public Notice (15A NCAC 2L .0409(b))
Notice of Request for Approval for Notice of No Further Action
Pantry #3031
8215 Cliffdale Road
Fayetteville, Cumberland County, North Carolina
Incident # 22150
WithersRavenel Project No. 02070860.00

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Fayetteville Regional Office
Attn: Mr. James W. Brown
Systel Building
225 Green Street; Suite 714
Fayetteville, North Carolina 28301
(910) 433-3300

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Please contact me at (919) 469-3340 with any questions or comments in this matter.

Sincerely,
WithersRavenel

Matt James, P.G.
Project Manager

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

cCauley & McDonald Investments, Inc.
O Box 361
ayetteville, NC 28302

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X [signature] ☒ Agent

B. Received by (Printed Name)
HUNTER JERNIGAN 11-16-15

delivery address different from ite
/ES, enter delivery address belc

UNITED WE

9590 9403 0626 5183 7264 32

2. Article Number (Transfer from service label)
7015 1660 0000 7916 3860

3. Service Type

- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☒ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Insured Mail
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- ☐ Signature Confirmation Restricted Delivery

PS Form 3811, April 2015 PSN 7530-02-000-9053 Domestic Return Receipt

WithersRavenel
Our People. Your Success.

November 3, 2015

Certified Mail Receipt No. 7015 1660 0000 7916 3877
Return Receipt Requested

Buck Wilson
Public Health Director – Cumberland County
1235 Ramsey Street
Fayetteville, NC 28311

Subject: Public Notice (15A NCAC 2L .0409(b))
Notice of Request for Approval for Notice of No Further Action
Pantry #3031
8215 Cliffdale Road
Fayetteville, Cumberland County, North Carolina
Incident # 22150
WithersRavenel Project No. 02070860.00

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Fayetteville Regional Office
Attn: Mr. James W. Brown
Systel Building
225 Green Street; Suite 714
Fayetteville, North Carolina 28301
(910) 433-3300

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Please contact me at (919) 469-3340 with any questions or comments in this matter.

Sincerely,
WithersRavenel

Matt James, P.G.
Project Manager

SENDER: *COMPLETE THIS SECTION*

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Buck Wilson
Public Health Director – Cumberland County
1235 Ramsey Street
Fayetteville, NC 28311

9590 9403 0626 5183 7264 49

2. Article Number *(Transfer from service label)*
7015 1660 0000 7916 3877

COMPLETE THIS SECTION ON DELIVERY

A. Signature
x Wanda McNeil ☐ Agent ☒ Addressee

B. Received by *(Printed Name)* Wanda McNeil C. Date of Delivery 11-6-15

D. address different from Item 1? ☐ Yes
nter delivery address below: ☐ No

3. Service Type
- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☐ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Insured Mail
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
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- ☒ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

PS Form 3811, April 2015 PSN 7530-02-000-9053 Domestic Return Receipt

WithersRavenel
Our People. Your Success.

November 3, 2015

Certified Mail Receipt No. 7015 1660 0000 7916 3891
Return Receipt Requested

RIM SC (IDR), LLC
C/O Marvin F. Poer & Company
3520 Piedmont Road
Atlanta, GA 30305

Subject: Public Notice (15A NCAC 2L .0409(b))
Notice of Request for Approval for Notice of No Further Action
Pantry #3031
8215 Cliffdale Road
Fayetteville, Cumberland County, North Carolina
Incident # 22150
WithersRavenel Project No. 02070860.00

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Fayetteville Regional Office
Attn: Mr. James W. Brown
Systel Building
225 Green Street; Suite 714
Fayetteville, North Carolina 28301
(910) 433-3300

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Please contact me at (919) 469-3340 with any questions or comments in this matter.

Sincerely,
WithersRavenel

Matt James, P.G.
Project Manager

SENDER: *COMPLETE THIS SECTION*

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- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1.

RIM SC (IDR), LLC
C/O Marvin F. Poer & Company
3520 Piedmont Road
Atlanta, GA 30305

9590 9403 0626 5183 7264 63

2. Article Number *(Transfer from service label)*
7015 1660 0000 7916 3891

COMPLETE THIS SECTION ON DELIVERY

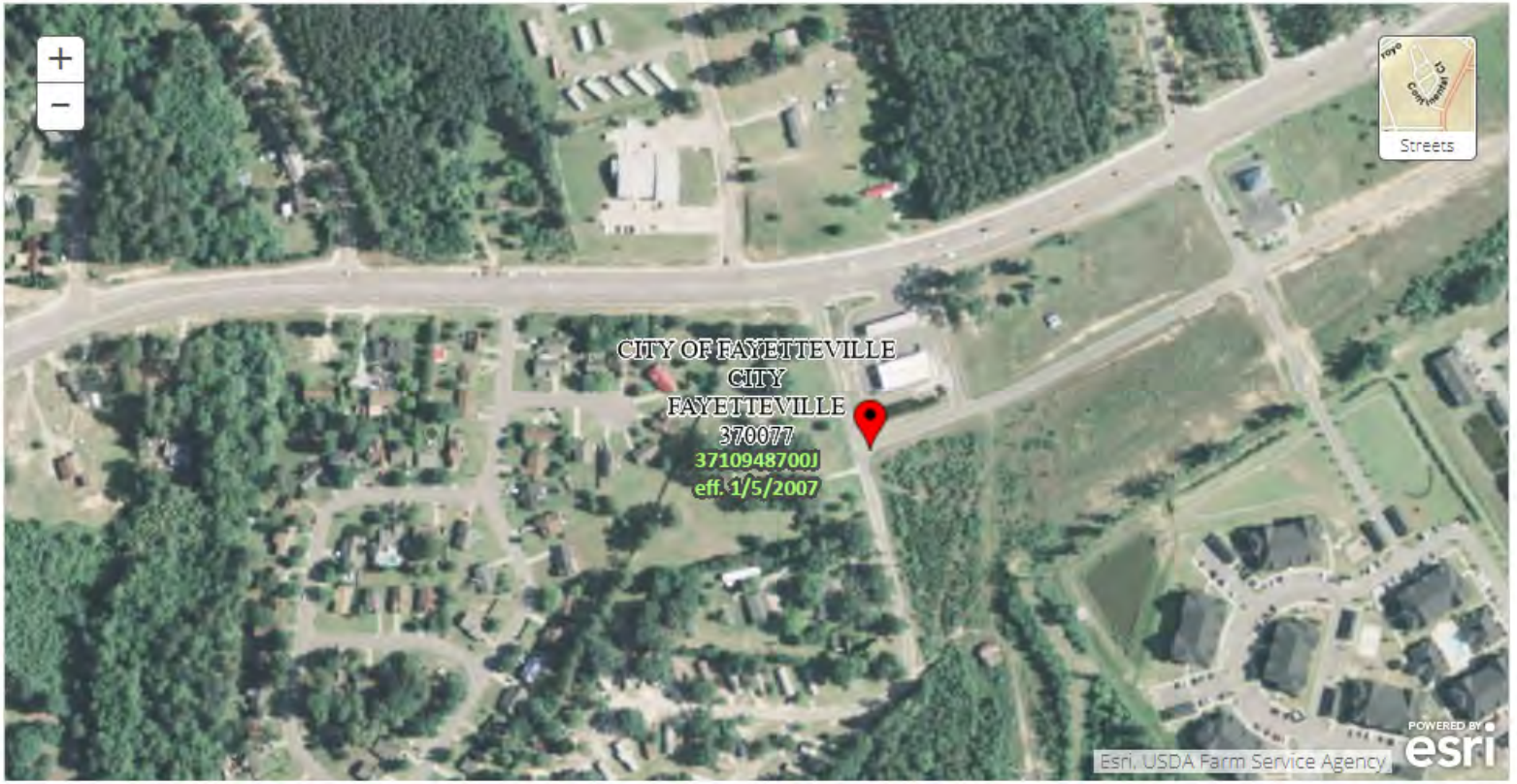
A. Signature
X
☐ Agent
☐ Addressee

B. Received by *(Printed Name)* Suzy Santoro
C. Date of Delivery 11-9-15

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☐ Certified Mail®
- ☒ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Insured Mail
- ☐ Insured Mail Restricted Delivery (over $500)
- ☐ Priority Mail Express®
- ☒ Registered Mail™
- ☒ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

PS Form 3811, April 2015 PSN 7530-02-000-9053 Domestic Return Receipt



PIN
- Approximate location based on user input and does not represent an authoritative property location

MAP PANELS
- Selected FloodMap Boundary
- Digital Data Available
- No Digital Data Available
- Unmapped

OTHER AREAS
- NO SCREEN — Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*
- Otherwise Protected Area
- Coastal Barrier Resource System Area

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth
- Regulatory Floodway *Zone AE, AO, AH, VE, AR*

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER FEATURES
- 20.2 / 17.5 — Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

APPENDIX IV

HISTORICAL DOCUMENTS

FILED ELECTRONICALLY
CUMBERLAND COUNTY NC
J. LEE WARREN, JR.

FILED	Jan 14, 2021
AT	03:57:11 PM
BOOK	10994
START PAGE	0079
END PAGE	0080
INSTRUMENT #	02050
RECORDING	$26.00
EXCISE TAX	$620.00

Prepared By and Return To: Attorney Steve Bunce File #50360-20

This instrument prepared by Attorney Steve Bunce, a licensed North Carolina Attorney delinquent taxes, if any, to be paid by closing attorney to the County upon disbursement of closing proceeds

Revenue Stamps $620.00

Tax Pin Number: a portion of 9487-45-3559

NORTH CAROLINA

GENERAL WARRANTY DEED

CUMBERLAND COUNTY

THIS DEED made and entered into this 11th day of January, 2021, by and between **Ethel E. Pate, unmarried and Worth Alexander Pate and wife, Vera Pate**, hereinafter called "Grantor," whose mailing address is 6381 Barbour Lake Road, Fayetteville, NC 28306 and **East Point Homes, LLC, a North Carolina Limited Liability Company** , whose mailing address is 166 Center Street, Jacksonville, NC 28546, hereinafter called "Grantee".

The designation Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include the singular, plural, masculine, feminine, or neuter as required by context.

W I T N E S S E T H:

The Grantor, for a valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto the Grantee in fee simple (with the exceptions hereinafter stated, if any), all the certain tract or parcel of land situated in the City of Fayetteville in Seventy-First Township, Cumberland County, North Carolina, and more particularly described as follows:

BEING all of Lot 1, containing 4.10 AC as shown on a plat entitled "RECOMBINATION SURVEY OF THE ANNIE GUNTER PATE PARCELS" recorded in Plat Book 145, Page 191 Cumberland County Registry and being a portion of the property conveyed to Annie Gunter Pate by deed recorded in Book 2296, Page 129. Annie Gunter Pate died testate on March 31, 1989 (see Estate File 89-E-847) and bequeathed the property to her daughter Ethel E. Pate and her Grandson Worth Alexander Pate.

This property does not include the primary residence of the Grantor(s).

Submitted electronically by "Attorney Steve Bunce"
in compliance with North Carolina statutes governing recordable documents
and the terms of the submitter agreement with the Cumberland County Register of Deeds.

TO HAVE AND TO HOLD the aforesaid tract or parcel of land and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

And the Grantor covenants with the Grantee, that Grantor is seized of the premises in fee simple, has the right to convey the same in fee simple; that title is marketable and free and clear of all encumbrances, and that Grantor will warrant and defend the title against the lawful claims of all persons whomsoever except for the exceptions hereinafter stated, if any.

Title to the property hereinabove described is subject to the following exceptions:

a. County and/or Municipal Zoning Ordinances, Rules and Regulations.
b. Restrictive Covenants, Easements and Rights of way of record.
c. County Ad Valorem Taxes.

IN WITNESS WHEREOF, the Grantors have hereunto set their hands, the day and year first above written.

Ethel E. Pate by Worth A. Pate as Attorney in Fact

Worth Alexander Pate

Vera Pate

STATE OF NORTH CAROLINA

COUNTY OF CUMBERLAND

I, Donald S. bunce, a Notary Public of said County and State, do hereby certify that Worth A. Pate, attorney in fact for Ethel E. Pate personally appeared before me this day, and being by me duly sworn, says that he executed the foregoing and annexed instrument for and in behalf of Ethel E. Pate and that his authority to execute and acknowledge said instrument is contained in an instrument recorded in the Cumberland County Register of Deeds, and that this instrument was executed under and by virtue of the authority given by said instrument granting his power of attorney; that the said Worth A. Pate acknowledged the due execution of the foregoing and annexed instrument for the purposes therein expressed for and in behalf of the said Ethel E. Pate.

FURTHER, I do hereby certify that Worth Alexander Pate and Vera Pate also personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

WITNESS, my hand and seal this the 12th day of January, 2021.

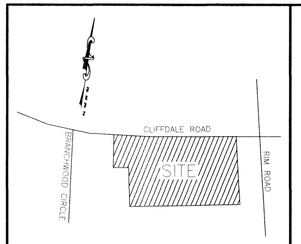
DONALD S. BUNCE
Notary Public
Cumberland County N.C.

Notary Public

DONALD S. BUNCE
Notary Public
Cumberland County, N.C.

My commission expires: 11/29/2022

197



VICINITY MAP
NOT TO SCALE

I, W. LARRY KING, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DESCRIBED IN (PLAT) / DEED BOOK 38 PAGE 75); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED AS DRAWN FROM INFORMATION FOUND IN PLAT / DEED BOOK AS , PAGE SHOWN ; THAT THE RATIO OF PRECISION AS CALCULATED IS 1:10,000; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS, MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL, THIS 22nd DAY OF August, A.D., 2006.

SURVEYOR
(W. LARRY KING, P.L.S.)
REGISTRATION NUMBER L-1339

NOTE:
THIS SURVEY IS FOR SUBDIVISION PURPOSES ONLY. (BOUNDARY INFORMATION ONLY.)

I, W. LARRY KING, HEREBY CERTIFY THAT THE CHECKED ITEM(S) BELOW APPLY TO THIS MAP.

(A) THAT THE SURVEY CREATES A SUBDIVISION OF LAND WITHIN THE AREA OF A COUNTY OR MUNICIPALITY THAT HAS AN ORDINANCE THAT REGULATES PARCELS OF LAND;

B. THAT THE SURVEY IS LOCATED IN SUCH PORTION OF A COUNTY OR MUNICIPALITY THAT IS UNREGULATED AS TO AN ORDINANCE THAT REGULATES PARCELS OF LAND;

C. THAT THE SURVEY IS OF AN EXISTING PARCEL OR PARCELS OF LAND;

D. THAT THE SURVEY IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF SUBDIVISION;

E. THAT THE INFORMATION AVAILABLE TO THE SURVEYOR IS SUCH THAT THE SURVEYOR IS UNABLE TO MAKE A DETERMINATION TO THE BEST OF HIS OR HER PROFESSIONAL ABILITY AS TO PROVISIONS CONTAINED IN (A) THROUGH (D) ABOVE.

THE UNDERSIGNED HEREBY ACKNOWLEDGE THAT THE LAND SHOWN ON THIS PLAT IS WITHIN THE SUBDIVISION REGULATION JURISDICTION OF CUMBERLAND COUNTY AND THAT THIS PLAT IS OUR FREE ACT AND DEED. I DO HEREBY DEDICATE FOR PUBLIC USE OF ALL RIGHTS-OF-WAY AND EASEMENTS AS SHOWN ON THIS MAP. THE UNDERSIGNED ALSO AGREED TO A ZERO LOT LINE ON ALL INTERIOR LOT LINES.

Worth Alexander Pate
PROPERTY OWNER

STATE OF NORTH CAROLINA
COUNTY OF CUMBERLAND

I, LORI SIMPSON EPLER, A NOTARY OF THE COUNTY AND STATE, AFORESAID, CERTIFY THAT, Worth Alexander Pate, SUBJECT PROPERTY OWNER PERSONALLY APPEARED BEFORE ME THIS DAY AND ACKNOWLEDGED THE EXECUTION OF THE FOREGOING INSTRUMENT. WITNESS MY HAND AND OFFICIAL STAMP OR SEAL. THIS 22nd DAY OF August, 2006.

Lori Simpson Epler
NOTARY PUBLIC

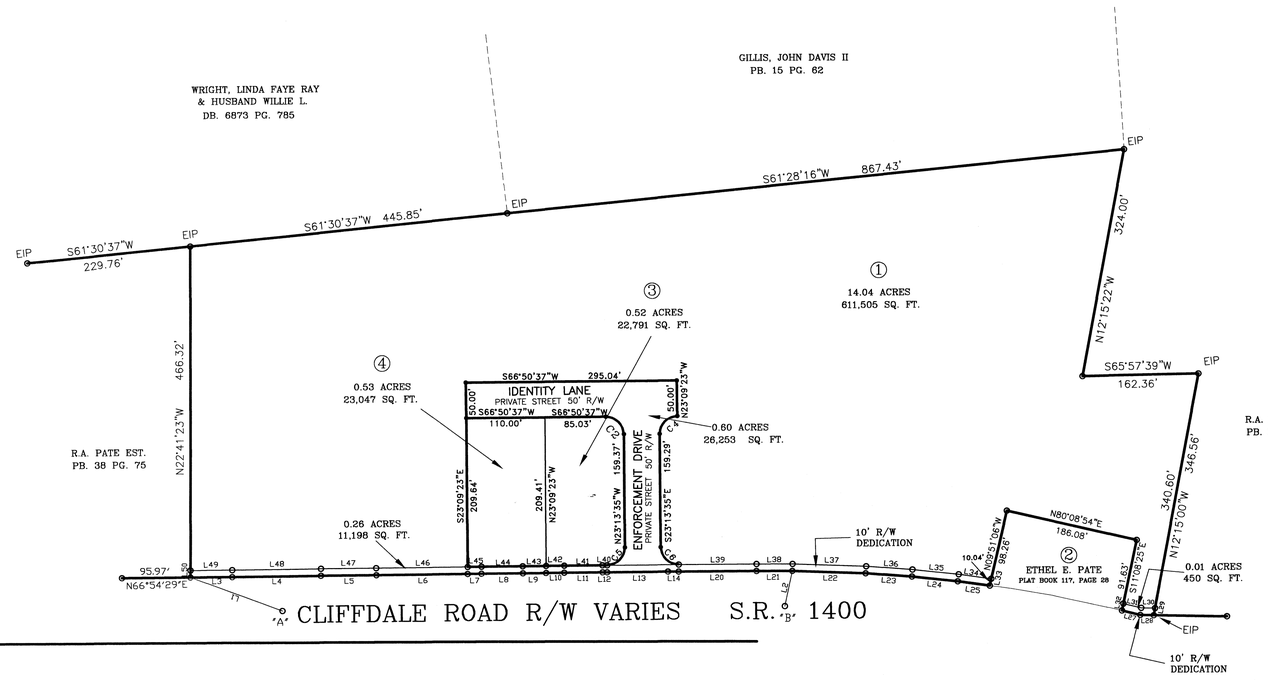
11-14-09
MY COMMISSION EXPIRES

Notary Public
Lori Simpson Epler
Cumberland County
North Carolina

LEGEND

- ○ DENOTES REBAR OR BREAK IN LINE
- ▣ CONTROL CORNER
- □ CONCRETE MONUMENT
- EIP EXISTING IRON PIPE
- ER EXISTING REBAR
- -E- ELECTRIC LINE
- -G- GAS LINE
- R/W RIGHT OF WAY
- C/L CENTERLINE
- Ⓢ SANITARY SEWER MANHOLE

NOTE - IRON REBAR SET AT ALL PROPERTY CORNERS UNLESS OTHERWISE NOTED.



LINE TABLE		
LINE	LENGTH	BEARING
L1	136.85	N87°37'18"E
L2	50.74	S10°36'27"E
L3	58.25	S66°54'29"W
L4	124.13	N66°45'20"E
L5	77.11	N66°45'07"E
L6	127.94	N66°50'16"E
L7	19.45	N66°50'16"E
L8	57.97	N66°37'09"E
L9	32.58	N66°50'37"E
L10	25.12	N66°50'37"E
L11	53.65	N66°48'08"E
L12	6.50	N66°46'25"E
L13	85.01	N66°46'25"E
L14	14.92	N66°56'35"E
L20	109.14	N66°56'35"E
L21	50.33	N67°26'04"E
L22	102.72	N69°08'02"E
L23	64.55	N71°30'28"E
L24	64.55	N73°14'57"E
L25	44.92	N75°17'25"E
L27	26.38	N80°59'49"E
L28	18.77	N68°12'27"E
L29	10.14	N12°15'00"W
L30	19.33	N68°12'27"E
L31	25.63	N80°59'49"E
L32	10.01	N11°08'25"W
L33	10.04	N09°51'06"W
L34	45.95	N75°17'25"E
L35	64.88	N73°14'57"E
L36	64.91	N71°30'28"E
L37	103.07	N69°08'02"E
L38	50.52	N67°26'04"E
L39	109.21	N66°56'35"E
L40	6.49	N66°48'08"E
L41	53.64	N66°48'08"E
L42	25.12	N66°50'37"E
L43	32.60	N66°50'37"E
L44	57.95	N66°37'09"E
L45	19.15	N66°50'16"E
L46	128.24	N66°50'16"E
L47	77.12	N66°45'07"E
L48	124.10	N66°45'19"E
L49	58.18	S66°54'29"W
L50	10.00	N22°41'23"W

CONTROL		
"A"	S66°55'52"W 703.13'	"B"

CURVE TABLE				
CURVE	LENGTH	RADIUS	CD DIR	CHORD
C2	39.24	25.00	S68°11'29"E	35.33
C4	39.24	25.00	S21°48'31"W	35.38
C5	39.28	25.00	S21°47'16"W	35.36
C6	39.20	25.00	N68°08'30"W	35.30

APPROVED BY THE CITY OF FAYETTEVILLE
ON THE 23 DAY OF August
Marsha Bryant
SIGNATURE DATE
Planner 8-23-2006
TITLE

Shane Parsons
8-23-06

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

041498
RECORDED
8-24-2006 AM 11:10:59
J. LEE WARREN JR.
REGISTER OF DEEDS
CUMBERLAND CO., N.C.
BOOK 117 PAGE 197

THE PURPOSE OF THIS RECORDATION IS TO DEDICATE RIGHT OF WAY (PREVIOUSELY RECORDED PB. 117 PG. 157)

ZERO LOT LINE

REVISIONS	A REVISION OF SUBDIVISION OF ETHEL E. PATE PROPERTY SECTION TWO (LOT 3, R.A. PATE EST.)	LARRY KING & ASSOCIATES, R.L.S., P.A. P.O. BOX 53787 1333 MORGANTON ROAD, SUITE 201 FAYETTEVILLE, N. C. 28305 TELEPHONE: (910) 483-4300 FAX: (910) 483-4052
8/9/06	TOWNSHIP: ~~FAYETTEVILLE~~ Cross Creek COUNTY: CUMBERLAND	
	STATE: NORTH CAROLINA	DATE: 07/21/06 SURVEYED BY: LKA FIELD BOOK:
	PROPERTY OF: R.A. PATE EST.	SCALE: 1"=100' DRAWN BY: LDJ FILE REF.
		CHECKED & CLOSURE BY: LARRY KING DRAWING NO.

Bk 117 Pg 197

K:\dsk\proj\cliffdale\FINAL PLAT.dwg, 8/21/2006 11:10:23 AM, sbank, 1:100

NORTH CAROLINA

CUMBERLAND COUNTY

THIS DEED, made this 23rd day of July, 1971, by and between ETHEL E. PATE, Single; RUTH PATE BUNN and husband, LIONEL D. BUNN, JR.; PRIOR P. PATE and wife, ESTHER S. PATE; FRANCES PATE PRINCE, Unmarried; ALEXANDER G. PATE and his wife, LELIA PATE; and OLLIE PATE TYNDALL and husband, EARTHIE D. TYNDALL, parties of the first part, hereinafter called "GRANTORS"; and ANNIE GUNTER PATE, Widow, party of the second part, hereinafter called "GRANTEE";

W I T N E S S E T H:

THAT WHEREAS, R. Alexander Pate, late of the County of Cumberland and State of North Carolina, died intestate in said County and State on the 4th day of October, 1945, and was survived by his Widow, Annie Gunter Pate; and six children, namely, Ollie Pate Tyndall; Ethel E. Pate; Ruth Pate Bunn; Prior P. Pate; Frances Pate Prince and Alexander G. Pate, all being either Grantors or Grantee in this Deed;

AND WHEREAS, the said Ollie Pate Tyndall, has intermarried with Earthie D. Tyndall and resides in the State of North Carolina; Ethel E. Pate is single and resides in the State of Virginia; Ruth Pate Bunn is intermarried with Lionel D. Bunn, Jr. and resides in Wake County, State of North Carolina; Prior P. Pate is intermarried with Esther S. Pate, and resides in Cumberland County, North Carolina; Frances Pate Prince is unmarried and resides in the State of Rhode Island; Alexander G. Pate is intermarried with Lelia Pate and resides in the State of Texas;

AND WHEREAS, the said R. Alexander Pate was the owner at his death of certain tracts and parcels of land in Seventy First Township, Cumberland County, North Carolina, lying and situate North and South of the Chicken Road (now called Cliffdale Road) and designated on the State Highway Map as State Rural Paved Road No. 1400 leading from Cliffdale to U. S. 401 Highway, West of Fayetteville, North Carolina, containing approximately 127.75 acres, more or less per deeds recorded in Book 105 on Page 317; Book 142 on Page 234; Book 165 on Page 452 and Book 316 on Page 44 in the Office of the Register of Deeds of Cumberland County, North Carolina;

AND WHEREAS, all of the heirs have agreed that the Widow, Annie Gunter Pate, shall receive an equal or one-seventh (1/7th) undivided interest in and to said lands in lieu of dower as provided by the Intestacy Laws of the State of North Carolina and that all the children receive an equal share, or a one-seventh (1/7th) undivided interest by a Deed duly executed by all of the heirs;

AND WHEREAS, all the heirs except Frances Pate Prince, together with the Widow, met on the premises in November, 1970, and with the Surveyor, E. E. Cain, made a division of all of the lands in seven (7) tracts of 18.25 acres, more or less, each, subject to complete survey by the Surveyor; and whereas, a drawing by lots was held and Lot No. 1 was allotted to Ollie Pate Tyndall; Lot No. 2 to Ethel E. Pate; Lot No. 3 to Annie Gunter Pate, the Widow, and this includes the homeplace; Lot No. 4 to Ruth Pate Bunn; Lot No. 5 to Prior P. Pate; Lot No. 6 to Frances Pate Prince; and Lot No. 7 to Alexander G. Pate;

AND WHEREAS, after full and complete survey, it was determined that Lot No. 4 did not contain a full 18.25 acres and that it would be necessary for Ruth Pate Bunn to settle or agree to a dividing line, by and between her and the heirs of J. H. McIlwinnen, who own the land North and East of said property as described in Book 183, on Page 185 of the Cumberland County Registry; and that the said Ruth Pate Bunn agreed to accept this lot with less acreage; and whereas, the Surveyor has established the lines of Lot No. 4, to the satisfaction of Ruth Pate Bunn and placed iron stakes on the corners of all lots;

NOW, THEREFORE, the above named Grantors, for and in consideration of the sum of One Dollar ($1.00), and other good and valuable considerations, the receipt of which is hereby acknowledged, havegiven, granted, bargained, sold and conveyed, and by these presents, do give, grant, bargain, sell and convey unto ANNIE GUNTER PATE, Widow, her heirs and assigns, the following tract or parcel of land located in Seventy First Township, Cumberland County, North Carolina, and more particularly described as follows:

BEGINNING at an old lightwood stake, the Southwest corner of the 88 acre tract conveyed to R. Alexander Pate in Book 105 on Page 317 of the Cumberland County Registry (See Map Book 15 on Page 62) and runs thence the Western line of said tract North 12 degrees 15 minutes West 324 feet to a new corner in the Eastern line of a 2-1/2 acre tract conveyed to R. Alexander Pate in Book 142 on Page 234 of the Cumberland County Registry (said corner being located in the Western line of the 88 acre tract and also being a corner of Lot No. 2 allotted to Ethel E. Pate) and runs thence the line of Lot No. 2 South 66 degrees 01 minutes West 162.36 feet to another corner of Lot No. 2 in the Western line of the 2-1/2 acre tract; thence the dividing line

of Lots 2 and 3 and the Western line of the 2-1/2 acre tract North 12 degrees 15 minutes West 346.56 feet to a stake in the Chicken Road; now State Road 1400; thence an old line North 66 degrees 01 minutes East 162.36 feet to a stake, in the road; thence the Western line of the 88 acre tract North 12 degrees 15 minutes West 4.44 feet to a stake in the road; thence the center of Chicken Road (also known as Cliffdale Road and State Road 1400) North 67 degrees 05 minutes East 1182.51 feet to a stake in the center of said road; a corner of the Southern part of Lot No. 4 allotted to Ruth P. Bunn; thence the dividing line of Lots 3 and 4 South 22 degrees 55 minutes East 531.13 feet to a stake in the Southern line of the 88 acre tract; being the Southeast corner of Lot No. 3 and the Southwest corner of Lot No. 4; thence the old line South 61 degrees 17 minutes West 1314.32 feet, crossing a concrete monument at the Northeast corner of the plat described in Plat Book 15 on Page 62, to the point of Beginning, containing 18.25 acres, more or less, and being a portion of the 88 acre tract in Book 105 on Page 117, lying South of the Chicken Road and being the Northern portion of a 2-1/2 acre tract described in Book 142 on Page 234 and conveyed to R. Alexander Pate, deceased.

The above description per survey and map of E. E. Cain, Registered Surveyor, in June, 1971. Said map recorded in Plat Book 38 on Page 76 of even date herewith.
The above being Lot No. 3 assigned by lot to Annie Gunter Pate, Widow of R. Alexander Pate, deceased, in lieu of her dower rights.

TO HAVE AND TO HOLD the above described tract of land, with all the appurtenances thereunto belonging, or in anywise appertaining, unto the Grantee, her heirs and assigns forever.

AND the Grantors covenant that they are seized of undivided interest in and to the above described land in fee, and that they have the right to convey their undivided interest to same in fee simple; that said land is free from all encumbrances and that they will warrant and defend the title to the same against the lawful claims of all persons whomsoever.

WHEN reference is made to the Grantor or Grantee, the singular shall include the plural, and the masculine shall include the feminine or the neuter.

IN WITNESS WHEREOF, the Grantors have hereunto set their hands and seals, the day and year first above written.

Ethel E. Pate (SEAL)
ETHEL E. PATE, Single

Ruth P. Bunn (SEAL)
RUTH PATE BUNN

LIONEL D. BUNN, JR.

BY: Ruth P. Bunn (SEAL)
RUTH P. BUNN
ATTORNEY IN FACT

Prior P. Pate (SEAL)
PRIOR P. PATE

Esther S. Pate (SEAL)
ESTHER S. PATE

Frances Pate Prince (SEAL)
FRANCES PATE PRINCE, Unmarried

Alexander G. Pate (SEAL)
ALEXANDER G. PATE

Lelia Pate (SEAL)
LELIA PATE

Ollie Pate Tyndall (SEAL)
OLLIE PATE TYNDALL

Earthie D. Tyndall (SEAL)
EARTHIE D. TYNDALL

STATE OF ~~New~~ North Carolina
COUNTY OF Cumberland

I, Sandra E. Cain, Notary Public, do hereby certify that ETHEL E. PATE, Single, personally appeared before me this day and acknowledged the due execution of the foregoing Deed of Conveyance.

WITNESS my hand and Notarial Seal, this 23rd day of December, 1971.

Sandra E. Cain
NOTARY PUBLIC

MY COMMISSION EXPIRES:
Sept. 29, 1974

NORTH CAROLINA
Cumberland COUNTY

I, JoAnn Heath, Notary Public, do hereby certify that RUTH PATE BUNN, individually, personally appeared before me this day and acknowledged the due execution of the foregoing Deed of Conveyance;

AND I do further certify that RUTH P. BUNN, Attorney in Fact for LIONEL D. BUNN, JR., personally appeared before me this day, and being by me duly sworn, says that she executed the foregoing and annexed instrument for and in behalf of LIONEL D. BUNN, JR., and that her authority to execute and acknowledge said instrument is contained in an instrument duly executed, acknowledged and recorded in the Office of Register of Deeds of Cumberland County, North Carolina on the 28th day of December, 1971, in Book 2296, on Page 69, of said Registry, and that this instrument was executed under and by virtue of the authority given by said instrument granting her power of attorney; that the said RUTH P. BUNN acknowledged the due execution of the foregoing and annexed instrument for the purposes therein expressed for and in behalf of the

said LIONEL D. BUNN, JR.

WITNESS my hand and Notarial Seal, this 30th day of July, 1971.

Jo Ann Heath
NOTARY PUBLIC

MY COMMISSION EXPIRES:
3-11-76

NORTH CAROLINA

CUMBERLAND COUNTY

I, Jo Ann Heath, Notary Public, do hereby certify that PRIOR P. PATE and wife, ESTHER S. PATE, personally appeared before me this day and acknowledged the due execution of the foregoing Deed of Conveyance.

WITNESS my hand and Notarial Seal, this 29th day of July, 1971.

Jo Ann Heath
NOTARY PUBLIC

MY COMMISSION EXPIRES:
3-11-76

STATE OF RHODE ISLAND

COUNTY OF WASHINGTON

I, Charles J. Moore, Notary Public, do hereby certify that FRANCES PATE PRINCE, Unmarried, personally appeared before me this day and acknowledged the due execution of the foregoing Deed of Conveyance.

WITNESS my hand and Notarial Seal, this 2ND day of Nov., 1971.

Charles J. Moore
NOTARY PUBLIC

MY COMMISSION EXPIRES:
Comm. Expires June 30, 1976

STATE OF TEXAS

COUNTY OF Dallas

I, Bettye F. Moeller, Notary Public, do hereby certify that ALEXANDER G. PATE and wife, LELIA PATE, personally appeared before me this day and acknowledged the due execution of the foregoing Deed of Conveyance.

WITNESS my hand and Notarial Seal, this 8th day of October, 1971.

Bettye F. Moeller
NOTARY PUBLIC

MY COMMISSION EXPIRES:
June 1, 1973

NORTH CAROLINA
COUNTY OF Cumberland

I, Jo Ann Heath, Notary Public, do hereby certify that OLLIE PATE TYNDALL and husband, EARTHIE D. TYNDALL, personally appeared before me this day and acknowledged the due execution of the foregoing Deed of Conveyance.

WITNESS my hand and Notarial Seal, this 29th day of July, 1971.

Jo Ann Heath
NOTARY PUBLIC

MY COMMISSION EXPIRES:
3-11-76

North Carolina, Cumberland County

The foregoing or annexed certificate of Sandra L. Cox, Jo Ann Heath, Charles J. Moore, Bettye T. Mueller Notary Public/Notaries Public is/are certified to be correct.

This instrument was presented for registration and recorded in this Office at Book 2296 Page 129.

This 29 day of December, 1971 at 10:25 O'clock A.M.

Marion Clark
Register of Deeds

By Juanita L. Wilburn - asst
Deputy Register of Deeds

No Revenue

Property Summary

Tax Year: 2022 - Value subject to change, property assessment under review

REID	9487451364000	**PIN**	9487-45-1364	**Property Ov**
Location Address	5133 IDENTITY LN	**Property Description**	ANNIE GUNTER PATE PARCELS LO1 PL00145-0191	**Owner's Ma Address**

Administrative Data	
Plat Book & Page	00145-0191
Old Map #	
Market Area	8029
Township	NONE
Planning Jurisdiction	COUNTY
City	FAYETTEVILLE
Fire District	
Spec District	
Land Class	C101-COMMERC
History REID 1	
History REID 2	
Acreage	4.1
Permit Date	
Permit #	

Transfer Information	
Deed Date	1/14/2021
Deed Book	010994
Deed Page	00079
Revenue Stamps	$620
Package Sale Date	
Package Sale Price	
Land Sale Date	
Land Sale Price	

Improvement Summary	
Total Buildings	0
Total Units	0
Total Living Area	0
Total Gross Leasable Area	0

Property V	
Total Appra	
Total Appra	
Total Appra Value	
Total Appra	
Other Exem	
Exemption	
Use Value D	
Historic Val	
Total Defer	
Total Taxab	

Photograph

Building Summary

Misc Improvements Summary

Card #	Unit Quantity	Measure	Type	Base Price	Eff Year	Phys Depr (% Bad)	Econ Depr (% Bad)	Funct Depr (% Bad)
No Data								
Total Misc Improvements Value Assessed:								

Land Summary

Land Class: C101-COMMERC Deeded Acres: 4.1 Calculated Ac

Zoning	Soil Class	Description	Size	Rate	Size Adj. Factor
MR5CZ		1096-COMM-SQ-FOOTAG	178596.00 SQUARE FOOT PRICED	$0	
Total Land Value Assessed:					

Ownership History

	Owner Name	Deed Type	% Ownership	Stamps	Sale Price
Current	EAST POINT HOMES, LLC	WD-WARRANTY DEED	100	620	$310,0

	Owner Name	Deed Type	% Ownership	Stamps	Sale Price
1 Back	PATE, ETHEL E/ PATE, WORTH ALEXANDER	WD-WARRANTY DEED	100	0	

Notes Summary

Building Card	Date	Line
No Data		

The NETR Environmental Lien and AUL Search Report

5134 IDENTITY LANE
FAYETTEVILLE, NORTH CAROLINA

Tuesday, November 23, 2021

Project Number: L21-01388

2055 East Rio Salado Parkway
Tempe, Arizona 85281

Telephone: 480-967-6752
Fax: 480-966-9422

ENVIRONMENTAL LIEN AND AUL REPORT

The NETR Environmental LienSearch Report provides results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers, following established procedures, uses client supplied property information to:

- search for parcel information and/or legal description;
- search for ownership information;
- research official land title documents recorded at jurisdictional agencies such as recorders' office, registries of deed, county clerks' offices, etc.;
- access a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument(s) (title, parties involved and description); and
- provide a copy of the deed or cite documents reviewed;

Thank you for your business
Please contact NETR at 480-967-6752
with any questions or comments

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ENVIRONMENTAL LIEN AND AUL REPORT

The NETR Environmental Lien Search Report is intended to assist in the search for environmental liens filed in land title records.

TARGET PROPERTY INFORMATION

ADDRESS

5134 Identity Lane
Fayetteville, North Carolina

RESEARCH SOURCE

Source: Cumberland County Assessor
Cumberland County Register of Deeds

DEED INFORMATION

Type of Instrument: Deed

Grantor: Ethel E. Pate, single; Ruth Pate Bunn and husband Lionel D. Bunn, Jr.; Prior P. Pate and wife Esther S. Pate; Frances Pate Prince unmarried; Alexander G. Pate and wife Lelia Pate and Ollie Pate Tyndall and husband Earthie D. Tyndall

Grantee: Annie Gunter Pate

Deed Dated: 07/23/1971
Deed Recorded: 12/29/1971
Book: 2296
Page: 129

Comments: The subject property is currently assessed to Ethel E. Pate and Worth Alexander Pate. They acquired title through the Estate of Annie Gunter Pate, Estate Number 89 E 847 in Cumberland County, North Carolina.

LEGAL DESCRIPTION

Lot 3, being 7.52 acres, more or less, according to the map or plat thereof, as filed of record in a plat or plan entitled "Plat Prepared for The Villages at Parcstone, LLC," Book 136, Page 73, also commonly known as 5133 Identity Lane, Cumberland County, State of North Carolina

Assessor's Parcel Number(s): 9487-45-3559

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AULs: Found ☐ Not Found ☒

NORTH CAROLINA

CUMBERLAND COUNTY

THIS DEED, made this 23rd day of July, 1971, by and between ETHEL E. PATE, Single; RUTH PATE BUNN and husband, LIONEL D. BUNN, JR.; PRIOR P. PATE and wife, ESTHER S. PATE; FRANCES PATE PRINCE, Unmarried; ALEXANDER G. PATE and his wife, LELIA PATE; and OLLIE PATE TYNDALL and husband, EARTHIE D. TYNDALL, parties of the first part, hereinafter called "GRANTORS"; and ANNIE GUNTER PATE, Widow, party of the second part, hereinafter called "GRANTEE";

W I T N E S S E T H:

THAT WHEREAS, R. Alexander Pate, late of the County of Cumberland and State of North Carolina, died intestate in said County and State on the 4th day of October, 1945, and was survived by his Widow, Annie Gunter Pate; and six children, namely, Ollie Pate Tyndall; Ethel E. Pate; Ruth Pate Bunn; Prior P. Pate; Frances Pate Prince and Alexander G. Pate, all being either Grantors or Grantee in this Deed;

AND WHEREAS, the said Ollie Pate Tyndall, has intermarried with Earthie D. Tyndall and resides in the State of North Carolina; Ethel E. Pate is single and resides in the State of Virginia; Ruth Pate Bunn is intermarried with Lionel D. Bunn, Jr. and resides in Wake County, State of North Carolina; Prior P. Pate is intermarried with Esther S. Pate, and resides in Cumberland County, North Carolina; Frances Pate Prince is unmarried and resides in the State of Rhode Island; Alexander G. Pate is intermarried with Lelia Pate and resides in the State of Texas;

AND WHEREAS, the said R. Alexander Pate was the owner at his death of certain tracts and parcels of land in Seventy First Township, Cumberland County, North Carolina, lying and situate North and South of the Chicken Road (now called Cliffdale Road) and designated on the State Highway Map as State Rural Paved Road No. 1400 leading from Cliffdale to U. S. 401 Highway, West of Fayetteville, North Carolina, containing approximately 127.75 acres, more or less per deeds recorded in Book 105 on Page 317; Book 142 on Page 234; Book 165 on Page 452 and Book 316 on Page 44 in the Office of the Register of Deeds of Cumberland County, North Carolina;

AND WHEREAS, all of the heirs have agreed that the Widow, Annie Gunter Pate, shall receive an equal or one-seventh (1/7th) undivided interest in and to said lands in lieu of dower as provided by the Intestacy Laws of the State of North Carolina and that all the children receive an equal share, or a one-seventh (1/7th) undivided interest by a Deed duly executed by all of the heirs;

AND WHEREAS, all the heirs except Frances Pate Prince, together with the Widow, met on the premises in November, 1970, and with the Surveyor, E. E. Cain, made a division of all of the lands in seven (7) tracts of 18.25 acres, more or less, each, subject to complete survey by the Surveyor; and whereas, a drawing by lots was held and Lot No. 1 was allotted to Ollie Pate Tyndall; Lot No. 2 to Ethel E. Pate; Lot No. 3 to Annie Gunter Pate, the Widow, and this includes the homeplace; Lot No. 4 to Ruth Pate Bunn; Lot No. 5 to Prior P. Pate; Lot No. 6 to Frances Pate Prince; and Lot No. 7 to Alexander G. Pate;

AND WHEREAS, after full and complete survey, it was determined that Lot No. 4 did not contain a full 18.25 acres and that it would be necessary for Ruth Pate Bunn to settle or agree to a dividing line, by and between her and the heirs of J. H. McIlwinnen, who own the land North and East of said property as described in Book 183, on Page 185 of the Cumberland County Registry; and that the said Ruth Pate Bunn agreed to accept this lot with less acreage; and whereas, the Surveyor has established the lines of Lot No. 4, to the satisfaction of Ruth Pate Bunn and placed iron stakes on the corners of all lots;

NOW, THEREFORE, the above named Grantors, for and in consideration of the sum of One Dollar ($1.00), and other good and valuable considerations, the receipt of which is hereby acknowledged, have given, granted, bargained, sold and conveyed, and by these presents, do give, grant, bargain, sell and convey unto ANNIE GUNTER PATE, Widow, her heirs and assigns, the following tract or parcel of land located in Seventy First Township, Cumberland County, North Carolina, and more particularly described as follows:

BEGINNING at an old lightwood stake, the Southwest corner of the 88 acre tract conveyed to R. Alexander Pate in Book 105 on Page 317 of the Cumberland County Registry (See Map Book 15 on Page 62) and runs thence the Western line of said tract North 12 degrees 15 minutes West 324 feet to a new corner in the Eastern line of a 2-1/2 acre tract conveyed to R. Alexander Pate in Book 142 on Page 234 of the Cumberland County Registry (said corner being located in the Western line of the 88 acre tract and also being a corner of Lot No. 2 allotted to Ethel E. Pate) and runs thence the line of Lot No. 2 South 66 degrees 01 minutes West 162.36 feet to another corner of Lot No. 2 in the Western line of the 2-1/2 acre tract; thence the dividing line

of Lots 2 and 3 and the Western line of the 2-1/2 acre tract North 12 degrees 15 minutes West 346.56 feet to a stake in the Chicken Road; now State Road 1400; thence an old line North 66 degrees 01 minutes East 162.36 feet to a stake, in the road; thence the Western line of the 88 acre tract North 12 degrees 15 minutes West 4.44 feet to a stake in the road; thence the center of Chicken Road (also known as Cliffdale Road and State Road 1400) North 67 degrees 05 minutes East 1182.51 feet to a stake in the center of said road; a corner of the Southern part of Lot No. 4 allotted to Ruth P. Bunn; thence the dividing line of Lots 3 and 4 South 22 degrees 55 minutes East 531.13 feet to a stake in the Southern line of the 88 acre tract; being the Southeast corner of Lot No. 3 and the Southwest corner of Lot No. 4; thence the old line South 61 degrees 17 minutes West 1314.32 feet, crossing a concrete monument at the Northeast corner of the plat described in Plat Book 15 on Page 62, to the point of Beginning, containing 18.25 acres, more or less, and being a portion of the 88 acre tract in Book 105 on Page 117, lying South of the Chicken Road and being the Northern portion of a 2-1/2 acre tract described in Book 142 on Page 234 and conveyed to R. Alexander Pate, deceased.

The above description per survey and map of E. E. Cain, Registered Surveyor, in June, 1971. Said map recorded in Plat Book 38 on Page 74 of even date herewith.
The above being Lot No. 3 assigned by lot to Annie Gunter Pate, Widow of R. Alexander Pate, deceased, in lieu of her dower rights.

TO HAVE AND TO HOLD the above described tract of land, with all the appurtenances thereunto belonging, or in anywise appertaining, unto the Grantee, her heirs and assigns forever.

AND the Grantors covenant that they are seized of undivided interest in and to the above described land in fee, and that they have the right to convey their undivided interest to same in fee simple; that said land is free from all encumbrances and that they will warrant and defend the title to the same against the lawful claims of all persons whomsoever.

WHEN reference is made to the Grantor or Grantee, the singular shall include the plural, and the masculine shall include the feminine or the neuter.

IN WITNESS WHEREOF, the Grantors have hereunto set their hands and seals, the day and year first above written.

Ethel E. Pate (SEAL)
ETHEL E. PATE, Single

Ruth P. Bunn (SEAL)
RUTH PATE BUNN

LIONEL D. BUNN, JR.

BY: Ruth P. Bunn (SEAL)
RUTH P. BUNN
ATTORNEY IN FACT

Prior P Pate (SEAL)
PRIOR P. PATE

Esther S. Pate (SEAL)
ESTHER S. PATE

Frances Pate Prince (SEAL)
FRANCES PATE PRINCE, Unmarried

Alexander G. Pate (SEAL)
ALEXANDER G. PATE

Lelia Pate (SEAL)
LELIA PATE

Ollie Pate Tyndall (SEAL)
OLLIE PATE TYNDALL

Earthie D. Tyndall (SEAL)
EARTHIE D. TYNDALL

STATE OF ~~Jay~~ North Carolina
COUNTY OF Cumberland

I, Sandra L. Cain, Notary Public, do hereby certify that ETHEL E. PATE, Single, personally appeared before me this day and acknowledged the due execution of the foregoing Deed of Conveyance.

WITNESS my hand and Notarial Seal, this 23rd day of December, 1971.

Sandra L. Cain
NOTARY PUBLIC

MY COMMISSION EXPIRES:
Sept. 29, 1974

NORTH CAROLINA
Cumberland COUNTY

I, JoAnn Heath, Notary Public, do hereby certify that RUTH PATE BUNN, individually, personally appeared before me this day and acknowledged the due execution of the foregoing Deed of Conveyance;

AND I do further certify that RUTH P. BUNN, Attorney in Fact for LIONEL D. BUNN, JR., personally appeared before me this day, and being by me duly sworn, says that she executed the foregoing and annexed instrument for and in behalf of LIONEL D. BUNN, JR., and that her authority to execute and acknowledge said instrument is contained in an instrument duly executed, acknowledged and recorded in the Office of Register of Deeds of Cumberland County, North Carolina on the 28th day of December, 1971, in Book 2296, on Page 69, of said Registry, and that this instrument was executed under and by virtue of the authority given by said instrument granting her power of attorney; that the said RUTH P. BUNN acknowledged the due execution of the foregoing and annexed instrument for the purposes therein expressed for and in behalf of the

said LIONEL D. BUNN, JR.

WITNESS my hand and Notarial Seal, this 30th day of July, 1971.

Jo Ann Heath
NOTARY PUBLIC

MY COMMISSION EXPIRES:
3-11-76

NORTH CAROLINA

CUMBERLAND COUNTY

I, Jo Ann Heath, Notary Public, do hereby certify that PRIOR P. PATE and wife, ESTHER S. PATE, personally appeared before me this day and acknowledged the due execution of the foregoing Deed of Conveyance.

WITNESS my hand and Notarial Seal, this 29th day of July, 1971.

Jo Ann Heath
NOTARY PUBLIC

MY COMMISSION EXPIRES:
3-11-76

STATE OF RHODE ISLAND

COUNTY OF WASHINGTON

I, Charles J. Moore, Notary Public, do hereby certify that FRANCES PATE PRINCE, Unmarried, personally appeared before me this day and acknowledged the due execution of the foregoing Deed of Conveyance.

WITNESS my hand and Notarial Seal, this 2ND day of Nov., 1971.

Charles J. Moore
NOTARY PUBLIC

MY COMMISSION EXPIRES:
Comm. Expires June 30, 1976

STATE OF TEXAS

COUNTY OF Dallas

I, Bettye F. Moeller, Notary Public, do hereby certify that ALEXANDER G. PATE and wife, LELIA PATE, personally appeared before me this day and acknowledged the due execution of the foregoing Deed of Conveyance.

WITNESS my hand and Notarial Seal, this 8th day of October, 1971.

Bettye F. Moeller
NOTARY PUBLIC

MY COMMISSION EXPIRES:
June 1, 1973

BOOK 2296 PAGE 134

NORTH CAROLINA

COUNTY OF Cumberland

I, Jo Ann Heath, Notary Public, do hereby certify that OLLIE PATE TYNDALL and husband, EARTHIE D. TYNDALL, personally appeared before me this day and acknowledged the due execution of the foregoing Deed of Conveyance.

WITNESS my hand and Notarial Seal, this 29th day of July, 1971.

Jo Ann Heath
NOTARY PUBLIC

MY COMMISSION EXPIRES:
3-11-76

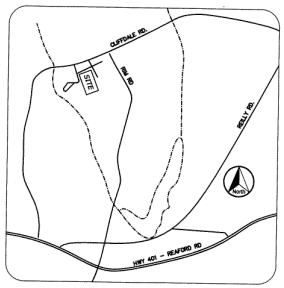
North Carolina, Cumberland County

The foregoing or annexed certificate of Sandra L. Cain, Jo Ann Heath, Charles J. Moore, Bettye F. Moeller
Notary Public/Notaries Public is/are certified to be correct.
This instrument was presented for registration and recorded in this Office at Book 2296 Page 129
this 29 day of December, 1971 at 10:30 o'clock A.M.

Marion Clark
Register of Deeds

By Juanita L. Wilburn -asst
Deputy Register of Deeds

No Revenue



VICINITY MAP

OWNERS CONSENT

THE UNDERSIGNED HEREBY ACKNOWLEDGE THAT THE LAND SHOWN ON THIS PLAT IS WITHIN THE SUBDIVISION JURISDICTION OF THE CITY OF FAYETTEVILLE AND THAT THIS PLAT IS MY/OUR FREE ACT AND SEES AND I/WE DO HEREBY DEDICATE TO PUBLIC USE AS STREETS AND EASEMENTS SO SHOWN OR INDICATED ON THIS PLAT

Ethel E. Pate

NOTARY

STATE OF NORTH CAROLINA
COUNTY OF Cumberland

I, Charles Fuentes, A NOTARY PUBLIC OF THE COUNTY AND STATE AFORESAID, CERTIFY THAT Ethel E. Pate, SUBJECT PROPERTY OWNER(S), PERSONALLY APPEARED BEFORE ME THIS DAY AND ACKNOWLEDGED THE EXECUTION OF THE FOREGOING INSTRUMENT.

WITNESS MY HAND AND OFFICIAL STAMP OR SEAL THIS 17th DAY OF July, 2015.

Charles Fuentes
NOTARY PUBLIC

MY COMMISSION EXPIRES June 12, 2020

OWNERS CONSENT

THE UNDERSIGNED HEREBY ACKNOWLEDGE THAT THE LAND SHOWN ON THIS PLAT IS WITHIN THE SUBDIVISION JURISDICTION OF THE CITY OF FAYETTEVILLE AND THAT THIS PLAT IS MY/OUR FREE ACT AND SEES AND I/WE DO HEREBY DEDICATE TO PUBLIC USE AS STREETS AND EASEMENTS SO SHOWN OR INDICATED ON THIS PLAT

Worth A. Pate

NOTARY

STATE OF NORTH CAROLINA
COUNTY OF Cumberland

I, Charles Fuentes, A NOTARY PUBLIC OF THE COUNTY AND STATE AFORESAID, CERTIFY THAT Worth A. Pate, SUBJECT PROPERTY OWNER(S), PERSONALLY APPEARED BEFORE ME THIS DAY AND ACKNOWLEDGED THE EXECUTION OF THE FOREGOING INSTRUMENT.

WITNESS MY HAND AND OFFICIAL STAMP OR SEAL THIS 17th DAY OF July, 2015.

Charles Fuentes
NOTARY PUBLIC

MY COMMISSION EXPIRES June 12, 2020

CERTIFICATION OF REVIEW OFFICER

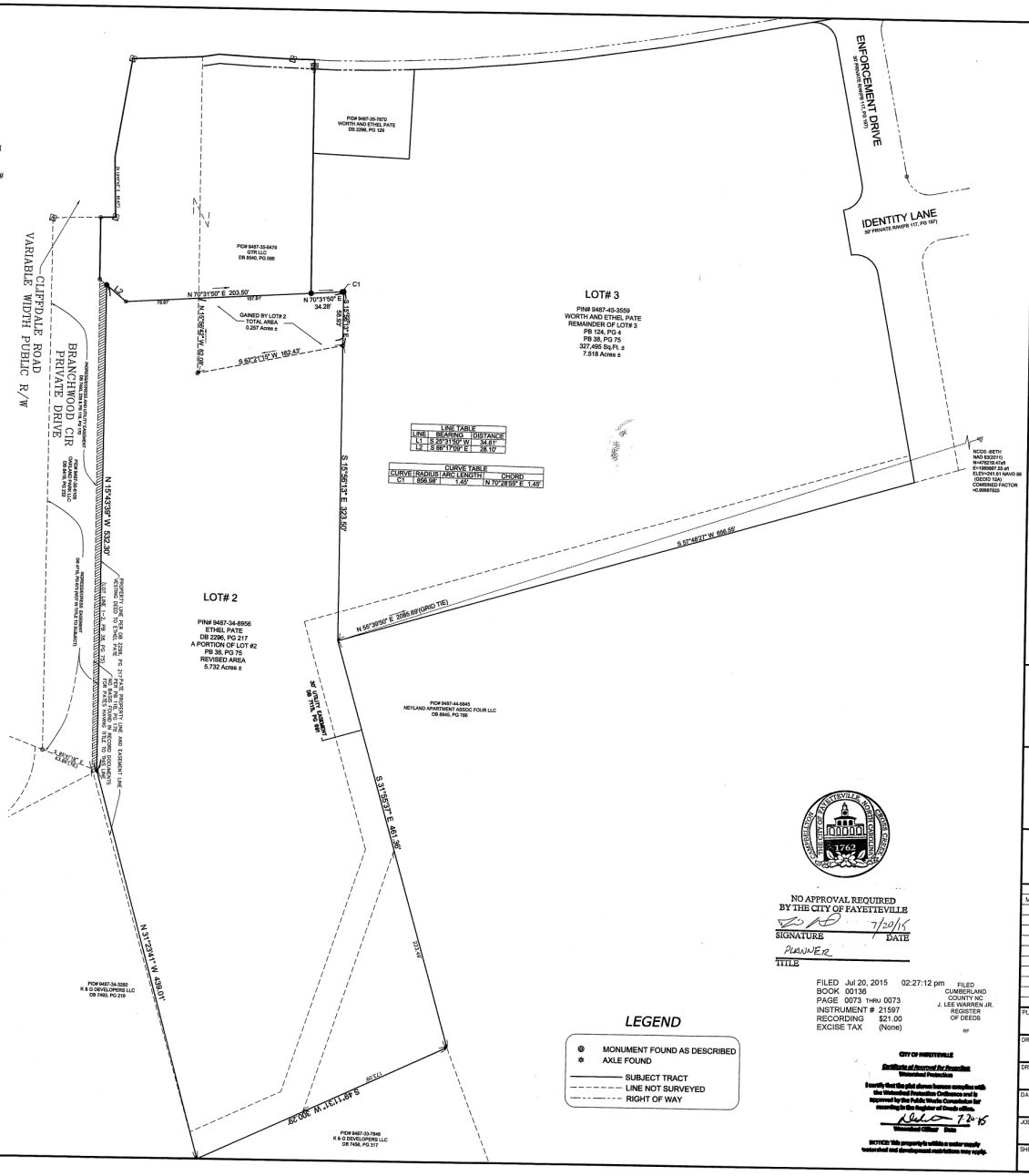
STATE OF NORTH CAROLINA
COUNTY OF CUMBERLAND

I, Donna McFadden, REVIEW OFFICER OF CUMBERLAND COUNTY, CERTIFY THAT THE MAP OR PLAT TO WHICH THIS CERTIFICATION IS AFFIXED MEETS ALL STATUTORY REQUIREMENTS FOR RECORDING.

Donna McFadden 7.20.15
REVIEW OFFICER DATE

SURVEYORS NOTES:

1. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES IN U.S. FEET UNLESS OTHERWISE NOTED.
2. BEARINGS BASED ON NC GRID NAD 83(2011)
3. THE PROPERTY IS LOCATED OUTSIDE ANY SPECIAL FLOOD HAZARD AREAS , PER F.E.M.A. F.I.R.M. PANEL #3710948700J EFFECTIVE DATE: JANUARY 5, 2007.
4. TEMPORARY BENCH MARK FOR THE SITE IS A CUT BOX ON A CONCRETE FLUME ACROSS IDENTITY LANE, ELEVATION =245.53 '.
5. THERE SEEMS TO BE A DISCREPENCY WITH THE WESTERN PROPERTY LINE AS SHOWN ON PB 118, PG 170 VS THE ORIGINAL SUBDIVISION PB 38, PG 75. THE AREA HATCHED ALONG BRANCHWOOD CIR DEPICTS AN OVERLAP BASED ON PB 118, PG 170. HOWEVER THERE IS NO OVERLAP BASED ON PB 38, PG 75.
6. THE PURPOSE OF THIS PLAT IS TO RECOMBINE 0.257 ACRES FROM LOT# 3 TO LOT# 2, PLAT BOOK 38, PAGE 75
7. NO NONCONFORMING STRUCTURES HAVE BEEN CREATED BY THIS RECOMBINATION PLAT.



LEGEND

- ⊙ MONUMENT FOUND AS DESCRIBED
- ✲ AXLE FOUND
- SUBJECT TRACT
- LINE NOT SURVEYED
- RIGHT OF WAY

NO APPROVAL REQUIRED
BY THE CITY OF FAYETTEVILLE

SIGNATURE 7/20/15 DATE

PLANNER
TITLE

FILED Jul 20, 2015 02:27:12 pm
BOOK 00136
PAGE 0073 THRU 0073
INSTRUMENT # 21597
RECORDING $21.00
EXCISE TAX (None)
FILED CUMBERLAND COUNTY NC J. LEE WARREN JR. REGISTER OF DEEDS

CITY OF FAYETTEVILLE
Certificate of Approval for Stormwater Watershed Protection

I certify that the plat shown hereon complies with the Watershed Protection Ordinance and is approved by the Public Works Commission for recording in the Register of Deeds office.

Authorized Official Date 7.20.15

NOTICE: This property is within a water supply watershed and development restrictions may apply.

SURVEY CERTIFICATION:

I, STEVEN A. AMOS, CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION (DEEDS AND PLATS RECORDED AS SHOWN); THAT THE BOUNDARIES NOT SURVEYED ARE CLEARLY INDICATED; THAT THE RATIO OF PRECISION EXCEEDS 1:10,000; THAT THIS PLAT WAS PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. I FURTHER CERTIFY THAT THIS SURVEY IS OF ANOTHER CATEGORY, SUCH AS THE RECOMBINATION OF EXISTING PARCELS, A COURT-ORDERED SURVEY, OR OTHER EXCEPTION TO THE DEFINITION OF A SUBDIVISION.
WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 15TH DAY OF JULY, 2015.

STEVEN A. AMOS NC PLS-4520 7/15/15 DATE

NORTH CAROLINA PROFESSIONAL LAND SURVEYOR SEAL L-4520 STEVEN A. AMOS

Van Horn Hoover
& Associates, Inc.
CIVIL ENGINEERING
LAND USE PLANNING
GPS/GIS CONSULTANTS
P.O. BOX 621524
CHARLOTTE, NC 28262
(704) 454-7007
www.VanHornHoover.com
E-Mail:
Info@VanHornHoover.com

North

60 30 0 60
(IN FEET)
1 inch = 60 ft.

OWNERS:
WORTH A. PATE AND
ETHEL PATE

PREPARED FOR:
THE VILLAGES AT
PARCSTONE, LLC
AN OHIO LIMITED LIABILITY COMPANY

CAPE'S LANDING

CITY OF FAYETTEVILLE,
CUMBERLAND COUNTY,
NORTH CAROLINA

Township

RECOMBINATION PLAT

REVISIONS		
MARK	DATE	DESCRIPTION

PLOTSCALE: 1:1
DRAWN: SAA CHECKED: SAA
DRAWING SCALE: 1"=60'
DATE: 7/15/15
JOB NUMBER: 13781NC
SHEET NUMBER: 1 of 1

Cliffmore Park
5133 Identity Lane
Fayetteville, NC 28314

Inquiry Number: 6682545.5
October 01, 2021

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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Data by infoUSA®

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2017	☐	☑	EDR Digital Archive
2014	☐	☑	EDR Digital Archive
2010	☐	☑	EDR Digital Archive
2005	☐	☑	EDR Digital Archive
2000	☐	☑	EDR Digital Archive
1995	☐	☑	EDR Digital Archive
1992	☐	☑	EDR Digital Archive

FINDINGS

TARGET PROPERTY STREET

5133 Identity Lane
Fayetteville, NC 28314

Year	*CD Image*	*Source*	

ENFORCEMENT LN

2017	-	EDR Digital Archive	Target and Adjoining not listed in Source
2014	-	EDR Digital Archive	Target and Adjoining not listed in Source
2010	-	EDR Digital Archive	Target and Adjoining not listed in Source
2005	-	EDR Digital Archive	Target and Adjoining not listed in Source
2000	-	EDR Digital Archive	Target and Adjoining not listed in Source
1995	-	EDR Digital Archive	Target and Adjoining not listed in Source
1992	-	EDR Digital Archive	Target and Adjoining not listed in Source

IDENTITY LN

2017	-	EDR Digital Archive	Target and Adjoining not listed in Source
2014	-	EDR Digital Archive	Target and Adjoining not listed in Source
2010	-	EDR Digital Archive	Target and Adjoining not listed in Source
2005	-	EDR Digital Archive	Target and Adjoining not listed in Source
2000	-	EDR Digital Archive	Target and Adjoining not listed in Source
1995	-	EDR Digital Archive	Target and Adjoining not listed in Source
1992	-	EDR Digital Archive	Target and Adjoining not listed in Source

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*
CLIFFDALE RD		
2017	pg. A1	EDR Digital Archive
2014	pg. A2	EDR Digital Archive
2010	pg. A3	EDR Digital Archive
2005	pg. A4	EDR Digital Archive
2000	pg. A5	EDR Digital Archive
1995	pg. A6	EDR Digital Archive
1992	pg. A7	EDR Digital Archive

City Directory Images

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CLIFFDALE RD 2017

7901	CLIFFDALE SAFE STORAGE
8122	ANDERSON CLEANERS
	DYNAMIC LED SUPPLY INC
	FANCY BANGLEZ
	PLATINUM TOUCH HAIR SALON
8126	KINGDOM CONNECTION CHRISTIAN CENTER
	LIBERTY TAX SERVICE
	MURPHYS BARBER SHOP
	SHEKINAH GLORY MINISTRIES
8130	DOMINOS PIZZA
8134	STUDIO 102 HAIR SALON
	XPO NAILS
	Y & S CLEANERS
8140	CUSTOM WORKS OF FAYETTEVILLE
	HOT ROD STUDIOS
	KOREANA BARBERSHOP
	LEE, ROBERT
	STATE FARM INSURANCE
	UNIFORMS BY SHARON
8175	911 SMOKE N DELI
	AHROY THAI CUISINE
	CHIC HAIR
	CRAZY DS LLC
	FANTASTIC NAILS & DAY SPA
	FOOD LION
	HERBERT TOWNES INSURANCE AGENCY
	NATIONWIDE
	PANDA WOK
	TOBACCO STATION
8191	KANGAROO
	REDBOX
8200	C MART
	CLIFFDALE MART & TOBACCO
	HAIR I AM HEALTH & WELLNESS
	MUNCHIES GRILL & DELI FAMOUS GYRO
	OLD LARRYS IRISH PUB
	VISION OF COMICS & CARDS
	YONG BEAUTY SUPPLY
8215	A & A AUTO & TIRE
	BUDGET TRUCK RENTAL
	US MINI MART

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CLIFFDALE RD 2014

7901	CLIFFDALE SAFE STORAGE
8106	OCCUPANT UNKNOWN,
8110	OCCUPANT UNKNOWN,
8114	OCCUPANT UNKNOWN,
8118	OCCUPANT UNKNOWN,
8122	ANDERSON CLEANERS
	PLATINUM TOUCH HAIR SALON
8126	KINGDOM CONNECTION CHRISTIAN CENTER
	LIBERTY TAX SERVICE
	MURPHYS BARBER & BOOT SHINE INC 2
8130	CHO, YOUNG O
	DOMINOS PIZZA
8134	OCCUPANT UNKNOWN,
	STUDIO 102
	XPO NAILS
	Y & S CLEANERS
8140	BARBARA SHELLY STATE FARM INSURANC
	HOT ROD STUDIOS
	KOREANA BARBERSHOP
	STATE FARM INSURANCE
8175	AHROY THAI CUISINE
	CRAZY DS LLC
	FANTASTIC NAILS & DAY SPA
	FOOD LION
	NATIONWIDE
	NATIONWIDE INSURANCE HERB TOWNES
	PANDA WOK
	THESE GIRLS CAN CURL
	TOBACCO PALACE
8191	KANGAROO EXPRESS
8200	BERNIES MODEST APPAREL
	CLIFFDALE MART & TOBACCO
	YONG BEAUTY SUPPLY
8215	VPC OF FAYETTEVILLE
8270	OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CLIFFDALE RD 2010

7901	CLIFFDALE SAFE STORAGE
8122	ANDERSON CLEANERS
	PINOY ASIAN GROCERIES
	PLATINUM TOUCH HAIR SALON
8126	KINGDOM CONNECTION CHRISTIAN
	LIBERTY TAX SVC
	MURPHYS BARBER & BOOT SHINE
8130	DOMINOS PIZZA
	OCCUPANT UNKNOWN,
	SUNNYS IMAGE WEAR
8134	DEE DEE AT STUDIO 102
	STUDIO 102
	XPO NAILS
	Y & S CLEANERS
	YU, YONG J
8140	HOT ROD STUDIOS
	STATE FARM INSURANCE
8150	DOLLAR GENERAL
8175	C & J SEWING & CLEANERS
	CHAI THAIS RESTAURANT
	CHIC HAIR INC
	CRAZY DS LLC
	FANTASTIC NAILS & DAY SPA
	FOOD LION
	HERBERT TOWNES INSURANCE
	NATIONWIDE MONEY SVC
	PANDA WOK
	RUGRATS PLAYHOUSE
8191	GRILL DEPOT
	KANGAROO EXPRESS
8200	CLIFFDALE MART & TOBACCO
	OLD LARRYS IRISH PUB
	VISION OF COMICS & CARDS
	YONG BEAUTY SUPPLY
8215	US MINI MART
8270	OCCUPANT UNKNOWN,
8292	OCCUPANT UNKNOWN,

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CLIFFDALE RD 2005

7858	OCCUPANT UNKNOWN,
8105	DOLLAR GENERAL STORE
8126	ANDERSON CLEANERS
8130	OCCUPANT UNKNOWN,
	SUNNYS IMAGE WEAR
	TIGER VIDEO
8134	OCCUPANT UNKNOWN,
	STILL TURNING HEADS
	TURNING HADS TOO STYLING STDIO
	XPO NAILS
	Y & S CLEANERS
8175	A L WOODS INC
	AL WOODS INC
	C & J SEWING & CLEANERS
	CHIC HAIR INC
	FANTASTIC NAILS
	FOOD LION INC NO 470
	LIBERTY INCOME TAX SERVICE
	NATIONWIDE INSURANCE CO
	PANDA WOK RESTAURANT
8191	PANTRY INC THE NO 456
8200	EDGE IT UP
	MUNCHIES
	TIGER VIDEO & TANNING LLC
	YONG BEAUTY SUPPLY
	YONGS BEAUTY SUPPLY
8270	OCCUPANT UNKNOWN,
8292	PATE, STEPHEN V

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CLIFFDALE RD 2000

7858	BROWN, WILLIAM S
8126	AARON DELARD UNISEX SALON
	ANDERSON CLEANERS
	MAIL EXPRESS
	MURPHEYS BARBER & BOOT SHINE INCORPORATED
8130	DOMINOS PIZZA
	MOVIES TONITE
8175	A & E FLORIST & GIFTS
	C & J SEWING & CLEANERS
	CASH ADVANCE CHECK CASHING
	FOOD LION NO 470
	MONTIBELLO FLORIST
	MONTIBELLO PET SALON
	NATIONWIDE INSURANCE COMPANY AGENTS
	NEW DIMENSIONS
	OH BRIANS RACK SHACK RESTRNT
	PANDA WOK
8191	PANTRY THE NO 456
8215	PANTRY INCORPORATED THE NO 3031

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CLIFFDALE RD 1995

7858 RAY, JOHN E
8175 A & E FLORIST
ANYTHING ELECTRIC
BOBBY KIMS WORLD TAEKWONDO
CHALEBRIS FRIED CHICKEN
CHIC HAIR INC
COMPUTER UPGRADES
DANCE CONNECTION THE
ZOTA, SHASHI
8270 PATE, PRIOR P

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CLIFFDALE RD 1992

7665	C & J SEWING SHOP
	CHIC HAIR INC
	FOOD LION #470
	MONTIBELLO PET SALON
	MOVIE CLUB THE
	NEW YORK SLICE PIZZA & SUB
	PIZZA HUT DELIVERY OR CARRYOUT
	V C R SERVICE CENTER
60653	SPENCER, CYNTHIA

Cliffmore Park
5133 Identity Lane
Fayetteville, NC 28314

Inquiry Number: 6760421.1
November 22, 2021

The EDR-City Directory Image Report

EDR® Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

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with any questions or comments.

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EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Report is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Report includes a search of available city directory data at 5 year intervals.

RECORD SOURCES

EDR's Digital Archive combines historical directory listings from sources such as Cole Information and Dun & Bradstreet. These standard sources of property information complement and enhance each other to provide a more comprehensive report.

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RESEARCH SUMMARY

The following research sources were consulted in the preparation of this report. A check mark indicates where information was identified in the source and provided in this report.

Year	Target Street	Cross Street	Source
2017	☐	☑	EDR Digital Archive
2014	☐	☑	EDR Digital Archive
2010	☐	☑	EDR Digital Archive
2005	☐	☑	EDR Digital Archive
2000	☐	☑	EDR Digital Archive
1995	☐	☑	EDR Digital Archive
1992	☐	☑	EDR Digital Archive
1989	☐	☑	Polk's City Directory
1985	☐	☐	Polk's City Directory
1980	☐	☐	HILLS DIRECTORY CO.
1975	☐	☐	Polk's City Directory
1971	☐	☐	HILLS DIRECTORY CO.
1967	☐	☐	HILLS DIRECTORY CO.
1964	☐	☐	HILLS DIRECTORY CO.

EXECUTIVE SUMMARY

Year	***Target Street***	***Cross Street***	***Source***

FINDINGS

TARGET PROPERTY STREET

5133 Identity Lane
Fayetteville, NC 28314

Year	CD Image	Source	
IDENTITY LN			
2017	-	EDR Digital Archive	Target and Adjoining not listed in Source
2014	-	EDR Digital Archive	Target and Adjoining not listed in Source
2010	-	EDR Digital Archive	Target and Adjoining not listed in Source
2005	-	EDR Digital Archive	Target and Adjoining not listed in Source
2000	-	EDR Digital Archive	Target and Adjoining not listed in Source
1995	-	EDR Digital Archive	Target and Adjoining not listed in Source
1992	-	EDR Digital Archive	Target and Adjoining not listed in Source
1989	-	Polk's City Directory	Street not listed in Source
1985	-	Polk's City Directory	Street not listed in Source
1980	-	HILLS DIRECTORY CO.	Street not listed in Source
1975	-	Polk's City Directory	Street not listed in Source
1971	-	HILLS DIRECTORY CO.	Street not listed in Source
1967	-	HILLS DIRECTORY CO.	Street not listed in Source
1964	-	HILLS DIRECTORY CO.	Street not listed in Source

FINDINGS

CROSS STREETS

Year	*CD Image*	*Source*	
CLIFFDALE RD			
2017	pg. A1	EDR Digital Archive	
2014	pg. A2	EDR Digital Archive	
2010	pg. A3	EDR Digital Archive	
2005	pg. A4	EDR Digital Archive	
2000	pg. A5	EDR Digital Archive	
1995	pg. A6	EDR Digital Archive	
1992	pg. A7	EDR Digital Archive	
1989	pg. A8	Polk's City Directory	
1985	-	Polk's City Directory	Street not listed in Source
1980	-	HILLS DIRECTORY CO.	Street not listed in Source
1975	-	Polk's City Directory	Street not listed in Source
1971	-	HILLS DIRECTORY CO.	Street not listed in Source
1967	-	HILLS DIRECTORY CO.	Street not listed in Source
1964	-	HILLS DIRECTORY CO.	Street not listed in Source

City Directory Images

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CLIFFDALE RD 2017

7901	CLIFFDALE SAFE STORAGE
8122	ANDERSON CLEANERS
	DYNAMIC LED SUPPLY INC
	FANCY BANGLEZ
	PLATINUM TOUCH HAIR SALON
8126	KINGDOM CONNECTION CHRISTIAN CENTER
	LIBERTY TAX SERVICE
	MURPHYS BARBER SHOP
	SHEKINAH GLORY MINISTRIES
8130	DOMINOS PIZZA
8134	STUDIO 102 HAIR SALON
	XPO NAILS
	Y & S CLEANERS
8140	CUSTOM WORKS OF FAYETTEVILLE
	HOT ROD STUDIOS
	KOREANA BARBERSHOP
	LEE, ROBERT
	STATE FARM INSURANCE
	UNIFORMS BY SHARON
8175	911 SMOKE N DELI
	AHROY THAI CUISINE
	CHIC HAIR
	CRAZY DS LLC
	FANTASTIC NAILS & DAY SPA
	FOOD LION
	HERBERT TOWNES INSURANCE AGENCY
	NATIONWIDE
	PANDA WOK
	TOBACCO STATION
8191	KANGAROO
	REDBOX
8200	C MART
	CLIFFDALE MART & TOBACCO
	HAIR I AM HEALTH & WELLNESS
	MUNCHIES GRILL & DELI FAMOUS GYRO
	OLD LARRYS IRISH PUB
	VISION OF COMICS & CARDS
	YONG BEAUTY SUPPLY
8215	A & A AUTO & TIRE
	BUDGET TRUCK RENTAL
	US MINI MART
8384	SESSOMS, MARLENE H
8385	ALBEMARLE OIL COMPANY
8464	WARREN, MARGARET C
8555	MYOUNG, DONG K

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CLIFFDALE RD 2014

7901	CLIFFDALE SAFE STORAGE
8106	OCCUPANT UNKNOWN,
8110	OCCUPANT UNKNOWN,
8114	OCCUPANT UNKNOWN,
8118	OCCUPANT UNKNOWN,
8122	ANDERSON CLEANERS
	PLATINUM TOUCH HAIR SALON
8126	KINGDOM CONNECTION CHRISTIAN CENTER
	LIBERTY TAX SERVICE
	MURPHYS BARBER & BOOT SHINE INC 2
8130	CHO, YOUNG O
	DOMINOS PIZZA
8134	OCCUPANT UNKNOWN,
	STUDIO 102
	XPO NAILS
	Y & S CLEANERS
8140	BARBARA SHELLY STATE FARM INSURANC
	HOT ROD STUDIOS
	KOREANA BARBERSHOP
	STATE FARM INSURANCE
8175	AHROY THAI CUISINE
	CRAZY DS LLC
	FANTASTIC NAILS & DAY SPA
	FOOD LION
	NATIONWIDE
	NATIONWIDE INSURANCE HERB TOWNES
	PANDA WOK
	THESE GIRLS CAN CURL
	TOBACCO PALACE
8191	KANGAROO EXPRESS
8200	BERNIES MODEST APPAREL
	CLIFFDALE MART & TOBACCO
	YONG BEAUTY SUPPLY
8215	VPC OF FAYETTEVILLE
8270	OCCUPANT UNKNOWN,
8363	PATE, ETHEL E
8384	SESSOMS, HORACE G
8385	ALBEMARLE OIL COMPANY
8464	WARREN, MARGARET C
8489	BURROUGH, GARCIA C
8507	BOSTICK, JEANETTE
8533	THOMPSON, JOHN L
8555	MYOUNG, DONG K

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CLIFFDALE RD 2010

7901	CLIFFDALE SAFE STORAGE
8122	ANDERSON CLEANERS
	PINOY ASIAN GROCERIES
	PLATINUM TOUCH HAIR SALON
8126	KINGDOM CONNECTION CHRISTIAN
	LIBERTY TAX SVC
	MURPHYS BARBER & BOOT SHINE
8130	DOMINOS PIZZA
	OCCUPANT UNKNOWN,
	SUNNYS IMAGE WEAR
8134	DEE DEE AT STUDIO 102
	STUDIO 102
	XPO NAILS
	Y & S CLEANERS
	YU, YONG J
8140	HOT ROD STUDIOS
	STATE FARM INSURANCE
8150	DOLLAR GENERAL
8175	C & J SEWING & CLEANERS
	CHAI THAIS RESTAURANT
	CHIC HAIR INC
	CRAZY DS LLC
	FANTASTIC NAILS & DAY SPA
	FOOD LION
	HERBERT TOWNES INSURANCE
	NATIONWIDE MONEY SVC
	PANDA WOK
	RUGRATS PLAYHOUSE
8191	GRILL DEPOT
	KANGAROO EXPRESS
8200	CLIFFDALE MART & TOBACCO
	OLD LARRYS IRISH PUB
	VISION OF COMICS & CARDS
	YONG BEAUTY SUPPLY
8215	US MINI MART
8270	OCCUPANT UNKNOWN,
8292	OCCUPANT UNKNOWN,
8315	OCCUPANT UNKNOWN,
8363	PATE, ETHEL E
8384	OCCUPANT UNKNOWN,
8464	WARREN, HANSEL C
8489	BURROUGH, GARCIA C
8533	THOMPSON, JOHN L
8555	KANG, TIM

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CLIFFDALE RD 2005

7802	OCCUPANT UNKNOWN,
7804	SOUTH, B
7808	STOELTZING, ROBERT F
7810	OCCUPANT UNKNOWN,
7812	PETERKIN, WALLACE L
7828	OCCUPANT UNKNOWN,
7858	OCCUPANT UNKNOWN,
8105	DOLLAR GENERAL STORE
8126	ANDERSON CLEANERS
8130	OCCUPANT UNKNOWN,
	SUNNYS IMAGE WEAR
	TIGER VIDEO
8134	OCCUPANT UNKNOWN,
	STILL TURNING HEADS
	TURNING HADS TOO STYLING STDIO
	XPO NAILS
	Y & S CLEANERS
8175	A L WOODS INC
	AL WOODS INC
	C & J SEWING & CLEANERS
	CHIC HAIR INC
	FANTASTIC NAILS
	FOOD LION INC NO 470
	LIBERTY INCOME TAX SERVICE
	NATIONWIDE INSURANCE CO
	PANDA WOK RESTAURANT
8191	PANTRY INC THE NO 456
8200	EDGE IT UP
	MUNCHIES
	TIGER VIDEO & TANNING LLC
	YONG BEAUTY SUPPLY
	YONGS BEAUTY SUPPLY
8270	OCCUPANT UNKNOWN,
8292	PATE, STEPHEN V
8300	TIGER TANNING
8363	PATE, ETHEL E
8384	OCCUPANT UNKNOWN,
8464	WARREN, HANSEL C
8489	JOSEPH, JEANNETTE B
8533	THOMPSON, JOHN L
8555	FAYETTEVILLE FULL GOSPEL VICTORY CHU
	KANG, TAE W

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CLIFFDALE RD 2000

7858	BROWN, WILLIAM S
8126	AARON DELARD UNISEX SALON
	ANDERSON CLEANERS
	MAIL EXPRESS
	MURPHEYS BARBER & BOOT SHINE INCORPORATED
8130	DOMINOS PIZZA
	MOVIES TONITE
8175	A & E FLORIST & GIFTS
	C & J SEWING & CLEANERS
	CASH ADVANCE CHECK CASHING
	FOOD LION NO 470
	MONTIBELLO FLORIST
	MONTIBELLO PET SALON
	NATIONWIDE INSURANCE COMPANY AGENTS
	NEW DIMENSIONS
	OH BRIANS RACK SHACK RESTRNT
	PANDA WOK
8191	PANTRY THE NO 456
8215	PANTRY INCORPORATED THE NO 3031
8383	CLIFFDALE COMMUNITY CHURCH
8555	LEE, MAN H
8581	KING, FLOYD

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CLIFFDALE RD 1995

7810	WILSON, C B
7812	WIGGINS, DAVID
7828	LAWSON, WARN
7858	RAY, JOHN E
8175	A & E FLORIST
	ANYTHING ELECTRIC
	BOBBY KIMS WORLD TAEKWONDO
	CHALEBRIS FRIED CHICKEN
	CHIC HAIR INC
	COMPUTER UPGRADES
	DANCE CONNECTION THE
	ZOTA, SHASHI
8270	PATE, PRIOR P
8363	PATE, ETHEL E
8383	HOUSE MAN ALARM SYSTEMS
	HOUSE MAN REALTY & CONSTR
	PATE, BRANDON
8384	SESSOMS, JERRY D
8489	KREATIVE KOLOURS BY HOWARD
8555	STROUD, THOMAS A
8565	STROUD, WADE W
8581	KING, FLOYD
8615	ASKEW, F G

Target Street	Cross Street	Source
-	✓	EDR Digital Archive

CLIFFDALE RD 1992

7125	AGNES' LAUNDRY & CLEANERS
	NEW FASHION CLOTHES
7665	C & J SEWING SHOP
	CHIC HAIR INC
	FOOD LION #470
	MONTIBELLO PET SALON
	MOVIE CLUB THE
	NEW YORK SLICE PIZZA & SUB
	PIZZA HUT DELIVERY OR CARRYOUT
	V C R SERVICE CENTER

Target Street	Cross Street	Source
-	✓	Polk's City Directory

CLIFFDALE RD 1989

CLIFFDALE RD (C)–Contd

25 Vacant
6636 Lucas Pauline
6651 Vacant
6881 Korean Baptist Church 867-5158
6889 Kidd's Day Care 864-6437
6900 Cliffdale Plaza
UNITS
100 T C B Y Yogurt 864-6417
101 Subway restr 868-9600
102 State Div Of Mtr Vehicles
103 Jade Palace Restaurant 867-5199
104 Vacant
105 Vacant
106 Inches Limited weight loss clinic 868-4624
107 Vacant
109 U S Post Office (Cliffdale Br) 867-2714
201a Mail Depot 867-7525
202 Fantastic Sam's beauty shop 864-4150
203 Fashion Legs ladies stockings 864-8907
204 P S Framing 864-9622
205 Cliffdale Plaza Florist 864-1188
206 Allstate Insurance Co 868-8700
207 Vacant
6920 Koenig John Realtors 868-1976
6945 Edwards Fred 868-5470

Cliffmore Park

5133 Identity Lane

Fayetteville, NC 28314

Inquiry Number: 6682545.3

September 29, 2021

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

09/29/21

Site Name:

Cliffmore Park
5133 Identity Lane
Fayetteville, NC 28314
EDR Inquiry # 6682545.3

Client Name:

Atlantic Shores Environmental
175 -1 Venture Drive
Leland, NC 28451
Contact: Cheryl Moody

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Certification # 878B-495A-8D14

PO # 1523

Project 1523

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Sanborn® Library search results

Certification #: 878B-495A-8D14

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- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

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Cliffmore Park

5133 Identity Lane

Fayetteville, NC 28314

Inquiry Number: 6682545.4

September 29, 2021

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

09/29/21

Site Name:

Cliffmore Park
5133 Identity Lane
Fayetteville, NC 28314
EDR Inquiry # 6682545.4

Client Name:

Atlantic Shores Environmental
175 -1 Venture Drive
Leland, NC 28451
Contact: Cheryl Moody

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Atlantic Shores Environmental were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# 1523
Project: 1523

Coordinates:

Latitude:	35.056199 35° 3' 22" North
Longitude:	-79.052914 -79° 3' 10" West
UTM Zone:	Zone 17 North
UTM X Meters:	677564.98
UTM Y Meters:	3881008.70
Elevation:	289.10' above sea level

Maps Provided:

2013
1982
1971
1951
1950
1948

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Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2013 Source Sheets

Clifdale
2013
7.5-minute, 24000

1982 Source Sheets

Clifdale
1982
7.5-minute, 24000
Aerial Photo Revised 1981

1971 Source Sheets

Clifdale
1971
7.5-minute, 24000
Aerial Photo Revised 1971

1951 Source Sheets

Clifdale
1951
15-minute, 62500
Aerial Photo Revised 1947

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1950 Source Sheets

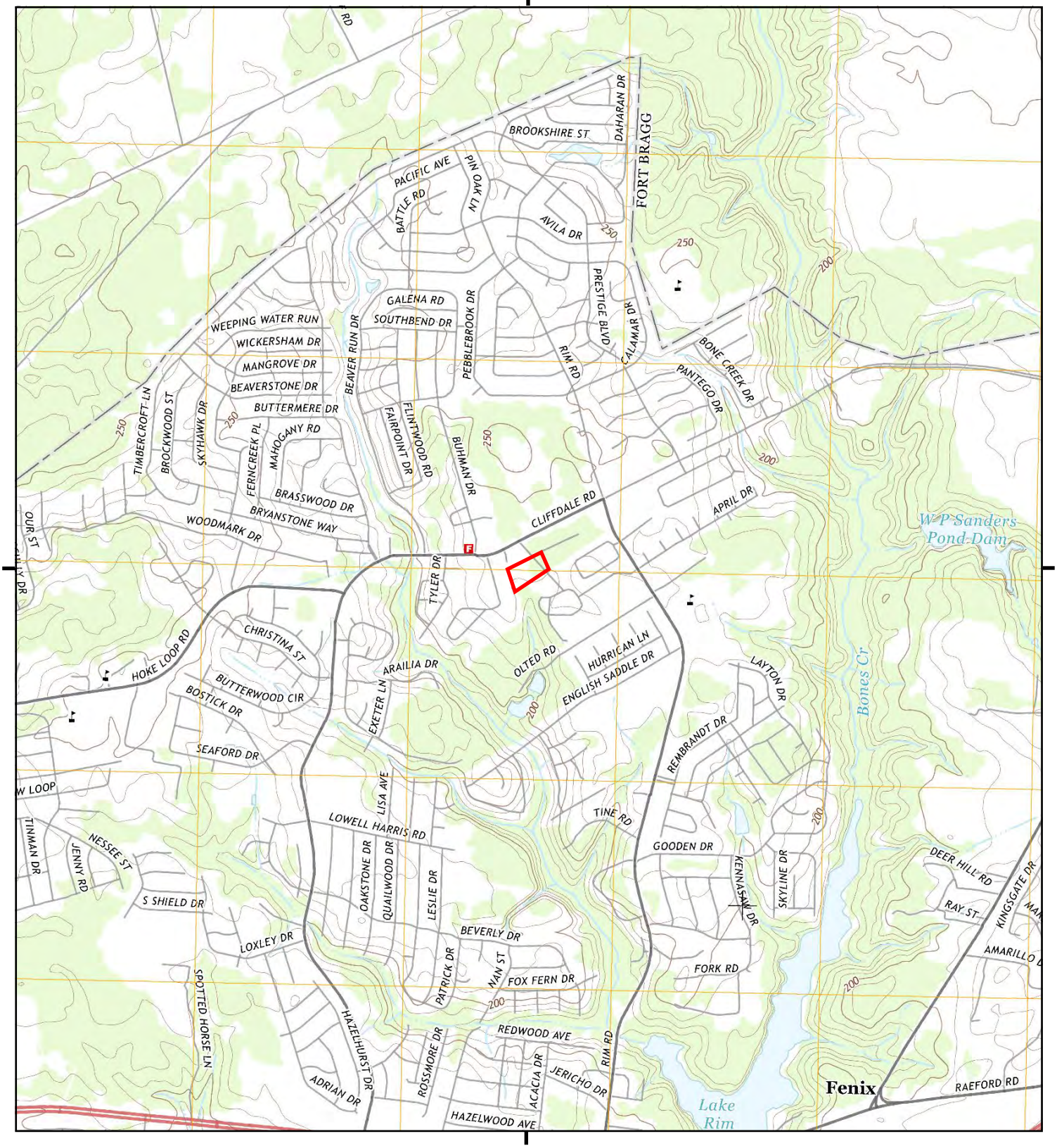
Clifdale
1950
7.5-minute, 24000
Aerial Photo Revised 1947

1948 Source Sheets

Clifdale
1948
15-minute, 62500
Aerial Photo Revised 1947

Historical Topo Map

2013



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

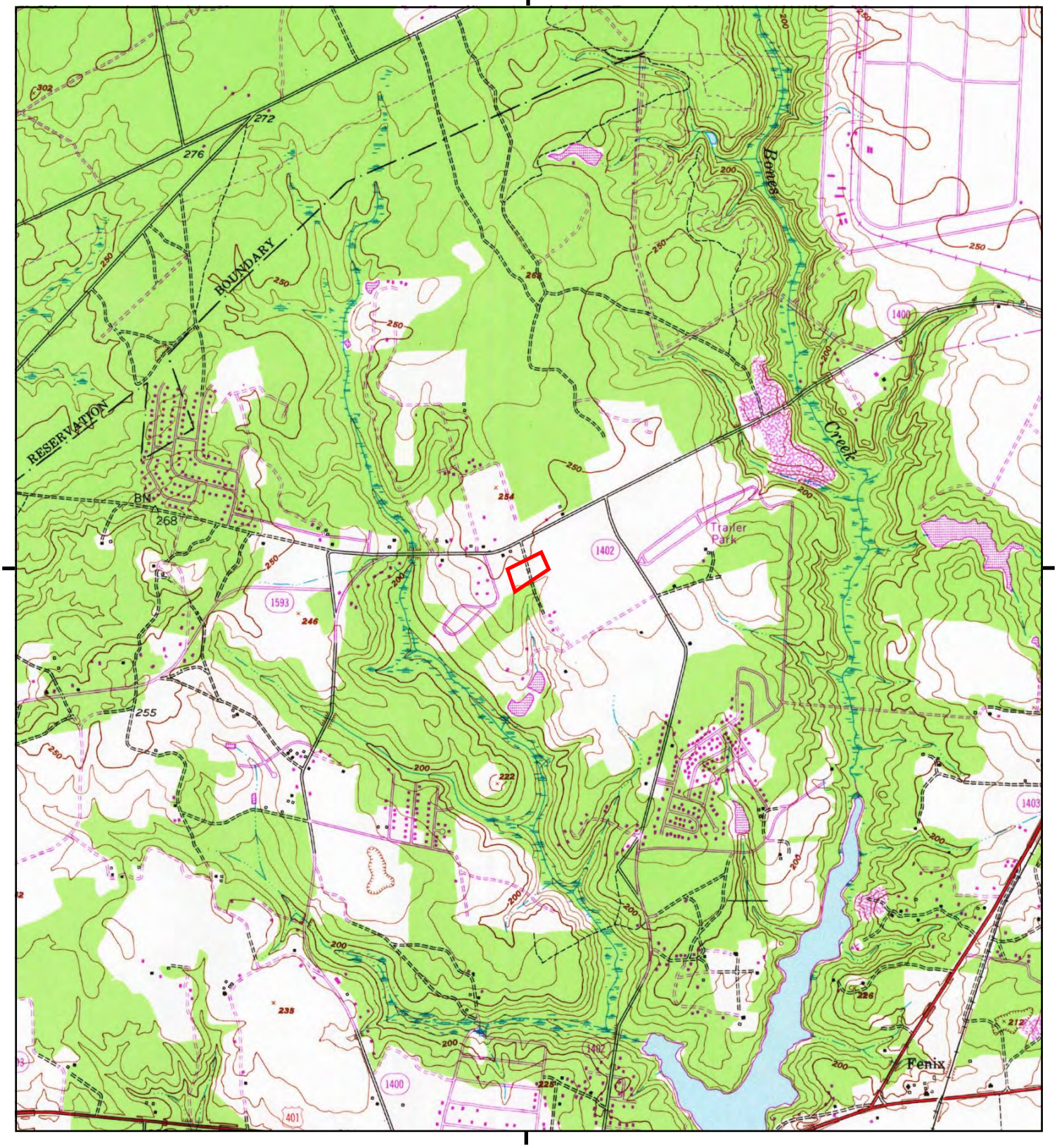
TP, Clifdale, 2013, 7.5-minute

SITE NAME: Cliffmore Park
ADDRESS: 5133 Identity Lane
Fayetteville, NC 28314
CLIENT: Atlantic Shores Environmental

N

Historical Topo Map

1982



This report includes information from the following map sheet(s).

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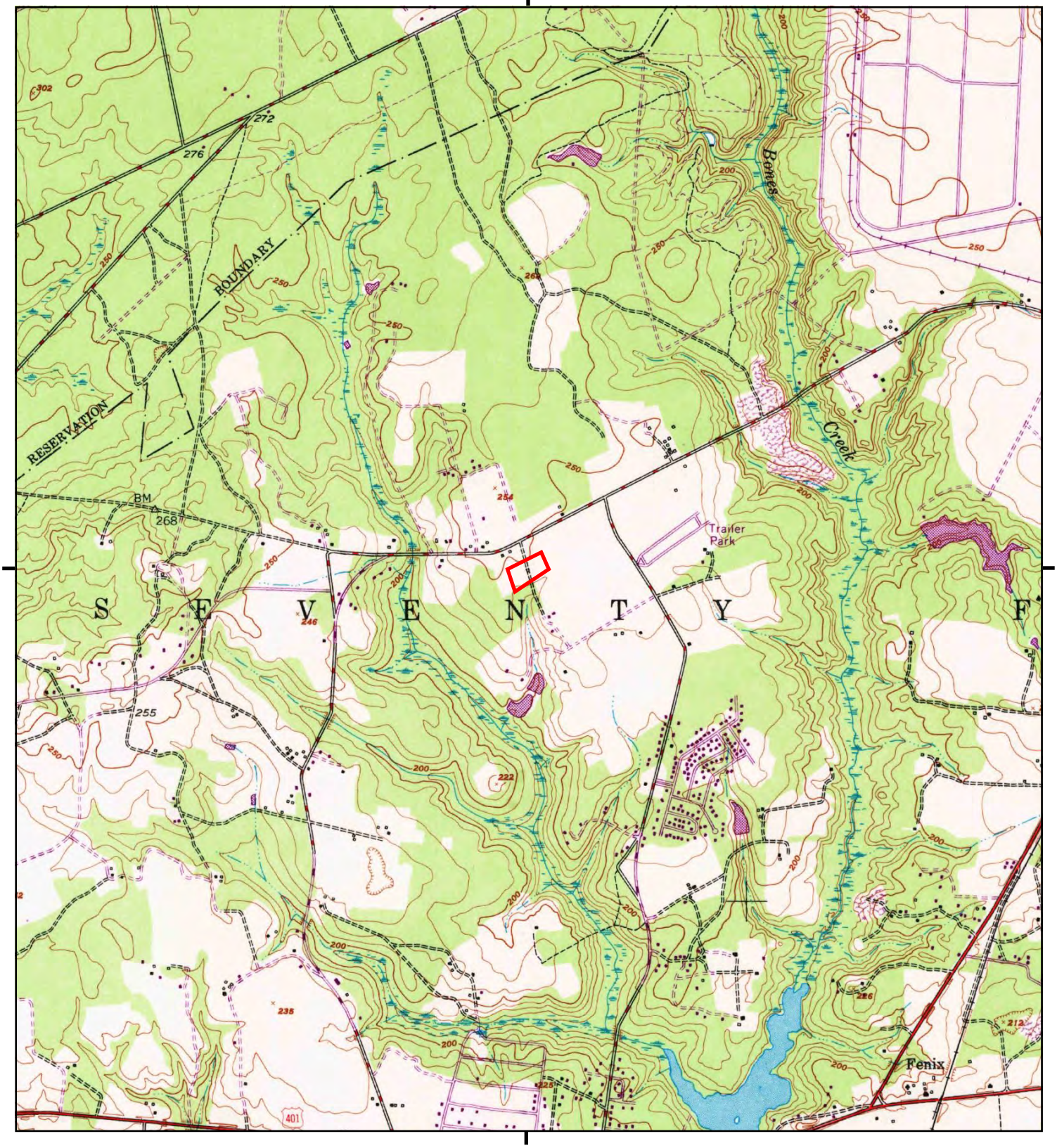
NW N NE
W E
SW S SE

TP, Clifdale, 1982, 7.5-minute

SITE NAME: Cliffmore Park
ADDRESS: 5133 Identity Lane
Fayetteville, NC 28314
CLIENT: Atlantic Shores Environmental

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

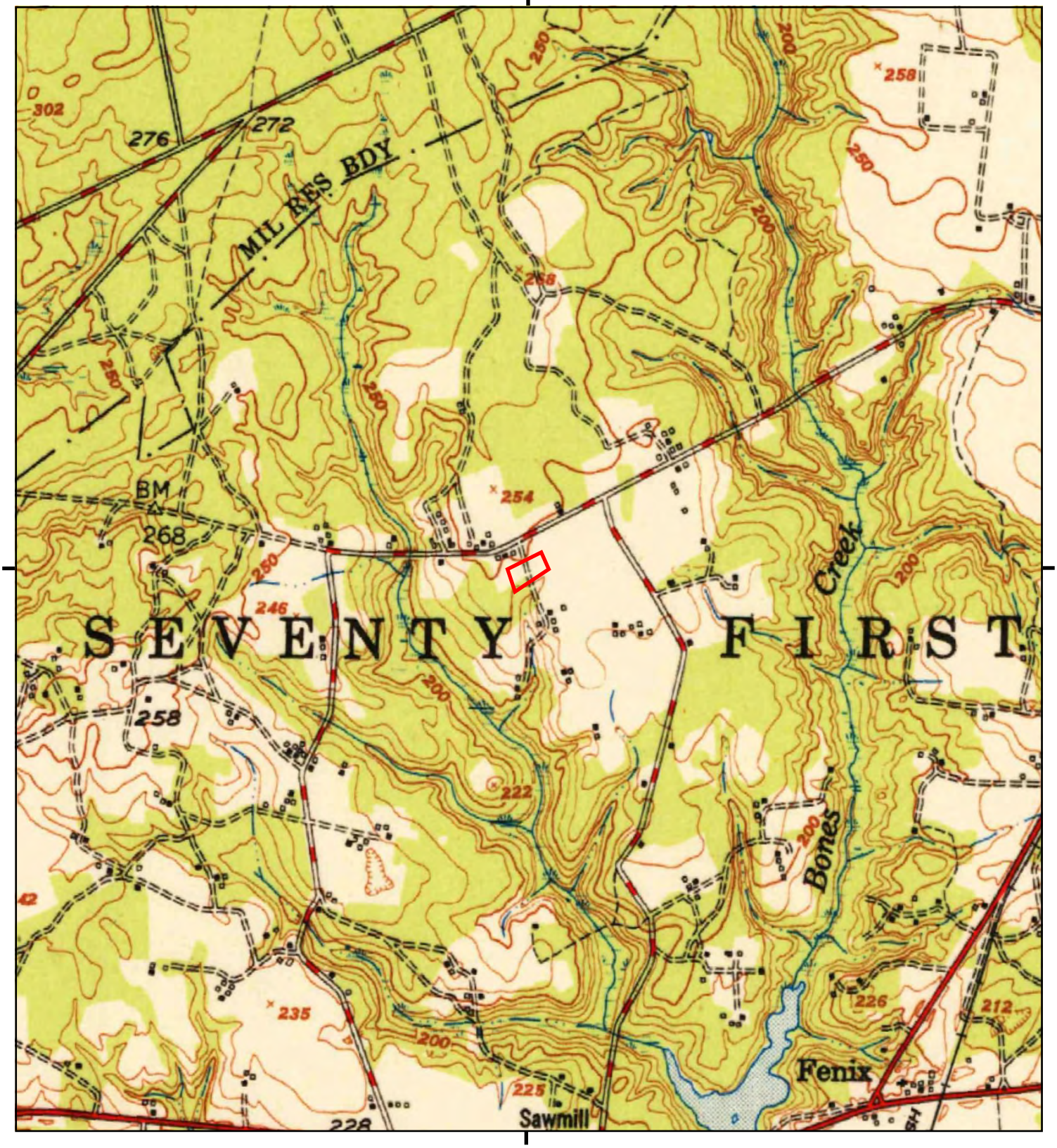
TP, Clifdale, 1971, 7.5-minute

SITE NAME: Cliffmore Park
ADDRESS: 5133 Identity Lane
Fayetteville, NC 28314
CLIENT: Atlantic Shores Environmental

N

Historical Topo Map

1951



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

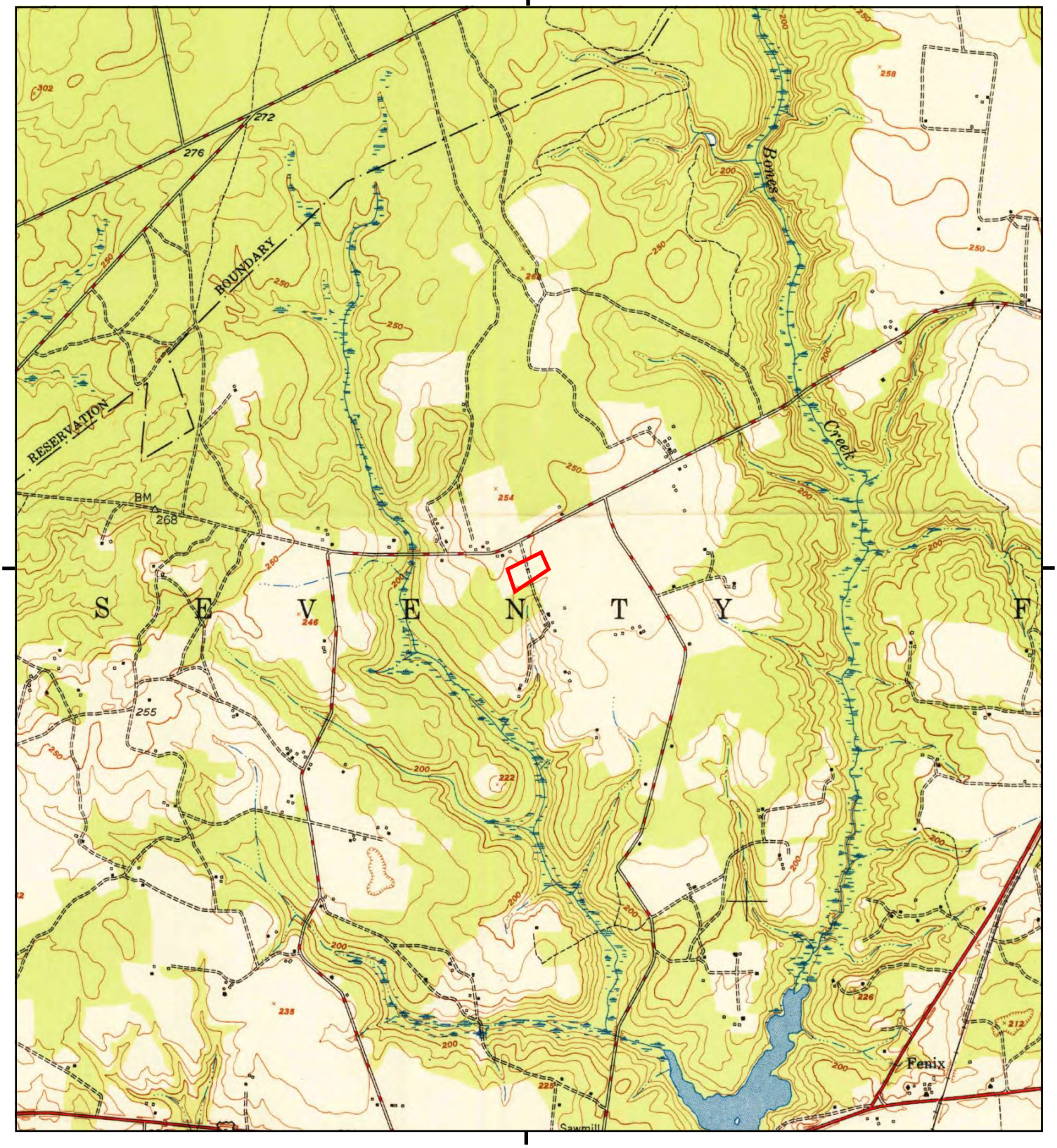
TP, Clifdale, 1951, 15-minute

SITE NAME: Cliffmore Park
ADDRESS: 5133 Identity Lane
Fayetteville, NC 28314
CLIENT: Atlantic Shores Environmental

N

Historical Topo Map

1950



This report includes information from the following map sheet(s).

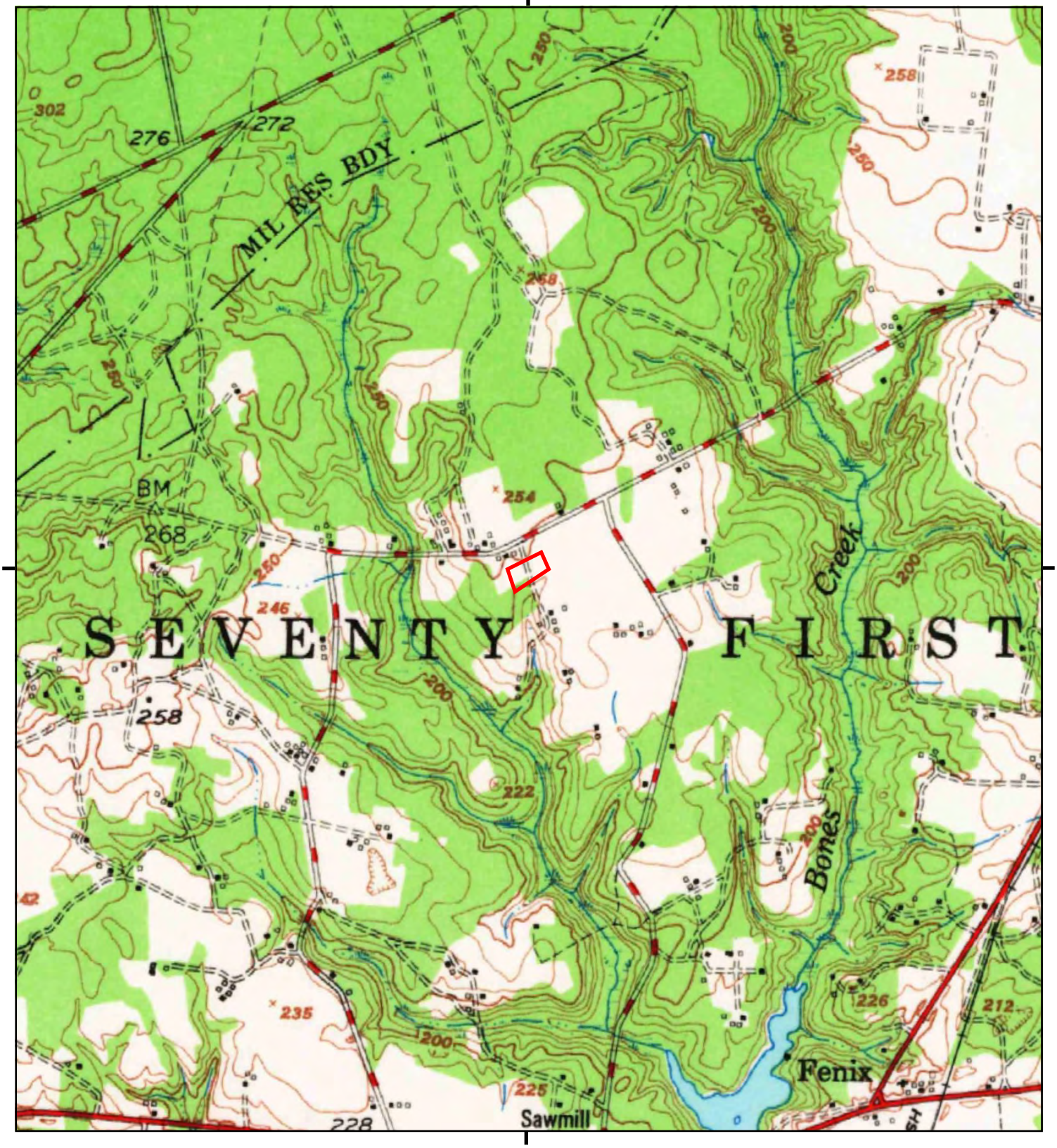
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Clifdale, 1950, 7.5-minute

SITE NAME: Cliffmore Park
ADDRESS: 5133 Identity Lane
Fayetteville, NC 28314
CLIENT: Atlantic Shores Environmental

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Clifdale, 1948, 15-minute

SITE NAME: Cliffmore Park
ADDRESS: 5133 Identity Lane
Fayetteville, NC 28314
CLIENT: Atlantic Shores Environmental

N

Cliffmore Park

5133 Identity Lane

Fayetteville, NC 28314

Inquiry Number: 6682545.8

September 29, 2021

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

09/29/21

Site Name:

Cliffmore Park
5133 Identity Lane
Fayetteville, NC 28314
EDR Inquiry # 6682545.8

Client Name:

Atlantic Shores Environmental
175 -1 Venture Drive
Leland, NC 28451
Contact: Cheryl Moody

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2014	1"=500'	Flight Year: 2014	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1999	1"=500'	Acquisition Date: January 01, 1999	USGS/DOQQ
1993	1"=500'	Acquisition Date: February 23, 1993	USGS/DOQQ
1983	1"=500'	Flight Date: April 04, 1983	NHAP
1976	1"=500'	Flight Date: January 15, 1976	USGS
1971	1"=500'	Flight Date: December 18, 1971	USGS
1966	1"=500'	Flight Date: March 20, 1966	USDA
1964	1"=500'	Flight Date: September 02, 1964	USGS
1950	1"=500'	Flight Date: November 21, 1950	USGS
1940	1"=500'	Flight Date: December 21, 1940	USGS
1938	1"=500'	Flight Date: January 01, 1938	FirstSearch

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INQUIRY #: 6682545.8
YEAR: 2014
= 500'
N
EDR

INQUIRY #: 6682545.8
YEAR: 2010
= 500'
N
EDR

INQUIRY #: 6682545.8
YEAR: 2006
= 500'
N
EDR

INQUIRY #: 6682545.8
YEAR: 1999
= 500'
N
EDR

INQUIRY #: 6682545.8
YEAR: 1993
= 500'
N
EDR

INQUIRY #: 6682545.8
YEAR: 1983
= 500'
N
EDR

INQUIRY #: 6682545.8
YEAR: 1976
= 500'
N
EDR

INQUIRY #: 6682545.8
YEAR: 1971
= 500'
N
EDR

INQUIRY #: 6682545.8

YEAR: 1966

= 500'

N

EDR

INQUIRY #: 6682545.8
YEAR: 1964
= 500'
N
EDR

INQUIRY #: 6682545.8

YEAR: 1950

= 500'

N

EDR

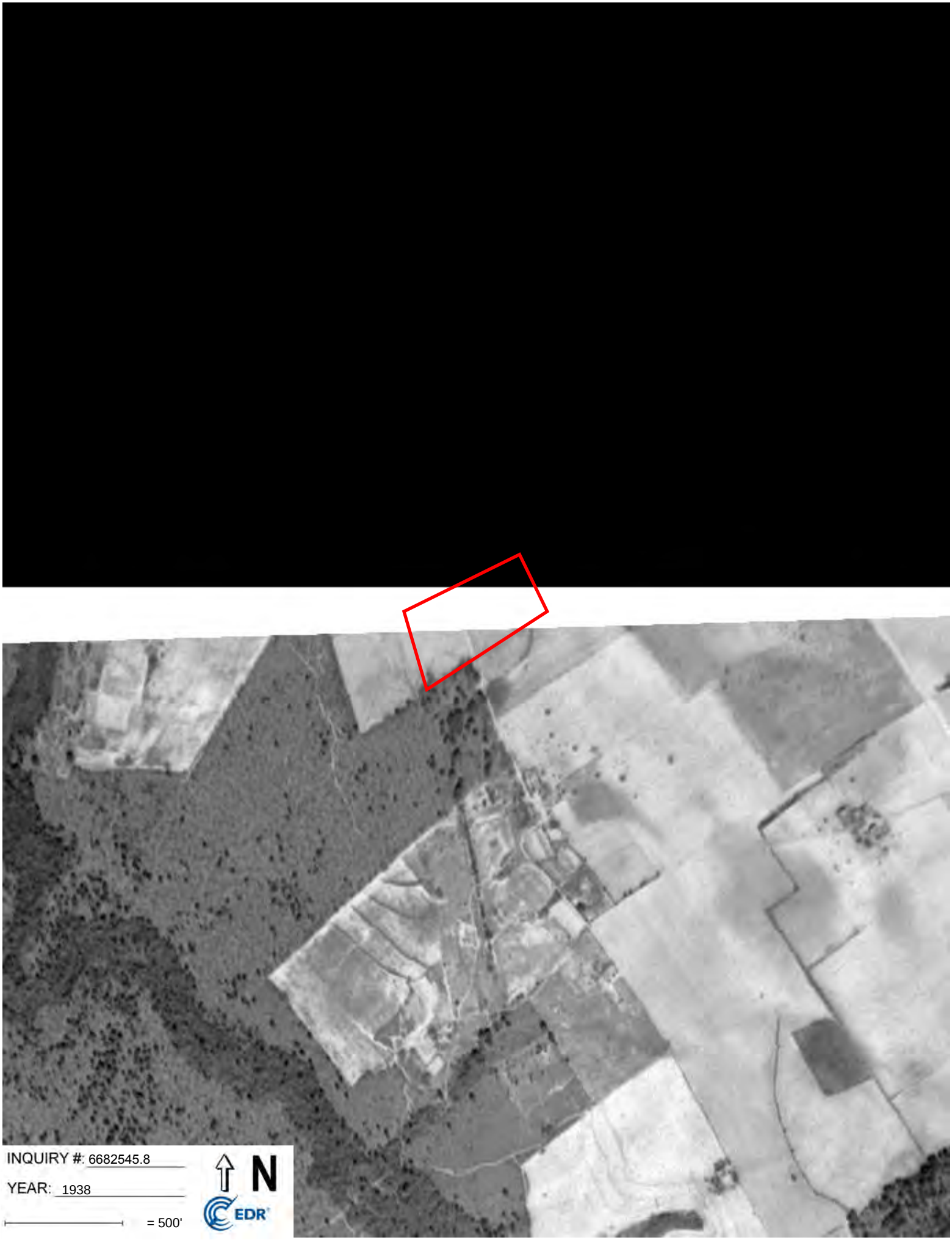
INQUIRY #: 6682545.8

YEAR: 1940

= 500'

N

EDR



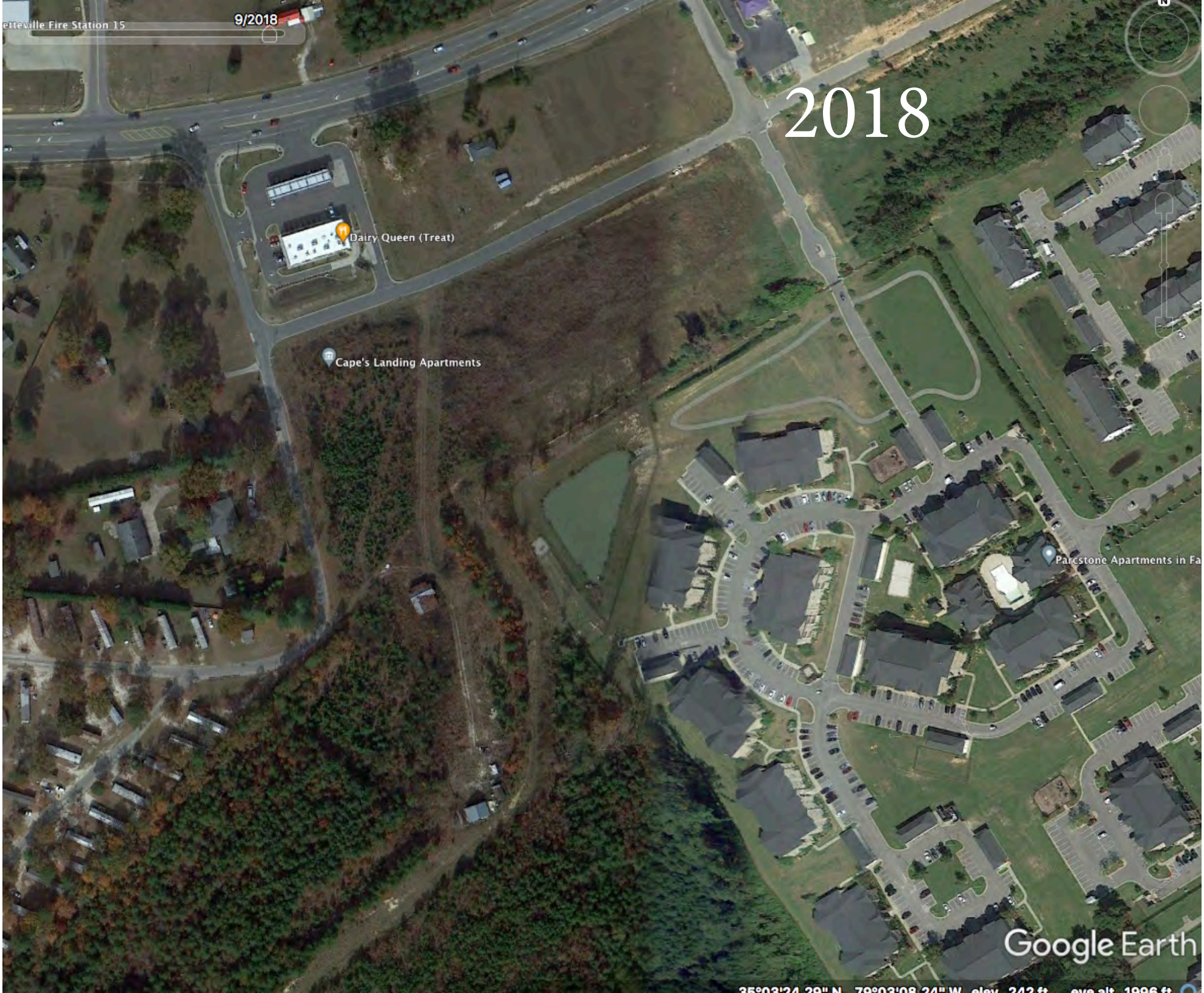
INQUIRY #: 6682545.8

YEAR: 1938

= 500'

N

EDR


etteville Fire Station 15
9/2018
2018
Dairy Queen (Treat)
Cape's Landing Apartments
Parcstone Apartments in Fa
Google Earth

4/2020
1985
2020
2020
Dairy Queen (Treat)
Cape's Landing Apartments
Parestone Apartments in Fay
Image © 2021 Maxar Technologies
Google Earth
Imagery Date: 4/9/2020 35°03'21.83" N 79°02'59.44" W elev 237 ft eye alt 1996 ft

2021

5133 IDENTITY LN, FAY
Show search results for 5133 I...
CLIFFDALE RD
CLIFFDALE RD
BUHMANN DR
IDENTITY LN
ENFORCEMENT DR
ABBOTTS LANDING CIR
PARCSTONE LN
PARCSTONE LN
ALABASTER WAY
DEER TRAIL DR
BRANCHWOOD CIR
35.0550 -79.0499 Degrees
CCGIS \ ESRI Charlotte | CCGIS | CCGIS - TAX MAPPING
POWERED BY esri

APPENDIX V

SITE PHOTOGRAPHS

Photograph 1 – View of the on-site structure looking south

Photograph 2 - View of the on-site structure looking southeast

Photograph 3 - View of interior of the on-site structure

Photograph 4 - View of the crawl space of the on-site structure

Photograph 5 - View of the site looking northeast

Photograph 6 – View of the southern property line looking west

Photograph 7 – West and northwestern adjacent properties

Photograph 8 – Northern adjacent property

Photograph 9 – Vie of trash along the road and northern portion of the site

Photograph 10 – View of the northeastern adjacent property

Photograph 11 – View of the northern adjacent property and the site looking southwest

Photograph 12 – View of the southern adjacent property

APPENDIX VI

INTERVIEW DOCUMENTATION

‹ Request #21-1477 ›

☑ CLOSED

All fire records for 5133 Identity Lane Fayetteville, NC 28314 at **PIN #** 9487-45-3559

Received	**November 3, 2021** via web
Due	**November 18, 2021**
Departments	**Fire Record Requests**
Requester	**Daniel Schiwinger** dschiwinger@atlanticshoresenv.com 175-1 Venture Drive, Wilmington, NC 28451 9105206998 Atlantic Shores Environmental

Documents

Public	(none)
Requester	(none)

Staff

Point of Contact	**Bobbie Hill**

Request Closed — Public

The information responsive to your public records request has been provided. Please feel free to submit another request if by chance the address needed to be changed. Thank you

November 3, 2021, 2:50pm

External Message — Requester + Staff

Good afternoon,
After looking into your request, there are no fire records I have found for 5133 Identity Lane, 28314. I will be closing this request out.

Thank you

November 3, 2021, 2:49pm by Daniel De Lellis, Fire Fighter (Staff)

Request Published — Public

November 3, 2021, 2:44pm

External Message — Requester + Staff

We have received your public records request and will provide you with the documents in a timely manner. This email serves as confirmation that we have received your request.

November 3, 2021, 2:44pm by Daniel De Lellis, Fire Fighter (Staff)

Department Assignment — Public

Fire Record Requests

November 3, 2021, 2:37pm

APPENDIX VII

STATEMENT OF QUALIFICATION

CHERYL J. MOODY, PE, CIEC

EDUCATION

- M.S. Environmental Science: Univ. of New Haven, West Haven, CT: January 1997.
- B.S. Biology: Univ. of Vermont, Burlington, VT: May 1990. Concentrations: Botany and Chemistry.

REGISTRATIONS/MEMBERSHIPS

- Licensed Professional Engineer – North Carolina
- Registered Environmental Manager (REM), National Registry of Environmental Professionals.
- North Carolina and South Carolina Asbestos Inspector and Management Planner.
- Certified Indoor Environmental Consultant, American Council for Accredited Certification (ACAC).
- Certified Microbial Remediation Supervisor, ACAC.
- North Carolina Certified Storm Water BPM Inspector.
- Member, Indoor Air Quality Association.
- Certifying Board Member, ACAC

PROFESSIONAL EXPERIENCE

July 2008 – Present **Atlantic Shores Environmental Services, Ltd.** **Leland, NC**
Principal Engineer, Owner
Ms. Moody has over 30 years of experience conducting and managing environmental due diligence projects. Major duties include financial, marketing, proposals, invoicing and supervising/mentoring team members. Also included as a major duty is reviewing team member reports for technical accuracy. Ms. Moody performed as well as supervised due diligence and compliance services relating to manufacturing industries, commercial properties and residential properties; asbestos and mold inspections; extensive experience with managing multiple phased projects at petroleum storage terminals, chemical and gasoline facilities.

2004-June 2008 **ECS Carolinas, LLP** **Wilmington, NC**
Principal Scientist, Environmental Department Manager
Managed a team of five professionals. Major duties include financial, marketing, proposals, invoicing and supervising/mentoring team members. Also included as a major duty was reviewing team member reports for technical accuracy.

1998-2004 **MACTEC Engineering and Consulting Inc.** **Wilmington, NC**
Senior Scientist
Major duties include performing and supervising due diligence and compliance services relating to agribusiness industry, manufacturing industries commercial properties and marinas in NC, NY, FL and SC; asbestos and mold inspections.

1993-1998 **Rizzo Associates, Inc.** **Hartford, CT**
Environmental Scientist II
Major duties included performing due diligence relating to commercial and manufacturing industries; Specific areas of technical expertise include: Management Systems Audits for the Massachusetts Highway Department, proposals for Phase I and Phase II hazardous materials investigations, Health and Safety plans, UST removals, limited environmental risk assessment evaluations, Phase I and II hazardous materials investigations and supervision of contractors during investigatory and soil remediation activities.

1992-1993 **Storch Associates, Inc.** **Rocky Hill, CT**
Environmental Specialist
Major duties included conducting corridor land use evaluations for the Connecticut Department of Transportation, Phase I and II hazardous materials investigations and soil gas surveys.

1990-1992 **Muranaka Environmental, Inc.** **Honolulu, HI**
Environmental Scientist
Major duties included conducting Phase I hazardous materials investigations, asbestos surveys and soil and groundwater sampling on many of the Hawaiian Islands.

ATTACHMENT 8:

Endangered Species

USFWS Raleigh FO 10-step Package and USFWS and NCORR Correspondence

Gievers, Andrea

From: Gievers, Andrea
Sent: Wednesday, July 13, 2022 2:45 PM
To: Raleigh@fws.gov
Cc: leigh_mann@fws.gov
Subject: Self-Certification Letter - Cliffmore Park Apartments, Fayetteville, NC
Attachments: NCORR Self Certification USFWS Pkg - Cliffmore Park Apts.pdf

Hello:

Please accept the *Cliffmore Park Apartments* Self-Certification Letter and supporting No Effect documentation for your records. The North Carolina Office of Recovery and Resiliency (NCORR), as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD), is considering funding this Affordable Housing Development Fund Program project. Cliffmore Park Apartments is a new construction project that will result in 72 units of affordable senior living apartments for residents aged 55 years and older located in Fayetteville, Cumberland County, North Carolina. The proposed project location is 5133 Identity Lane, Fayetteville, NC 28314, close to other residential developments. Please feel free to contact me if you have any questions. Thank you for your time and assistance!

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development
NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

United States Department of the Interior
FISH AND WILDLIFE SERVICE
Raleigh ES Field Office
551-F Pylon Drive
Raleigh, North Carolina 27606

January 26, 2022

Cheryl Moody
Atlantic Shores Environmental Services Ltd
175-1 Venture Drive
Leland, NC 28451

Re: Cliffmore Park Apartments – Cumberland County

Dear Mrs. Moody:

This letter is to inform you that the Service has established an on-line project planning and consultation process which assists developers and consultants in determining whether a federally-listed species or designated critical habitat may be affected by a proposed project. For future projects, please visit the Raleigh Field Office's project planning website at https://www.fws.gov/raleigh/pp.html. If you are only searching for a list of species that may be present in the project's Action Area, then you may use the Service's Information, Planning, and Consultation System (IPaC) website to determine if any listed, proposed, or candidate species may be present in the Action Area and generate a species list. The IPaC website may be viewed at https://ecos.fws.gov/ipac/. The IPaC web site contains a complete and frequently updated list of all endangered threatened species protected by the provisions of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.)(Act), a list of federal species of concern[1] that are known to occur in each county in North Carolina, and other resources.

Section 7 of the Act requires that all federal agencies (or their designated non-federal representative), in consultation with the Service, ensure that any action federally authorized, funded, or carried out by such agencies is not likely to jeopardize the continued existence of any federally-listed endangered or threatened species. A biological assessment or evaluation may be prepared to fulfill that requirement and in determining whether additional consultation with the Service is necessary. In addition to the federally-protected species list, information on the species' life histories and habitats and information on completing a biological assessment or

[1] The term "federal species of concern" refers to those species which the Service believes might be in need of concentrated conservation actions. Federal species of concern receive no legal protection and their designation does not necessarily imply that the species will eventually be proposed for listing as a federally endangered or threatened species. However, we recommend that all practicable measures be taken to avoid or minimize adverse impacts to federal species of concern.

evaluation and can be found on our web page at http://www.fws.gov/raleigh. Please check the web site often for updated information or changes.

If your project contains suitable habitat for any of the federally-listed species known to be present within the county where your project occurs, the proposed action has the potential to adversely affect those species. As such, we recommend that surveys be conducted to determine the species' presence or absence within the project area. The use of North Carolina Natural Heritage program data should not be substituted for actual field surveys.

If you determine that the proposed action may affect (i.e., likely to adversely affect or not likely to adversely affect) a federally-protected species, you should notify this office with your determination, the results of your surveys, survey methodologies, and an analysis of the effects of the action on listed species, including consideration of direct, indirect, and cumulative effects, before conducting any activities that might affect the species. If you determine that the proposed action will have no effect (i.e., no beneficial or adverse, direct or indirect effect) on federally listed species, then you are not required to contact our office for concurrence (unless an Environmental Impact Statement is prepared). However, you should maintain a complete record of the assessment, including steps leading to your determination of effect, the qualified personnel conducting the assessment, habitat conditions, site photographs, and any other related articles.

With regard to the above-referenced project, we offer the following remarks. Our comments are submitted pursuant to, and in accordance with, provisions of the Endangered Species Act.

Based on the information provided and other information available, it appears that the proposed action is not likely to adversely affect any federally-listed endangered or threatened species, their formally designated critical habitat, or species currently proposed for listing under the Act at these sites. We believe that the requirements of section 7(a)(2) of the Act have been satisfied for your project. Please remember that obligations under section 7 consultation must be reconsidered if: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered; (2) this action is subsequently modified in a manner that was not considered in this review; or, (3) a new species is listed or critical habitat determined that may be affected by the identified action.

However, the Service is concerned about the potential impacts the proposed action might have on aquatic species. Aquatic resources are highly susceptible to sedimentation. Therefore, we recommend that all practicable measures be taken to avoid adverse impacts to aquatic species, including implementing directional boring methods and stringent sediment and erosion control measures. An erosion and sedimentation control plan should be submitted to and approved by the North Carolina Division of Land Resources, Land Quality Section prior to construction. Erosion and sedimentation controls should be installed and maintained between the construction site and any nearby down-gradient surface waters. In addition, we recommend maintaining natural, vegetated buffers on all streams and creeks adjacent to the project site.

The North Carolina Wildlife Resources Commission has developed a Guidance Memorandum (a copy can be found on our website at (http://www.fws.gov/raleigh) to address and mitigate secondary and cumulative impacts to aquatic and terrestrial wildlife resources and water quality.

We recommend that you consider this document in the development of your projects and in completing an initiation package for consultation (if necessary).

We hope you find our web page useful and informative and that following the process described above will reduce the time required, and eliminate the need, for general correspondence for species' lists. If you have any questions or comments, please contact John Ellis of this office at (919) 856-4520 ext. 26.

Sincerely,

Pete Benjamin
Field Supervisor

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Ecological Services Field Office
Post Office Box 33726
Raleigh, NC 27636-3726
Phone: (919) 856-4520 Fax: (919) 856-4556

In Reply Refer To: June 20, 2022
Project Code: 2022-0055674
Project Name: CLIFFMORE PARK APARTMENTS

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). If your project area contains suitable habitat for any of the federally-listed species on this species list, the proposed action has the potential to adversely affect those species. If suitable habitat is present, surveys should be conducted to determine the species' presence or absence within the project area. The use of this species list and/or North Carolina Natural Heritage program data should not be substituted for actual field surveys.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- Migratory Birds

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Raleigh Ecological Services Field Office
Post Office Box 33726
Raleigh, NC 27636-3726
(919) 856-4520

Project Summary

Project Code: 2022-0055674
Event Code: None
Project Name: CLIFFMORE PARK APARTMENTS
Project Type: New Constr - Above Ground
Project Description: Cliffmore Park Apartments is a proposed 72-unit senior living apartment community for residents aged 55 years and older located in Fayetteville, Cumberland County, North Carolina. The single building design consists of three floors with two elevators and a unit mix of 36- one-bedroom units and 36- two-bedroom units. The building incorporates a variety of community amenities throughout each floor and includes multiple seating and lounge areas, multi-purpose room with a kitchenette, computer area, exercise room, tenant storage units, large balconies and a laundry room. Office space for on-site management and maintenance staff as well as the mailbox kiosk are to be located within the building. A covered drive-through drop off area is provided at the main entrance. The building will have a secured controlled access system at the entry along with security cameras. Outdoor amenities will feature a covered porch, patio with picnic tables and grills, a gazebo and seating areas.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@35.05624065,-79.05301118195142,14z

Counties: Cumberland County, North Carolina

Endangered Species Act Species

There is a total of 8 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Birds

NAME	STATUS
Red-cockaded Woodpecker *Picoides borealis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7614	Endangered

Reptiles

NAME	STATUS
American Alligator *Alligator mississippiensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/776	Similarity of Appearance (Threatened)

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate
Saint Francis' Satyr Butterfly *Neonympha mitchellii francisci* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5419	Endangered

Flowering Plants

NAME	STATUS
American Chaffseed *Schwalbea americana* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1286	Endangered
Michaux's Sumac *Rhus michauxii* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5217	Endangered
Pondberry *Lindera melissifolia* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1279	Endangered
Rough-leaved Loosestrife *Lysimachia asperulaefolia* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2747	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
American Kestrel *Falco sparverius paulus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9587	Breeds Apr 1 to Aug 31
Bachman's Sparrow *Aimophila aestivalis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/6177	Breeds May 1 to Sep 30
Eastern Whip-poor-will *Antrostomus vociferus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20

NAME	BREEDING SEASON
Prairie Warbler *Dendroica discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

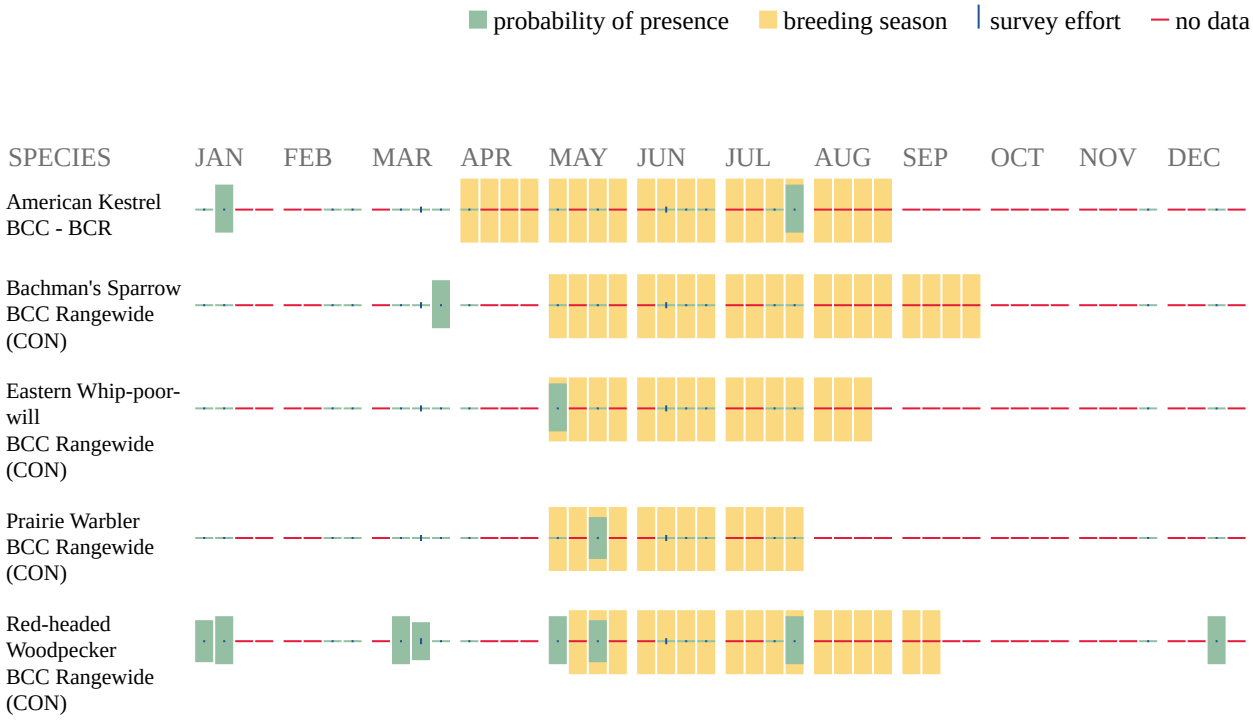
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?
The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of

certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

IPaC User Contact Information

Agency:	State of North Carolina
Name:	Andrea Gievers
Address:	North Carolina Office of Recovery and Resiliency (NCORR)
Address Line 2:	200 Park Offices Drive
City:	Durham
State:	NC
Zip:	27713
Email	andrea.l.gievers@rebuild.nc.gov
Phone:	8456821700

NC DEPARTMENT OF
NATURAL AND CULTURAL RESOURCES

Roy Cooper, **Governor**

D. Reid Wilson, **Secretary**

Misty Buchanan
Deputy Director, Natural Heritage Program

NCNHDE-17482

March 23, 2022

Andrea Gievers
NCORR
P.O. Box 110465
Durham, NC 27709
RE: Cliffmore Park Apartments, 5133 Identity Lane, Fayetteville, NC 28314

Dear Andrea Gievers:

The North Carolina Natural Heritage Program (NCNHP) appreciates the opportunity to provide information about natural heritage resources for the project referenced above.

Based on the project area mapped with your request, a query of the NCNHP database indicates that there are no records for rare species, important natural communities, natural areas, and/or conservation/managed areas within the proposed project boundary. Please note that although there may be no documentation of natural heritage elements within the project boundary, it does not imply or confirm their absence; the area may not have been surveyed. The results of this query should not be substituted for field surveys where suitable habitat exists. In the event that rare species are found within the project area, please contact the NCNHP so that we may update our records.

The attached 'Potential Occurrences' table summarizes rare species and natural communities that have been documented within a one-mile radius of the property boundary. The proximity of these records suggests that these natural heritage elements may potentially be present in the project area if suitable habitat exists. Tables of natural areas and conservation/managed areas within a one-mile radius of the project area, if any, are also included in this report.

If a Federally-listed species is found within the project area or is indicated within a one-mile radius of the project area, the NCNHP recommends contacting the US Fish and Wildlife Service (USFWS) for guidance. Contact information for USFWS offices in North Carolina is found here: https://www.fws.gov/offices/Directory/ListOffices.cfm?statecode=37.

Please note that natural heritage element data are maintained for the purposes of conservation planning, project review, and scientific research, and are not intended for use as the primary criteria for regulatory decisions. Information provided by the NCNHP database may not be published without prior written notification to the NCNHP, and the NCNHP must be credited as an information source in these publications. Maps of NCNHP data may not be redistributed without permission.

The NC Natural Heritage Program may follow this letter with additional correspondence if a Dedicated Nature Preserve, Registered Heritage Area, Land and Water Fund easement, or Federally-listed species are documented near the project area.

If you have questions regarding the information provided in this letter or need additional assistance, please contact Rodney A. Butler at rodney.butler@ncdcr.gov or 919-707-8603.

Sincerely,
NC Natural Heritage Program

Natural Heritage Element Occurrences, Natural Areas, and Managed Areas Within a One-mile Radius of the Project Area
Cliffmore Park Apartments, 5133 Identity Lane, Fayetteville, NC 28314
March 23, 2022
NCNHDE-17482

Element Occurrences Documented Within a One-mile Radius of the Project Area

Taxonomic Group	EO ID	Scientific Name	Common Name	Last Observation Date	Element Occurrence Rank	Accuracy	Federal Status	State Status	Global Rank	State Rank
Butterfly	33913	Callophrys hesseli	Hessel's Hairstreak	1972-07	H	5-Very Low	---	Significantly Rare	G3	S3
Butterfly	34488	Neonympha helicta	Helicta Satyr	1997-06-24	H?	5-Very Low	---	Significantly Rare	G3G4	S1?
Butterfly	8676	Neonympha mitchellii francisci	Saint Francis' Satyr	1997-08	H?	5-Very Low	Endangered	Significantly Rare	G2T1	S1
Crustacean	32580	Cambarus hystricosus	Sandhills Spiny Crayfish	2004-10-29	E	3-Medium	---	Significantly Rare	G2	S2
Dragonfly or Damselfly	33740	Somatochlora georgiana	Coppery Emerald	2004-Pre	H?	5-Very Low	---	Significantly Rare	G3G4	S1?
Dragonfly or Damselfly	33780	Stylurus ivae	Shining Clubtail	2004-Pre	H?	5-Very Low	---	Significantly Rare	G4	S1?
Freshwater Fish	31812	Enneacanthus chaetodon	Blackbanded Sunfish	2003-10-20	E	3-Medium	---	Significantly Rare	G3G4	S3
Vascular Plant	20660	Desmodium fernaldii	Fernald's Tick-trefoil	1992-10-02	E	3-Medium	---	Significantly Rare Peripheral	G4	S1

Natural Areas Documented Within a One-mile Radius of the Project Area

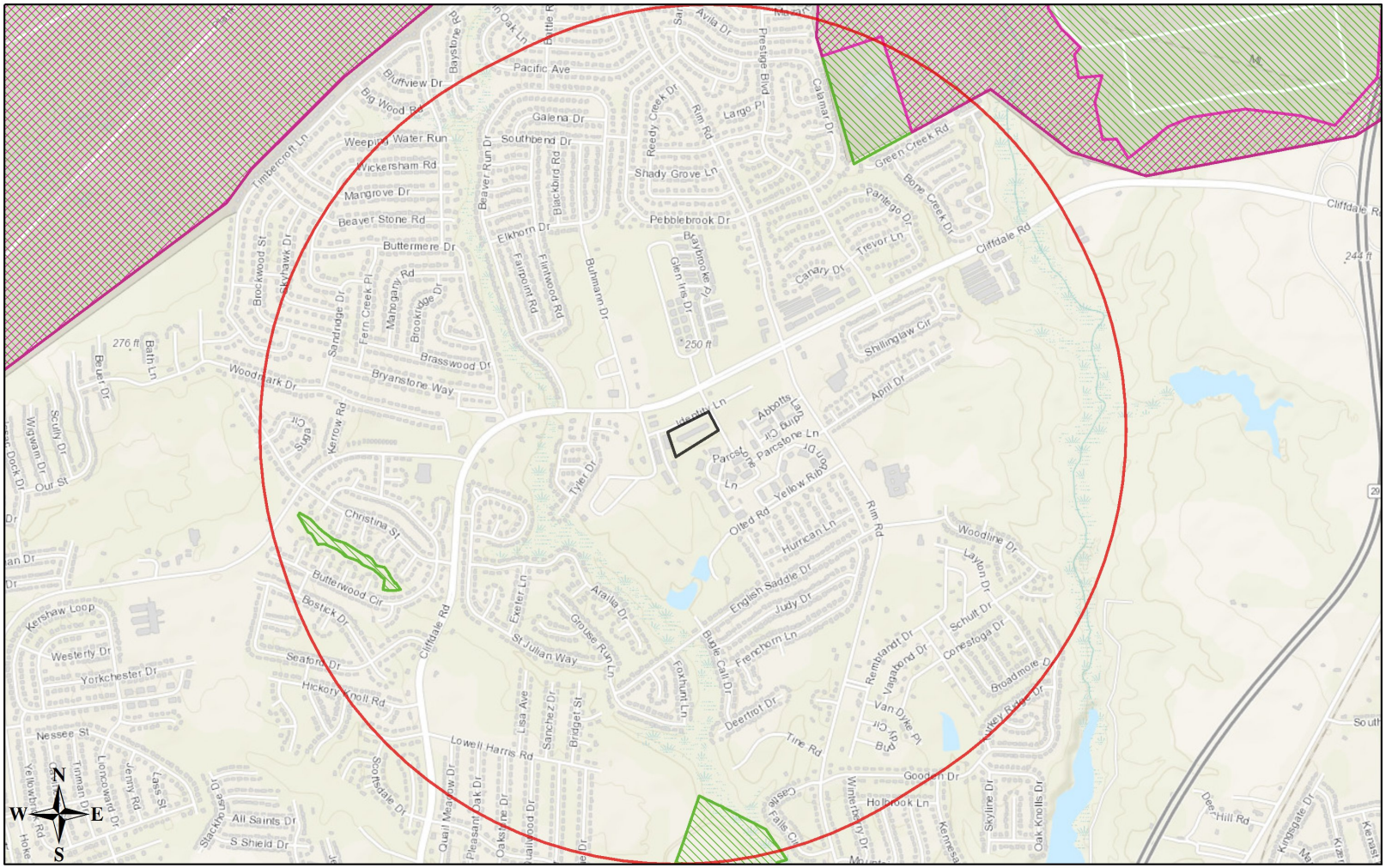
Site Name	Representational Rating	Collective Rating
Fort Bragg (Central Section)	R1 (Exceptional)	C1 (Exceptional)

Managed Areas Documented Within a One-mile Radius of the Project Area

Managed Area Name	Owner	Owner Type
City of Fayetteville Open Space	City of Fayetteville	Local Government
Cumberland County Open Space	Cumberland County	Local Government
Fort Bragg Military Reservation	US Department of Defense	Federal

Definitions and an explanation of status designations and codes can be found at https://ncnhde.natureserve.org/help. Data query generated on March 23, 2022; source: NCNHP, Q4, January 2022. Please resubmit your information request if more than one year elapses before project initiation as new information is continually added to the NCNHP database.

NCNHDE-17482: Cliffmore Park Apartments, 5133 Identity Lane, Fayetteville, NC 28314



March 23, 2022

- Project Boundary
- Buffered Project Boundary
- NHP Natural Area (NHNA)
- Managed Area (MAREA)

1:21,401

0 0.175 0.35 0.7 mi

0 0.275 0.55 1.1 km

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

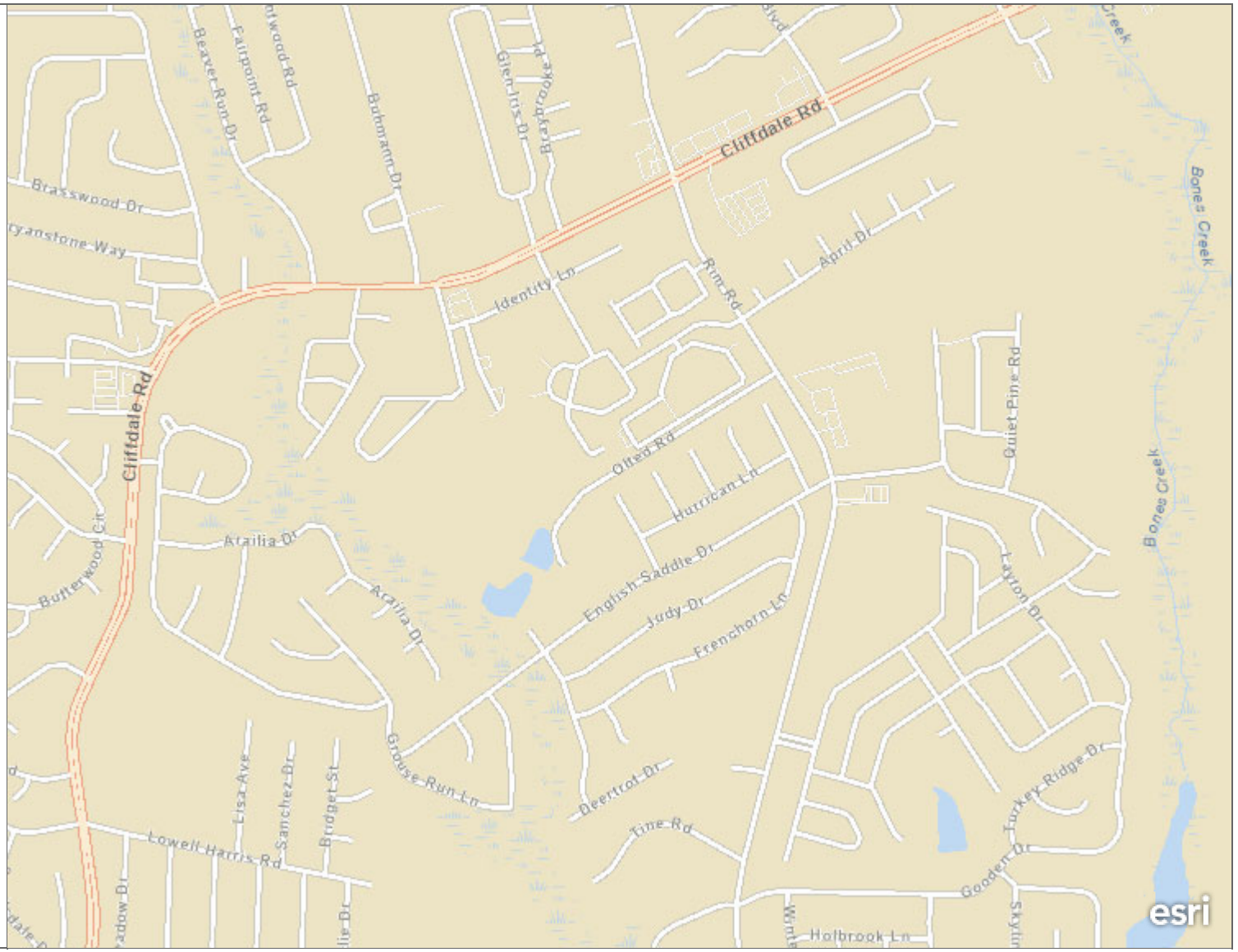
Critical Habitat for Threatened & Endangered Species [USFWS]

Final Linear Features

Final Polygon Features

Proposed Linear Features

Proposed Polygon Features



A specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection.

U.S. Fish and Wildlife Service | Esri Community Maps Contributors, County of Cumberland, State of North Carolina DOT, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

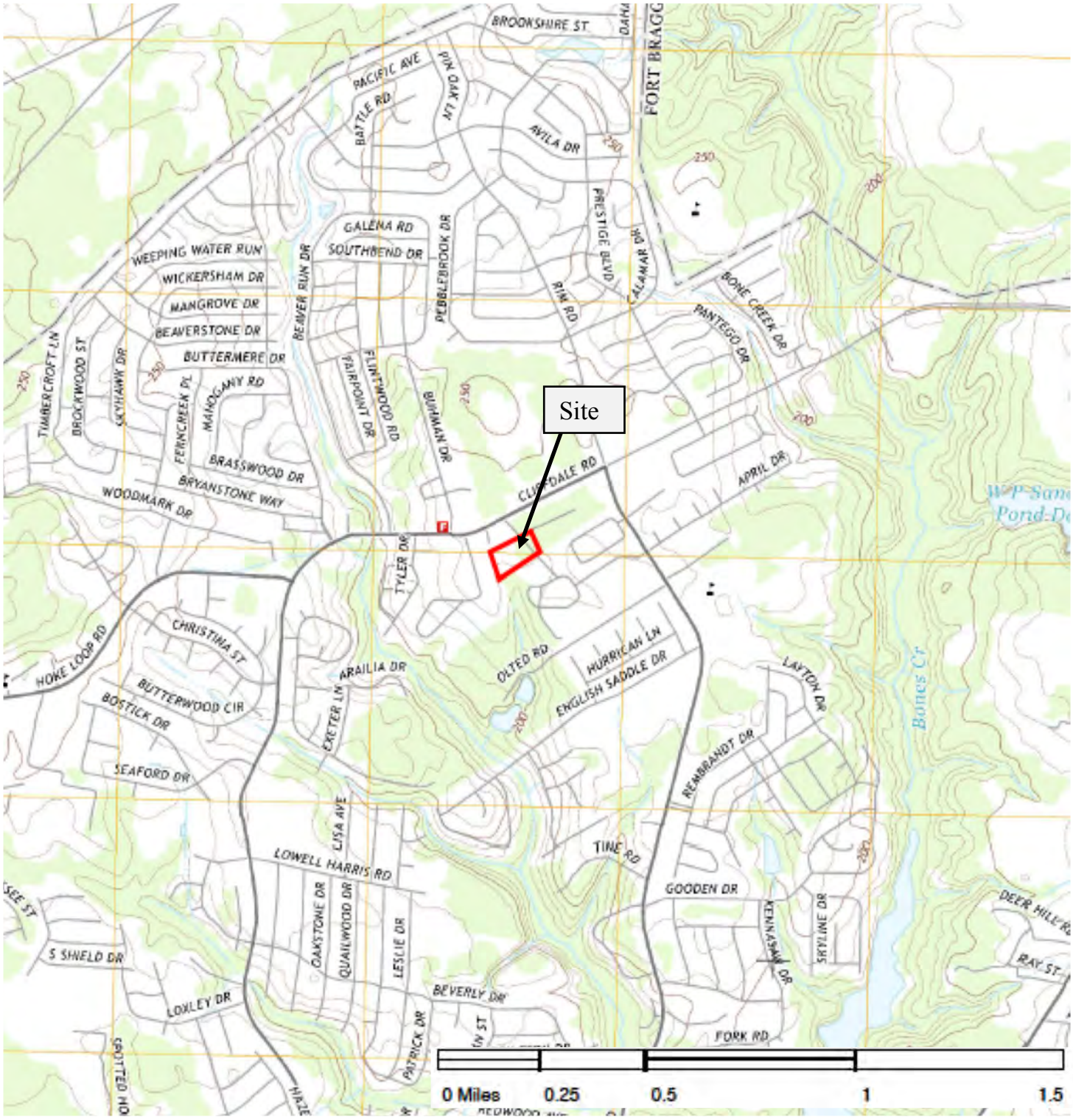


FIGURE 1: TOPOGRAPHIC MAP

Source: USGS Clifdale, North Carolina Quadrangle, 2013.

N

Phase I Environmental Site Assessment
Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
November 2021

0 50 100

FIGURE 2: AERIAL MAP

Source: Cumberland County GIS 2021 aerial

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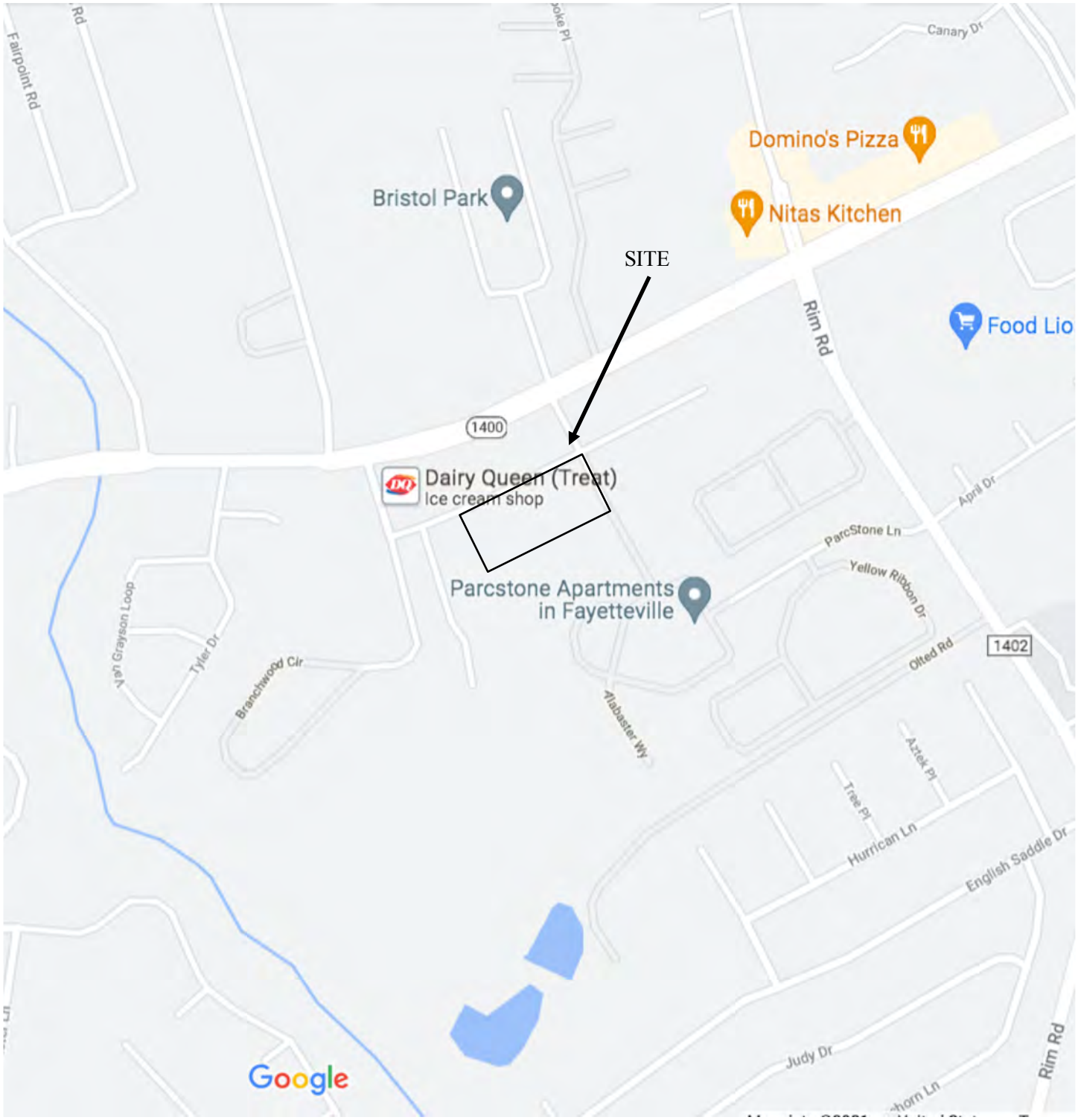
Phase I Environmental Site Assessment
Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
November 2021



Not to Scale

FIGURE 3: STREET MAP

Source: Google Maps

N

Phase I Environmental Site Assessment
Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
November 2021

2021

5133 IDENTITY LN, FAY
Show search results for 5133 I...
CLIFFDALE RD
CLIFFDALE RD
BUHMANN DR
IDENTITY LN
ENFORCEMENT DR
ABBOTTS LANDING CIR
PARCSTONE LN
PARCSTONE LN
ALABASTER WAY
DEER TRAIL DR
BRANCHWOOD CIR
35.0550 -79.0499 Degrees
CCGIS \ ESRI Charlotte | CCGIS | CCGIS - TAX MAPPING
POWERED BY esri

Photograph 1 – View of the on-site structure looking south

Photograph 2 - View of the on-site structure looking southeast

Photograph 3 - View of interior of the on-site structure

Photograph 4 - View of the crawl space of the on-site structure

Photograph 5 - View of the site looking northeast

Photograph 6 – View of the southern property line looking west

Photograph 7 – West and northwestern adjacent properties

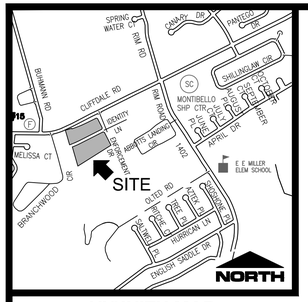
Photograph 8 – Northern adjacent property

Photograph 9 – Vie of trash along the road and northern portion of the site

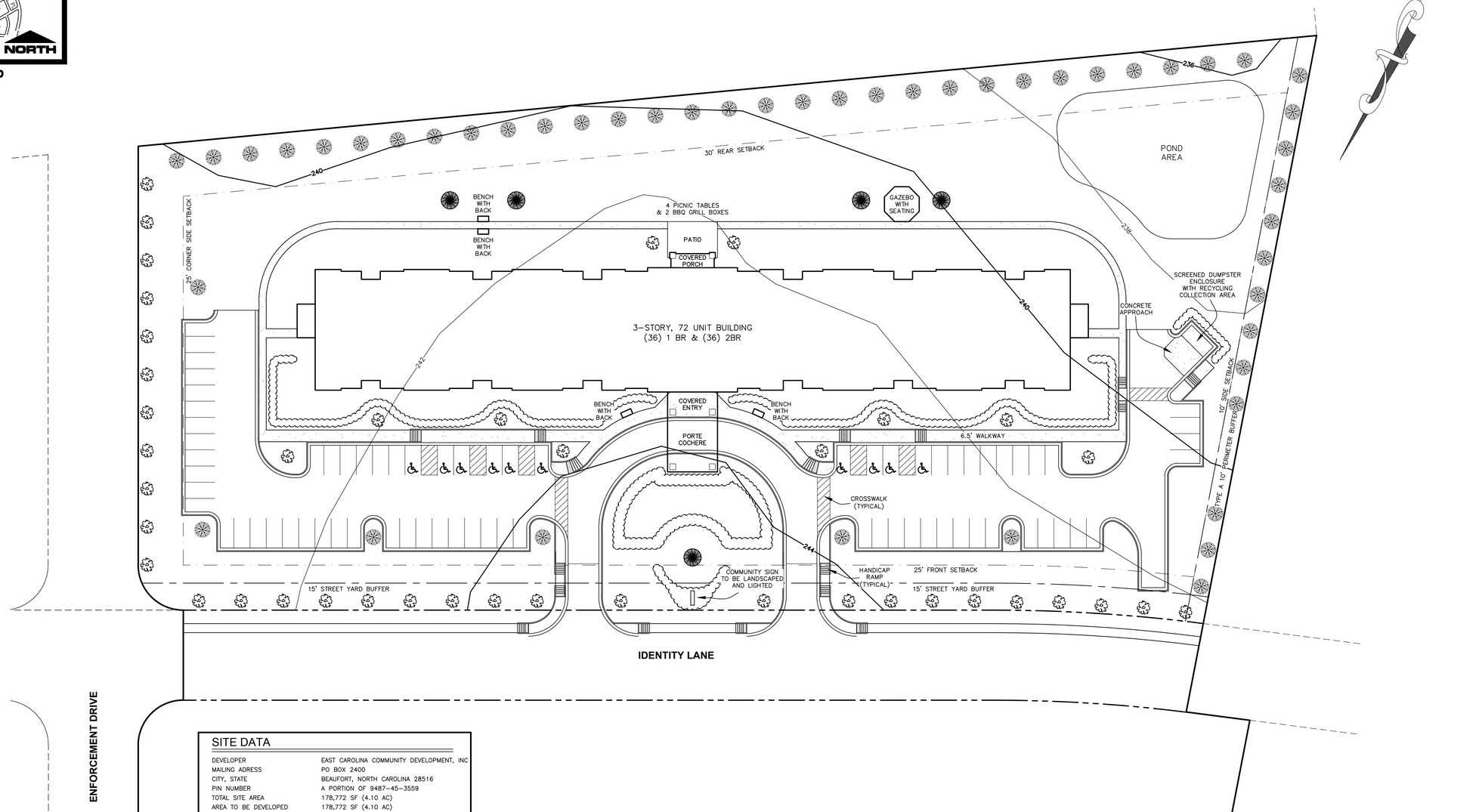
Photograph 10 – View of the northeastern adjacent property

Photograph 11 – View of the northern adjacent property and the site looking southwest

Photograph 12 – View of the southern adjacent property



VICINITY MAP
NOT TO SCALE



SITE DATA

DEVELOPER	EAST CAROLINA COMMUNITY DEVELOPMENT, INC
MAILING ADRESS	PO BOX 2400
CITY, STATE	BEAUFORT, NORTH CAROLINA 28516
PIN NUMBER	A PORTION OF 9487-45-3559
TOTAL SITE AREA	178,772 SF (4.10 AC)
AREA TO BE DEVELOPED	178,772 SF (4.10 AC)
CURRENT ZONING	MR-5
EXISTING USE	VACANT
PROPOSED USE	APARTMENTS
DISTURBED/DENUDED AREA	X.XX AC
OPEN SPACE	
REQUIRED (10% OF SITE)	17,877 SF (0.41 AC)
PROVIDED	XX,XXX SF (0.XX AC)
MR-5 SETBACKS REQUIRED:	
FRONT & CORNER SIDE	25 FT
SIDE	10 FT
REAR	30 FT
IMPERVIOUS:	
BUILDING	XX,XXX SF
PAVEMENT	XX,XXX SF
TOTAL	XX,XXX SF
PARKING:	
PROPOSED (INCLUDING HANDICAP)	72

SITE DATA:

TRACT AREA	4.10 AC±
NUMBER OF UNITS	72
PARKING PROVIDED	72

NOTES:
1. ALL SITE FURNISHINGS & AMENITIES TO BE HANDICAP ACCESSIBLE AS REQUIRED.
2. ALL CROSSWALKS TO HAVE HANDICAP RAMPS AR SIDEWALK CONNECTIONS.
3. PROJECT WILL INCLUDE 5% (4 UNITS) TYPE-A AND AN ADDITIONAL 5% (4 UNITS) TYPE-A UNITS WITH ROLL-IN SHOWERS.
4. TOTAL UNITS INCLUDE 10% TARGETED TO PERSONS WITH DISABILITIES AND/OR HOMELESS.
5. SITE AMENITIES INCLUDE:
   A. COVERED DRIVE-THRU ENTRY
   B. EXERCISE ROOM
   C. INDOOR AND OUTDOOR SEATING AREAS - 4 BENCHES WITH BACK TO BE LOCATED ON SITE.
   D. RESIDENT COMPUTER CENTER
   E. TENANT STORAGE AREAS
   F. MULTI-PURPOSE ROOM
   G. GAZEBO
6. PROJECT TO COMPLY WITH NCHFA 2021 QAP
7. LANDSCAPE PLAN TO MEET OR EXCEED NCHFA AND THE CITY OF FAYETTEVILLE REQUIREMENTS.

GRAPHIC SCALE
30 0 15 30 60 120
(IN FEET)
1 inch = 30 ft.

4Dsite solutions
civil engineering | land surveying
409 Chicago Drive, Suite 112, Fayetteville, NC 28306
office | 910-426-6777 fax | 910-426-5777 licenses number | C-2354
www.4Dsitesolutions.com

REVISIONS

PROGRESS DRAWINGS
DO NOT USE FOR CONSTRUCTION

PROJECT NAME

CLIFFMORE PARK APARTMENTS

SITE PLAN

CLIENT

EAST CAROLINA COMMUNITY DEVELOPMENT, INC

PO Box 2400
Beaufort, North Carolina 28516
Phone: (252) 504-3996

PROJECT INFORMATION

DESIGNED BY:	SEAN
DRAWN BY:	SEAN
CHECKED BY:	SCOTT
PROJECT NUMBER:	1151

DRAWING SCALE

HORIZONTAL: 1"=30'

DATE DRAWN

APRIL 23, 2021

SHEET NUMBER

1

OF 1

I:\Cliffmore Construction\1151 Cliffmore Park Apartments\Civil_3D\DWG\SITE PLANS\1151-SITE PLAN-01-07-21.dwg • 2DCONCEPTUAL • 4.23.2021 5:55:28 PM

Species Conclusions Table

Project Name: Cliffmore Park Apartments

Date: 6/23/22

Species / Resource Name	Conclusion	ESA Section 7 / Eagle Act Determination	Notes / Documentation
Bald Eagle	Unlikely to disturb nest	No Eagle Act Permit required	Trees are not present on site.
American Alligator	No effect	No effect	Nether a habitat nor foraging areas are present on the site.
Monarch Butterfly	No effect	No effect	The site area could be a habitat. However milkweed was not observed on the site on the day. of the site visit
Saint Francis' Satyr Butterfly	No effect	No effect	The site is not a habitat. No wet meadows are present on the site
American Chaffseed	No effect	No effect	The site is not a habitat - pine flat, fire maintained savannas or transition area between peaty wetlands and sandy soils.
Michaux's Sumac	No effect	No effect	The site is not a habitat - dry rocky or sandy woodlands over bedrock
Pondberry	No effect	No effect	The plants habitat is not located on the site. Poorly drained, swampy depressions associated with small sand dunes
Rough-leaved Loosestrife	No effect	No effect	The habitat is not located on the site -the site is not a moist area between long leaf pines and wet shrubby areas
Red-cockaded Woodpecker	No effect	No effect	Neither habitat nor forage areas are located on the site. Trees are not present on the site

Acknowledgement: I agree that the above information about my proposed project is true. I used all of the provided resources to make an informed decision about impacts in the immediate and surrounding areas.

President AST

Signature /Title

6/23/22

Date

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Raleigh Field Office
P.O. Box 33726
Raleigh, NC 27636-3726

Date: 6/23/22

Self-Certification Letter

Project Name Cliffmore Park Apartments

Dear Applicant:

Thank you for using the U.S. Fish and Wildlife Service (Service) Raleigh Ecological Services online project review process. By printing this letter in conjunction with your project review package, you are certifying that you have completed the online project review process for the project named above in accordance with all instructions provided, using the best available information to reach your conclusions. This letter, and the enclosed project review package, completes the review of your project in accordance with the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA), and the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c, 54 Stat. 250), as amended (Eagle Act). This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office for this certification to be valid. This letter and the project review package will be maintained in our records.

The species conclusions table in the enclosed project review package summarizes your ESA and Eagle Act conclusions. Based on your analysis, mark all the determinations that apply:

- [x] "no effect" determinations for proposed/listed species and/or proposed/designated critical habitat; and/or
- [ ] "may affect, not likely to adversely affect" determinations for proposed/listed species and/or proposed/designated critical habitat; and/or
- [ ] "may affect, likely to adversely affect" determination for the Northern long-eared bat (Myotis septentrionalis) and relying on the findings of the January 5, 2016, Programmatic Biological Opinion for the Final 4(d) Rule on the Northern long-eared bat;
- [x] "no Eagle Act permit required" determinations for eagles.

We certify that use of the online project review process in strict accordance with the instructions provided as documented in the enclosed project review package results in reaching the appropriate determinations. Therefore, we concur with the "no effect" or "not likely to adversely affect" determinations for proposed and listed species and proposed and designated critical habitat; the "may affect" determination for Northern long-eared bat; and/or the "no Eagle Act permit required" determinations for eagles. Additional coordination with this office is not needed. Candidate species are not legally protected pursuant to the ESA. However, the Service encourages consideration of these species by avoiding adverse impacts to them. Please contact this office for additional coordination if your project action area contains candidate species. Should project plans change or if additional information on the distribution of proposed or listed species, proposed or designated critical habitat, or bald eagles becomes available, this determination may be reconsidered. This certification letter is valid for 1 year. Information about the online project review process including instructions, species information, and other information regarding project reviews within North Carolina is available at our website http://www.fws.gov. If you have any questions, you can write to us at Raleigh@fws.gov or please contact Leigh Mann of this office at 919-856-4520, ext. 10.

Sincerely,

/s/Pete Benjamin

Pete Benjamin
Field Supervisor
Raleigh Ecological Services

Enclosures - project review package

ATTACHMENT 9:

Explosive and Flammable Hazards

HUD Thermal and Explosive Hazards Worksheet

See also **Attachment 7** – Phase I ESA site visit photographs, aerial maps, NEPAssist Documentation, NC DEQ DWM Documentation, and EDR in Phase I Appendix.

Thermal and Explosive Hazards

Project Name	Investigator(s)	Site Visit Date
Cliffmore Park Apartments	Cheryl Moody	11/16/21

Part I –Above Ground Storage Tanks – Site Review

Are any above ground storage tanks visible from the site?

☐ Yes ☒ No

If yes, are these tanks 100-gallons or larger?

☐ Yes ☐ No

List visible tanks						
Tank Identifier	Tank Distance (ft)	Tank Size/Contents	Flammable? (Yes or No)	Pressurized? (Yes or No)	ASD[1] (ft) Thermal Radiation	ASD (ft) Blast Pressure

[1]ASD = Acceptable Separation Distance as defined in "Siting of HUD-Assisted Projects Near Hazardous Facilities"

Is the project site within the ASD of any above ground storage tank visible from the site?

☐ Yes ☐ No

If yes, list the proposed mitigation strategies or reject the site?

Mitigation (attach additional documentation

Part II –Above Ground Storage Tanks – Agency Consultation

Has consultation with the Local Planning, Building, Public Safety or Fire Department indicated the presence of existing or planned thermal/explosive hazards that may affect the site (Attach record of consultation)?

☐ Yes ☒ No

If yes, list the proposed mitigation strategies or reject the site?

Mitigation (attach additional documentation

Part III – Above Ground Storage Tanks – Record Review

Are above ground storage tanks, which are visible on aerial photographs and USGS topographic maps, located within 1-mile of the site (Attach copies of documents reviewed)?

☐ Yes ☒ No (Refer to the EDR report within the Phase I ESA)

If yes, are these tanks 100-gallons or larger?

☐ Yes ☐ No

List visible tanks						
Tank Identifier	Tank Distance (ft)	Tank Size/Contents	Flammable? (Yes or No)	Pressurized? (Yes or No)	ASD[1] (ft) Thermal Radiation	ASD (ft) Blast Pressure

[1]ASD = Acceptable Separation Distance as defined in "Siting of HUD-Assisted Projects Near Hazardous Facilities"

Is the project site within the ASD of any above ground storage tank?

☐ Yes ☐ No

If yes are there acceptable barriers (natural or manmade) between the site and the tank?

☐ Yes ☐ No

Identify Acceptable Barriers[2]

[2]Acceptable barriers must meet the conditions of 24 CFR § 51.205

If no, list the proposed mitigation strategies or reject the site?

Mitigation (attach additional documentation
Additional Comments or Recommendations

Cheryl Moody

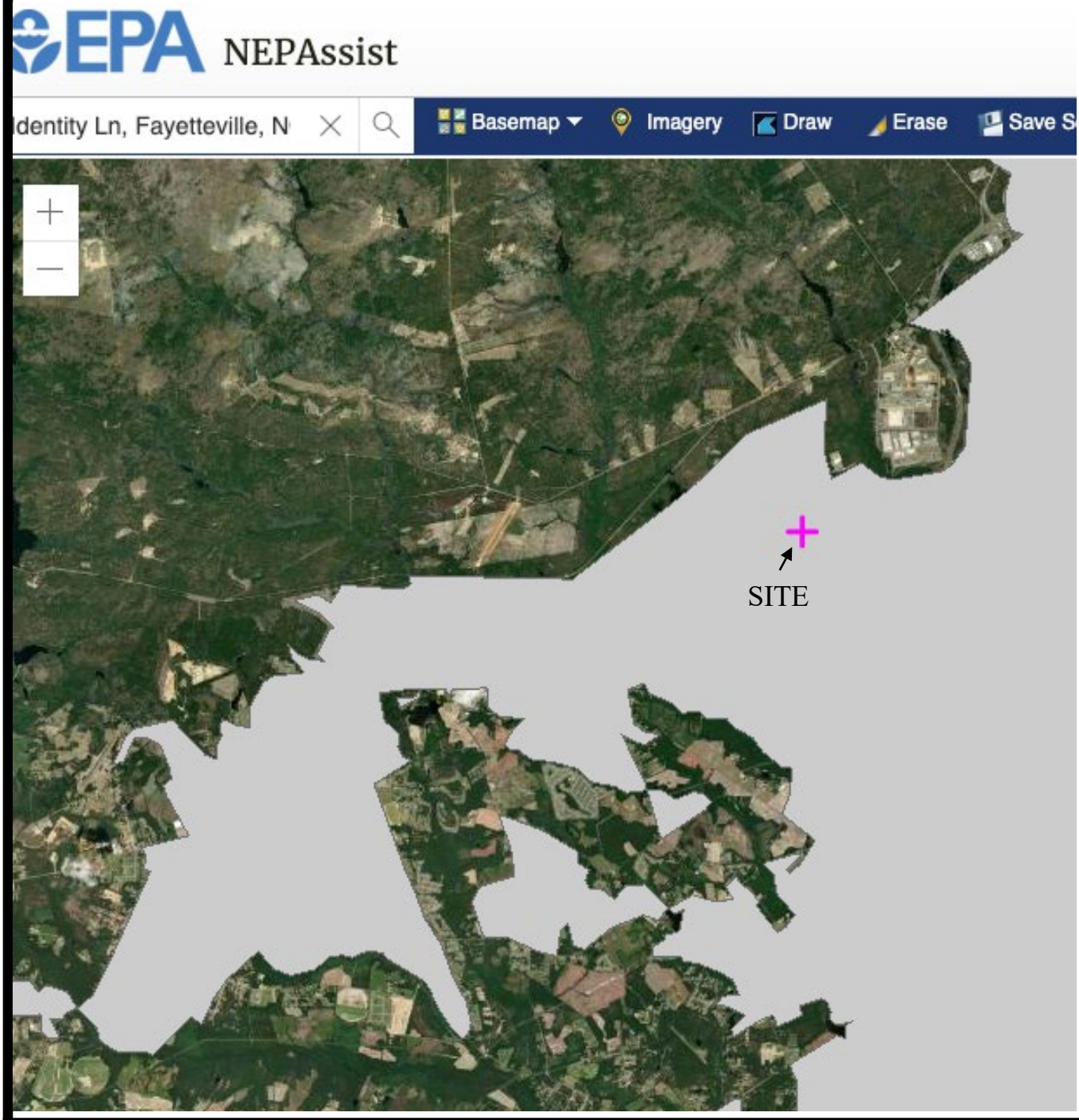
Lead Investigator's Signature

11/17/21

Date

ATTACHMENT 10:

Farmlands Protection



Not to Scale

FIGURE 11: Urban Area

Source: https://www.epa.gov/nepa/nepassist

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Proposed Cliffmore Park Apartments
Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
February 2022

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Cumberland County, North Carolina

December 28, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,400 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County, North Carolina
Survey Area Data: Version 22, Sep 3, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 13, 2014—Feb 4, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
WaB	Wagram loamy sand, 0 to 6 percent slopes	4.0	100.0%
Totals for Area of Interest		**4.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cumberland County, North Carolina

WaB—Wagram loamy sand, 0 to 6 percent slopes

Map Unit Setting

National map unit symbol: w72m
Elevation: 80 to 330 feet
Mean annual precipitation: 38 to 55 inches
Mean annual air temperature: 59 to 70 degrees F
Frost-free period: 210 to 265 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Wagram and similar soils: 90 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wagram

Setting

Landform: Ridges on marine terraces, broad interstream divides on marine terraces
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

Ap - 0 to 8 inches: loamy sand
E - 8 to 24 inches: loamy sand
Bt - 24 to 75 inches: sandy clay loam
BC - 75 to 83 inches: sandy loam

Properties and qualities

Slope: 0 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 60 to 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Bibb, undrained

Percent of map unit: 3 percent

Landform: Flood plains
Landform position (two-dimensional): Toeslope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: Yes

Johnston, undrained

Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: Yes

References

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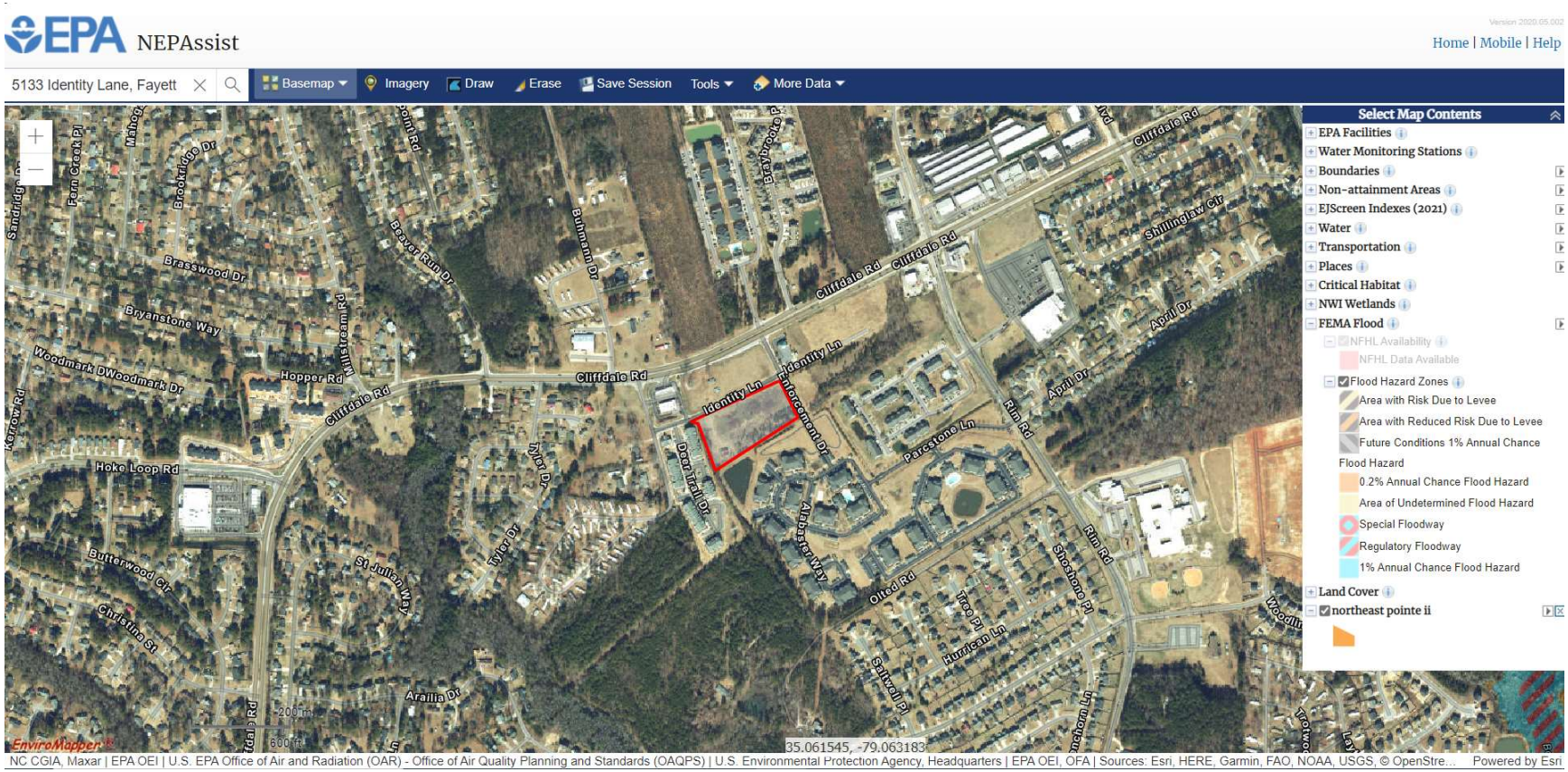
ATTACHMENT 11:

FEMA FIRM and FIRMette

CLIFFMORE PARK – FEMA FIRM



National Flood Hazard Layer FIRMette

FEMA

79°3'29"W 35°3'35"N

79°2'52"W 35°3'6"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/3/2022 at 11:12 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

ATTACHMENT 12:

Historic Preservation

North Carolina Department of Natural and Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

May 4, 2022

MEMORANDUM

TO: Andrea Gievers Andrea.L.Gievers@Rebuild.NC.Gov
N.C. Office of Recovery & Resiliency
Department of Public Safety

FROM: Ramona M. Bartos, Deputy
State Historic Preservation Officer RSL for Ramona M. Bartos

SUBJECT: Construct Cliffmore Park Apartments, 5133 Identity Lane, Fayetteville, Cumberland County, 9487-45-3559, 22-E-0000-0186, ER 22-0134

Thank you for your email of March 22, 2022, regarding the above-referenced undertaking. We have reviewed the submittal and offer the following comments.

We have determined that the project as proposed will not have an effect on any historic structures.

There are no known archaeological sites within the proposed project area. Based on our knowledge of the area, it is unlikely that any archaeological resources that may be eligible for inclusion in the National Register of Historic Places will be affected by the project. We, therefore, recommend that no archaeological investigation be conducted in connection with this project.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov . In all future communication concerning this project, please cite the above referenced tracking number.

North Carolina Department of Public Safety

Office of Recovery and Resiliency

Roy Cooper, Governor
Casandra Skinner Hoekstra, Interim Secretary

Laura H. Hogshead, Director

March 22, 2022

Ms. Renee Gledhill-Earley
Environmental Review Coordinator
NC State Historic Preservation Office
4617 Mail Service Center
Raleigh, NC 27699-4617

Via email: Environmental.Review@ncdcr.gov
renee.gledhill-earley@ncdcr.gov

RE: State Historic Preservation Office Request for Concurrence
Section 106 Review - HUD CDBG-DR Program
Proposed Cliffmore Park Apartments – SCH #22-E-0000-0186
5133 Identity Lane
Fayetteville, NC 28314

Dear Ms. Gledhill-Earley:

In accordance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations, 36 CFR Part 800, we are providing information for your review and concurrence regarding the above-referenced project. The North Carolina Office of Recovery and Resiliency (NCORR), as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD), is serving as the responsible entity for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. NCORR is acting on behalf of HUD in providing the enclosed project information and request for consultation. *A separate environmental review is being performed by NCHFA for a HUD HOME Program funding application – see SCH# 22-E-0000-0186. A copy of your Office's response for that review is included in* ***Attachment 4***.

Area of Potential Effects (APE) under §800.16(d): We have defined the APE as the boundary of the Subject Property consisting of 5133 Identity Lane, Fayetteville, NC 28314 and identified as Cumberland County Parcel ID number 9487-45-3559.

The State of North Carolina was adversely impacted by the landfall of Hurricanes Matthew (October 8, 2016) and Florence (September 14, 2018). These hurricanes damaged or destroyed hundreds of homes worsening the affordable housing shortage. This proposed project will increase affordable housing inventory for low- and moderate-income seniors.

Mailing Address:
Post Office Box 110465
Durham, NC 27709

NCORR
NORTH CAROLINA OFFICE OF RECOVERY AND RESILIENCY

Telephone: 984.833.5350
www.ncdps.gov
www.rebuild.nc.gov

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Proposed Project Description: Cliffmore Park Apartments is a proposed seventy-two (72) unit senior living apartment community for residents fifty-five (55) and older. The single building design consists of three floors with two elevators and a unit mix of thirty-six (36) one-bedroom units and thirty-six (36) two-bedroom units. Outdoor amenities will feature a covered porch, patio with picnic tables and grills, a gazebo and seating areas. The proposed project is described further in the Consultant Letter in **Attachment 1**.

We have made a Finding of *"No Historic Properties Affected"* pursuant to 36 CFR 800.4(d)(1) based on the following:

> A review of the Subject Property in the National Register of Historic Places, North Carolina State Historic Preservation Office's HPOWEB, and site review performed by Atlantic Shores Environmental Services, Ltd., identified no publicly recorded historic properties which are locally designated or listed in or eligible for inclusion in the State or National Register of Historic Places are located on or adjacent to the Subject Property (**Attachment 2**). The Subject Property is primarily vacant vegetated land located south of Identity Lane. The Subject Property appears to have been developed as agricultural property some time prior to 1938 and has been agricultural or vacant land since, according to the historic aerials. By 2006, the site was cleared of vegetation and a water feature was present on the southern portion of the site for a short time in 2010. This corresponds to the construction of the southern adjoining Parestone Apartments and is likely a temporary storm water control for the construction. A site reconnaissance was conducted on November 16, 2021, and only one structure was present on the site. An abandoned house was located on the southwestern portion of the site. Based on aerial photographs, this structure has been present on the site for less than three years. This house was observed on the 2020 and 2021 historical aerial photographs but was not present on the 2018 aerial. The house is situated on a crawl space and there are no written records identified for the structure. Based on visual observations, it appears that this structure was moved to the site from another property. The age of the structure is not known. The proposed development will be a multifamily apartment complex and, therefore, typical clearing and grading will take place on the Subject Property during construction. The Subject Property photographs are included in **Attachment 3**.

Attached for your review are copies of relevant documents supporting our finding, along with photographs and a map showing the location of the Subject Property. This documentation satisfies requirements set forth at §800.11(d).

NCORR processes environmental reviews for proposed projects funded with HUD CDBG-DR on a case-by-case basis. A consultation request for the proposed project described herein was sent to the Catawba Indian Nation. A notification of the proposed project was sent to the Lumbee Tribe. In accordance with Section 101(d)(6)(B) of the NHPA of 1966, as amended (16 U.S.C. 470f), and its implementing regulations, 36 CFR Part 800, this letter serves as notification of the proposed action.

NCORR respectfully requests your review of the proposed project described herein. In accordance with §800.4(d)(1)(i), your office has *thirty days* to object to this finding. Please respond within this timeframe, otherwise we will assume that you concur with our finding. If you concur, please sign on the line below and return a copy of this letter by email to Andrea Gievers at Andrea.L.Gievers@Rebuild.NC.gov.

If you have any questions or require additional information regarding this request, please feel free to contact Andrea Gievers at (845) 682-1700 or via email at Andrea.L.Gievers@Rebuild.NC.gov. Thank you for your time and assistance.

Sincerely,

Andrea Gievers

Andrea Gievers, JD, MSEL, ERM
NCORR Environmental Subject Matter Expert

Proposed Cliffmore Park Apartments Enclosures:
Attachment 1: Consultant Letter
Attachment 2: Proposed Project Location, NRHP and NC HPOWEB Maps
Attachment 3: Subject Property Photographs
Attachment 4: NC SHPO Response for NCHFA's Environmental Review

Concurrence:

_____

State Historic Preservation Officer Date

ATTACHMENT 1:

Consultant Letter

Atlantic Shores
Environmental Services, Ltd

January 5, 2022

Claudia Young
551-F Pylon Road
Raleigh, North Carolina 27606

Reference: Report of No Historical Properties Affected
5133 Identity Lane
Fayetteville, North Carolina
ASE Project No. 1523

Ms. Young,

The site located at 5133 Identity Lane in Fayetteville and includes Cumberland County Parcel ID number 9487-45-3559. The site is an approximate 4.1-acre tract of land owned by East Point Homes, LLC. The site is primarily vacant vegetated land located south of Identity Lane. However, an abandoned residence is located on the southwestern side of the site. Based on aerial photographs, this structure has been present on the site for less than three years. Based on visual observations, it appears that this structure was moved to the site from another property. The age of the structure is not known. The site was used as an agricultural field as far back as 1938. By 2006 the site was cleared of vegetation and a water feature was present on the southern portion of the site for a short time in 2010. This corresponds to the construction of the southern adjoining Parestone Apartments and is likely a temporary storm water control for the construction. Cliffmore Park Apartments is a proposed seventy-two (72) unit senior living apartment community for residents fifty-five (55) and older. The single building design consists of three floors with two elevators and a unit mix of thirty-six (36) one-bedroom units and thirty-six (36) two-bedroom units. Outdoor amenities will feature a covered porch, patio with picnic tables and grills, a gazebo and seating areas. See the attached figures for maps of the area and site.

ASE utilized EDR package historic aerials, topographic maps, city directories, and Sanborn maps during the Phase I Environmental Assessment conducted in accordance with ASTM E1527-13 and ASTM E1527-21. Other databases utilized for historic research include:

- Cumberland County Registry of Deeds
- Cumberland County GIS
- City of Fayetteville
- Fayetteville Clerks Office
- Fayetteville Fire Department
- Physiography of North Carolina, compiled by the North Carolina Geological Society, dated 2004.

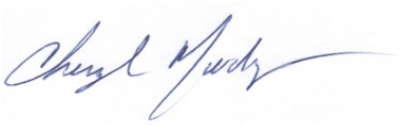
- NCDEQ Records Review
- User Questionnaire prepared by Keith Walker, President of Eastpoint Homes, LLC.
- Google Earth Historic Aerials
- Historicsites.nc.gov
- NC.gov interactive map of the National Registry of Historic Places in NC
- WWW.NPS.gov

The site appears to have been developed as agricultural property some time prior to 1938 and has been agricultural or vacant land since, according to the historic aerials. A site reconnaissance was conducted on November 16, 2021, and only one structure was present on the site. An abandoned house was located on the southwestern portion of the site. This house was observed on the 2020 and 2021 historical aerial photographs but was not present on the 2018 aerial. The house is situated on a crawl space and there are no written records identified for the structure. Neither the National Registry of Historic Places, nor the North Carolina Historic interactive map shows historic sites or buildings on the site. Based on our review, no historic properties will be affected by this project.

ASE appreciates the opportunity to provide our environmental consulting services to you on this project. If there are questions regarding this report, or a need for further information, please contact us at 910-371-5980.

Sincerely,

ATLANTIC SHORES ENVIRONMENTAL SERVICES, LTD.



Cheryl J. Moody, PE, REM
Principal Engineer

Daniel J. Schiwinger
Staff Scientist

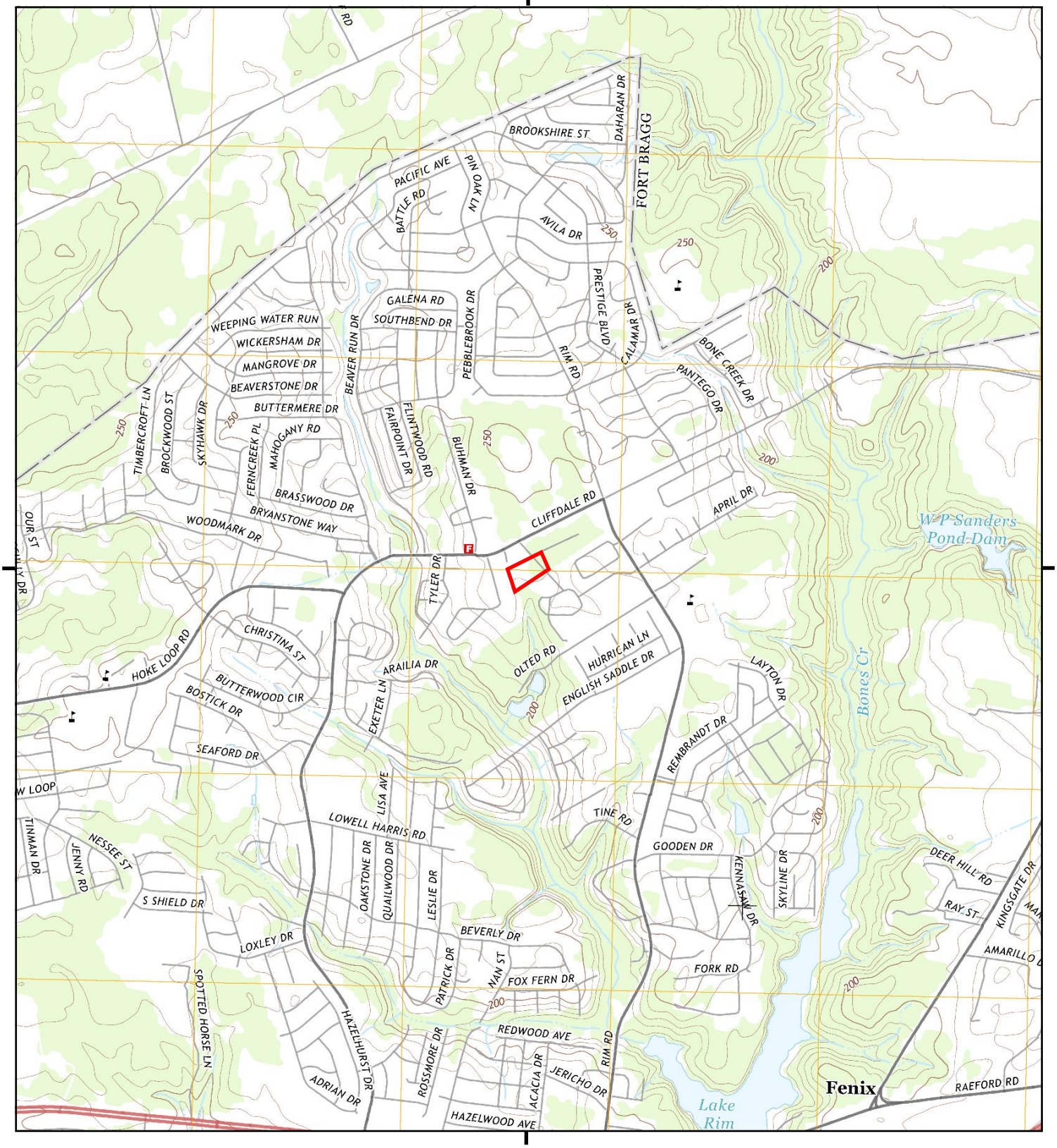
Attachments: USGS Quad Map
Figures
Site Photographs

ATTACHMENT 2:

Proposed Project Location, NRHP and NC HPOWEB Maps

Historical Topo Map

2013



This report includes information from the following map sheet(s).

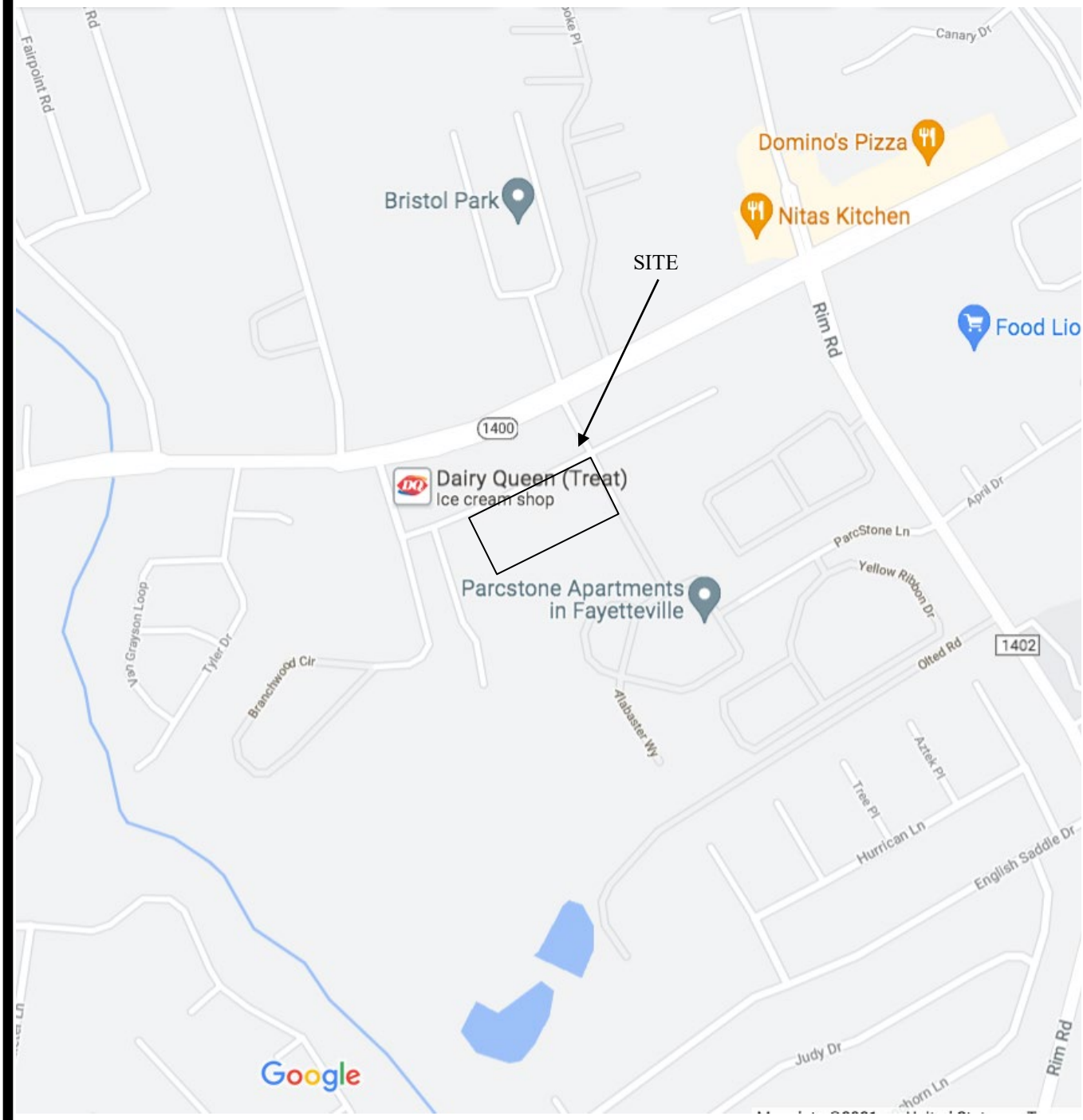
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Clifdale, 2013, 7.5-minute

SITE NAME: Cliffmore Park
ADDRESS: 5133 Identity Lane
Fayetteville, NC 28314
CLIENT: Atlantic Shores Environmental

N



Not to Scale

FIGURE 1: STREET MAP

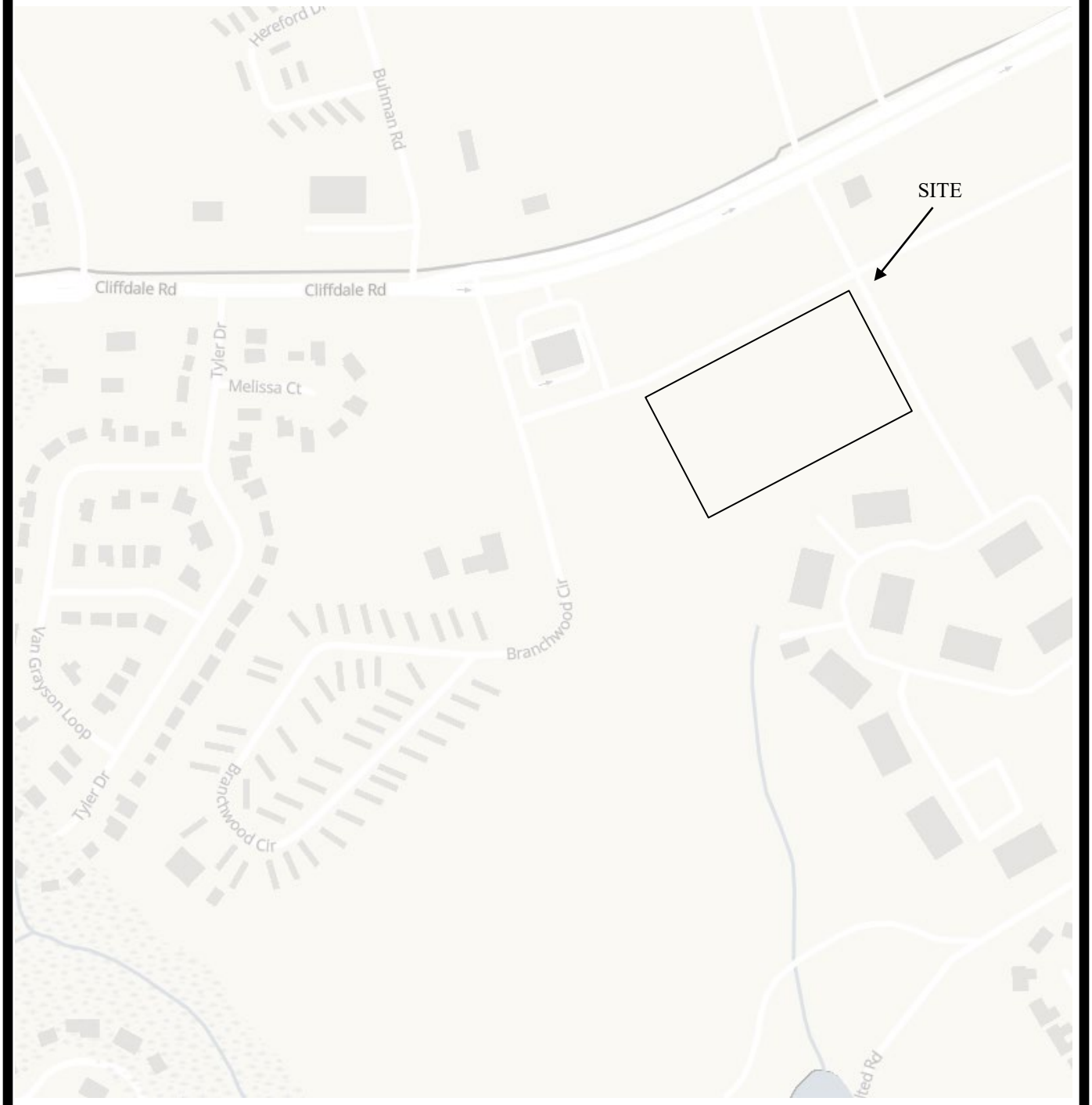
Source: Google Maps

N

Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
January 2022



Not to Scale

FIGURE 3: NATIONAL REGISTRY MAP

Source: National Registry of Historic Places Database

N

Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
January 2022

Not to Scale

FIGURE 2: NC HISTORICAL PROPERTIES

Source: NC Historic Preservation Online Data

N

Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
January 2022

ATTACHMENT 3:

Subject Property Photographs

Photograph 1 – View of the on-site structure looking south

Photograph 2 - View of the on-site structure looking southeast

Photograph 3 - View of interior of the on-site structure

Photograph 5 - View of the site looking northeast

Photograph 6 – View of the southern property line looking west

Photograph 7 – West and northwestern adjacent properties

Photograph 8 – Northern adjacent property

Photograph 9 – Vie of trash along the road and northern portion of the site

Photograph 10 – View of the northeastern adjacent property

Photograph 11 – View of the northern adjacent property and the site looking southwest

Photograph 12 – View of the southern adjacent property

ATTACHMENT 4:

NC SHPO Response for NCHFA's Environmental Review

North Carolina Department of Natural and Cultural Resources

State Historic Preservation Office

Ramona M. Bartos, Administrator

Governor Roy Cooper
Secretary D. Reid Wilson

Office of Archives and History
Deputy Secretary, Darin J. Waters, Ph.D.

January 28, 2022

MEMORANDUM

TO: Claudia Young csyoung@nchfa.com
NC Housing Finance Agency

FROM: Renee Gledhill-Earley RGE for Ramona M. Bartos
Environmental Review Coordinator

SUBJECT: Construct Cliffmore Park Apartments, 5133 Identity Lane, Fayetteville, Cumberland County, ER 22-0134

Thank you for your letter of January 7, 2022, regarding the above-referenced undertaking. We have reviewed the submittal and offer the following comments.

We have conducted a review of the project and are aware of no historic resources which would be affected by the project. Therefore, we have no comment on the project as proposed.

The above comments are made pursuant to Section 106 of the National Historic Preservation Act and the Advisory Council on Historic Preservation's Regulations for Compliance with Section 106 codified at 36 CFR Part 800.

Thank you for your cooperation and consideration. If you have questions concerning the above comment, contact Renee Gledhill-Earley, environmental review coordinator, at 919-814-6579 or environmental.review@ncdcr.gov. In all future communication concerning this project, please cite the above referenced tracking number.

Tribal Directory Assessment Information

Contact Information for Tribes with Interests in Cumberland County, North Carolina

	Tribal Name	County Name
−	Catawba Indian Nation	Cumberland

Contact Name	Title	Mailing Address	Work Phone	Fax Number	Cell Phone	Email Address	URL
Dr. Wenonah G. Haire	THPO and Catawba Cultural Center Executive Director	1536 Tom Steven Road Rock Hill, SC 29730	(803) 328-2427 ext. 224	(803) 328-5791		wenonah.haire@catawba.com	http://www.catawbaindian.net/
Bill Harris	Chief	996 Avenue of the Nations Rock Hill, SC 29730	(803) 366-4792	(803) 327-4853		bill.harris@catawbaindian.net	http://www.catawbaindian.net/

1 - 1 of 1 results « ‹ 1 › » 10

Office 803-328-2427
Fax 803-328-5791

February 22, 2022

Attention: Andrea Gievers
NC Dept. of Public Safety
P.O. Box 110465
Durham, NC 27709

Re. THPO #	TCNS #	Project Description
2022-1119-7		Proposed Cliffmore Park Apartments – 5133 Identity Lane, Fayetteville, NC

Dear Ms. Gievers,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail Caitlin.Rogers@catawba.com.

Sincerely,

Caitlin Rogers for

Wenonah G. Haire
Tribal Historic Preservation Officer

North Carolina Department of Public Safety
Office of Recovery and Resiliency

Roy Cooper, Governor
Eddie M. Buffaloe, Jr., Secretary

Laura H. Hogshead, Director

January 13, 2022

Chief Bill Harris
Catawba Indian Nation
996 Avenue of the Nations
Rock Hill, SC 29730

RE: Section 106 Review - HUD CDBG-DR Program
Proposed Cliffmore Park Apartments
5133 Identity Lane
Fayetteville, NC 28314
Parcel #9487-45-3559

Dear Chief Bill Harris:

The North Carolina Office of Recovery and Resiliency (NCORR), as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD), is serving as the responsible entity for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. NCORR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation.

NCORR processes environmental reviews for proposed projects funded with HUD CDBG-DR on a case-by-case basis. In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470f), and its implementing regulations, 36 CFR Part 800, this letter serves as notification of the proposed action. This letter also serves as an invitation to discussion as a consulting party in this review to help identify historic properties in the proposed project area that may have religious and cultural significance to your Nation, and if such properties exist, to help assess how the proposed project might affect them. If the proposed project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

Mailing Address:
Post Office Box 110465
Durham, NC 27709

NCORR
NORTH CAROLINA OFFICE OF RECOVERY AND RESILIENCY

Phone: (984) 833-5350
www.ncdps.gov
www.rebuild.nc.gov

An Equal Opportunity Employer

Area of Potential Effects (APE) under §800.16(d): We have defined the APE as the boundary of the Subject Property consisting of a 4.1-acre site, located at 5133 Identity Lane, Fayetteville, NC 28314 and identified as Cumberland County Parcel ID number 9487-45-3559. The proposed project location maps are included in **Attachment 2** for your review.

The State of North Carolina was adversely impacted by the landfall of Hurricanes Matthew (October 8, 2016) and Florence (September 14, 2018). These hurricanes damaged or destroyed hundreds of homes worsening the affordable housing shortage. This proposed project will increase affordable housing inventory for low- and moderate-income families.

Proposed Project Description: Cliffmore Park Apartments is a proposed seventy-two (72) unit senior living apartment community for residents fifty-five (55) and older. The single building design consists of three floors with two elevators and a unit mix of thirty-six (36) one-bedroom units and thirty-six (36) two-bedroom units. Outdoor amenities will feature a covered porch, patio with picnic tables and grills, a gazebo and seating areas.

We have completed an initial review of this project in compliance with Section 106 of the NHPA and its implementing regulations 36 CFR Part 800. Based on our research of the Subject Property in the National Register of Historic Places, North Carolina State Historic Preservation Office's (NC SHPO) HPOWEB, and site review performed by Atlantic Shores Environmental Services, Ltd., no publicly recorded historic properties which are locally designated or listed in or eligible for inclusion in the State or National Register of Historic Places are located on or adjacent to the Subject Property. The results are included in **Attachment 2**.

The proposed project information has been sent to the NC SHPO in accordance with Section 106 of the NHPA and its implementing regulations, 36 CFR Part 800. The Lumbee Tribe is being sent a notification of the proposed project. The Subject Property is primarily vacant vegetated land located south of Identity Lane. The Subject Property appears to have been developed as agricultural property some time prior to 1938 and has been agricultural or vacant land since, according to the historic aerials. By 2006, the site was cleared of vegetation and a water feature was present on the southern portion of the site for a short time in 2010. This corresponds to the construction of the southern adjoining Parestone Apartments and is likely a temporary storm water control for the construction.

A site reconnaissance was conducted on November 16, 2021, and only one structure was present on the site. An abandoned house was located on the southwestern portion of the site. Based on aerial photographs, this structure has been present on the site for less than three years. This house was observed on the 2020 and 2021 historical aerial photographs but was not present on the 2018 aerial. The house is situated on a crawl space and there are no written records identified for the structure. Based on visual observations, it appears that this structure was moved to the site from another property. The age of the structure is not known. The proposed development will be a multifamily apartment complex and, therefore, typical clearing and grading will take place on the Subject Property during construction. The Subject Property photographs are included in **Attachment 3**.

With this letter, NCORR respectfully submits for your review the attached documentation for the proposed project described herein. If the APE encompasses historic properties of religious or cultural significance to your Nation, please respond within 30 days of receipt of this letter indicating a desire to consult. If you have any concerns with potential impacts of the proposed project on historic properties, please note them in your response along with your preferred principal representative's point of contact. Please respond within this timeframe, otherwise we will assume that the proposed project will have no effect to historic properties of religious or cultural significance. Please respond via email at Andrea.L.Gievers@Rebuild.NC.gov or in writing to the address listed below.

Ms. Andrea Gievers
NCORR - Environmental
ATTN: THPO Comments
P.O. Box 110465
Durham, NC 27709

If you have any questions or require additional information regarding this request, please feel free to contact Andrea Gievers at (845) 682-1700 or via email at Andrea.L.Gievers@Rebuild.NC.gov. Thank you for your time and assistance.

Sincerely,

Andrea Gievers

Andrea Gievers, JD, MSEL, ERM
NCORR Environmental Subject Matter Expert

Enclosures:
Attachment 1: Consultant Letter
Attachment 2: Proposed Project Location, NRHP and NC HPOWEB Maps
Attachment 3: Subject Property Photographs

cc: Dr. Wenonah George Haire, THPO, Catawba Indian Nation, 1536 Tom Steven Road, Rock Hill, SC 29730

ATTACHMENT 1:

Consultant Letter

Atlantic Shores
Environmental Services, Ltd

January 5, 2022

Claudia Young
551-F Pylon Road
Raleigh, North Carolina 27606

Reference: Report of No Historical Properties Affected
5133 Identity Lane
Fayetteville, North Carolina
ASE Project No. 1523

Ms. Young,

The site located at 5133 Identity Lane in Fayetteville and includes Cumberland County Parcel ID number 9487-45-3559. The site is an approximate 4.1-acre tract of land owned by East Point Homes, LLC. The site is primarily vacant vegetated land located south of Identity Lane. However, an abandoned residence is located on the southwestern side of the site. Based on aerial photographs, this structure has been present on the site for less than three years. Based on visual observations, it appears that this structure was moved to the site from another property. The age of the structure is not known. The site was used as an agricultural field as far back as 1938. By 2006 the site was cleared of vegetation and a water feature was present on the southern portion of the site for a short time in 2010. This corresponds to the construction of the southern adjoining Parestone Apartments and is likely a temporary storm water control for the construction. Cliffmore Park Apartments is a proposed seventy-two (72) unit senior living apartment community for residents fifty-five (55) and older. The single building design consists of three floors with two elevators and a unit mix of thirty-six (36) one-bedroom units and thirty-six (36) two-bedroom units. Outdoor amenities will feature a covered porch, patio with picnic tables and grills, a gazebo and seating areas. See the attached figures for maps of the area and site.

ASE utilized EDR package historic aerials, topographic maps, city directories, and Sanborn maps during the Phase I Environmental Assessment conducted in accordance with ASTM E1527-13 and ASTM E1527-21. Other databases utilized for historic research include:

- Cumberland County Registry of Deeds
- Cumberland County GIS
- City of Fayetteville
- Fayetteville Clerks Office
- Fayetteville Fire Department
- Physiography of North Carolina, compiled by the North Carolina Geological Society, dated 2004.

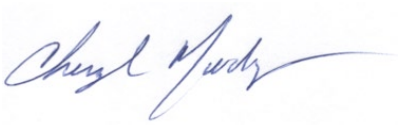
- NCDEQ Records Review
- User Questionnaire prepared by Keith Walker, President of Eastpoint Homes, LLC.
- Google Earth Historic Aerials
- Historicsites.nc.gov
- NC.gov interactive map of the National Registry of Historic Places in NC
- WWW.NPS.gov

The site appears to have been developed as agricultural property some time prior to 1938 and has been agricultural or vacant land since, according to the historic aerials. A site reconnaissance was conducted on November 16, 2021, and only one structure was present on the site. An abandoned house was located on the southwestern portion of the site. This house was observed on the 2020 and 2021 historical aerial photographs but was not present on the 2018 aerial. The house is situated on a crawl space and there are no written records identified for the structure. Neither the National Registry of Historic Places, nor the North Carolina Historic interactive map shows historic sites or buildings on the site. Based on our review, no historic properties will be affected by this project.

ASE appreciates the opportunity to provide our environmental consulting services to you on this project. If there are questions regarding this report, or a need for further information, please contact us at 910-371-5980.

Sincerely,

ATLANTIC SHORES ENVIRONMENTAL SERVICES, LTD.



Cheryl J. Moody, PE, REM
Principal Engineer

Daniel J. Schiwinger
Staff Scientist

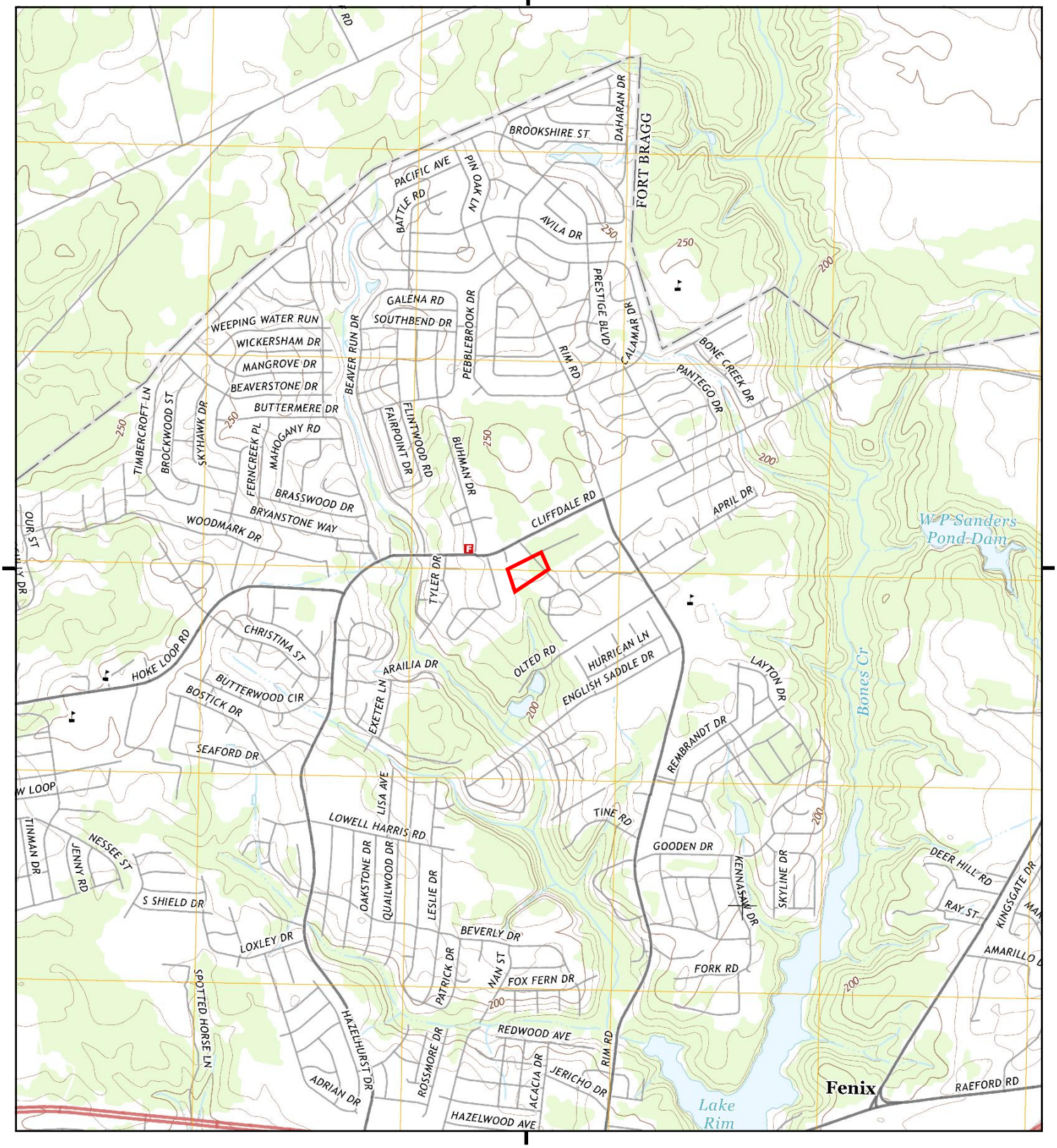
Attachments: USGS Quad Map
Figures
Site Photographs

ATTACHMENT 2:

Proposed Project Location, NRHP and NC HPOWEB Maps

Historical Topo Map

2013



This report includes information from the following map sheet(s).

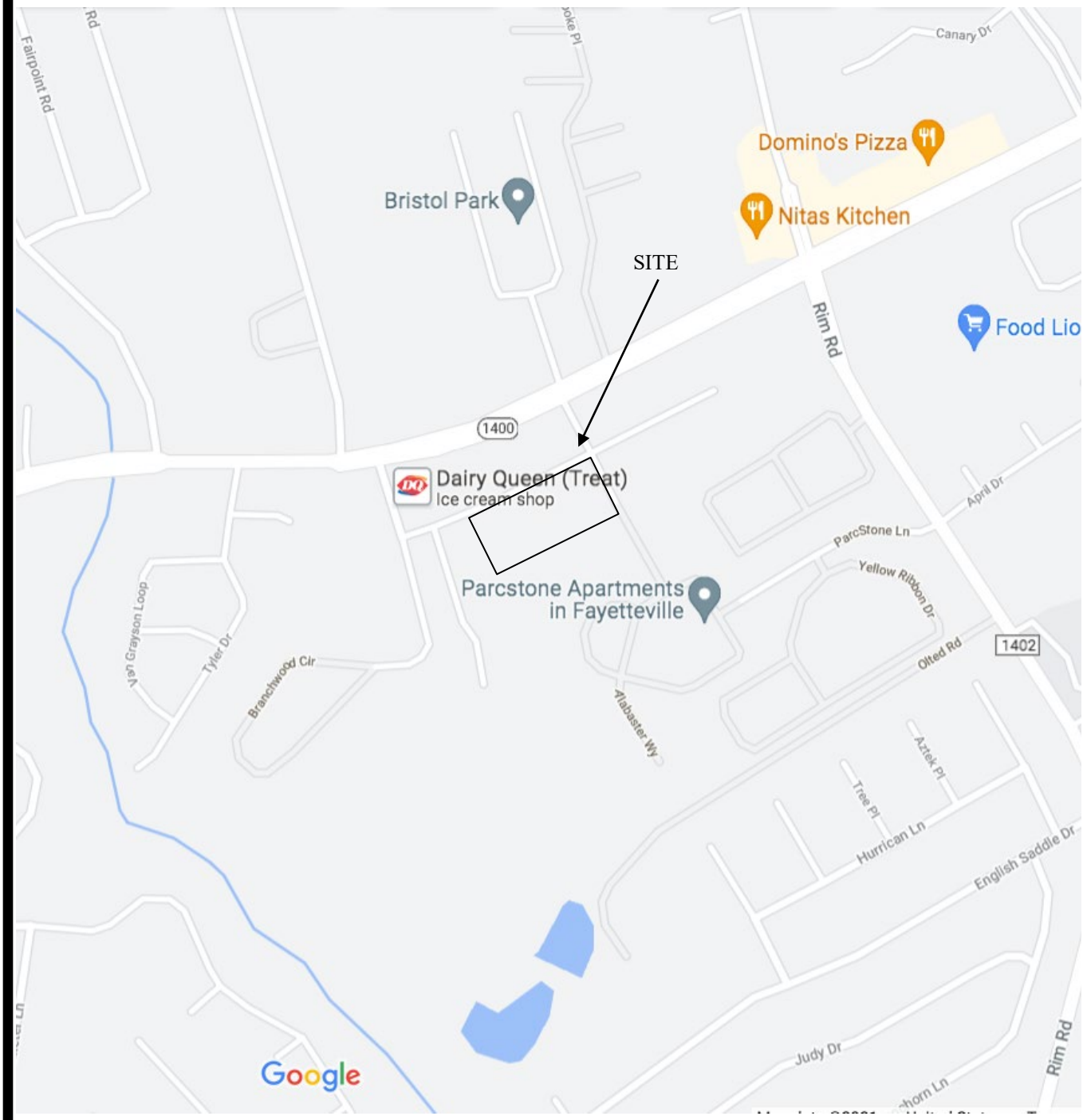
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Clifdale, 2013, 7.5-minute

SITE NAME: Cliffmore Park
ADDRESS: 5133 Identity Lane
Fayetteville, NC 28314
CLIENT: Atlantic Shores Environmental

N



Not to Scale

FIGURE 1: STREET MAP

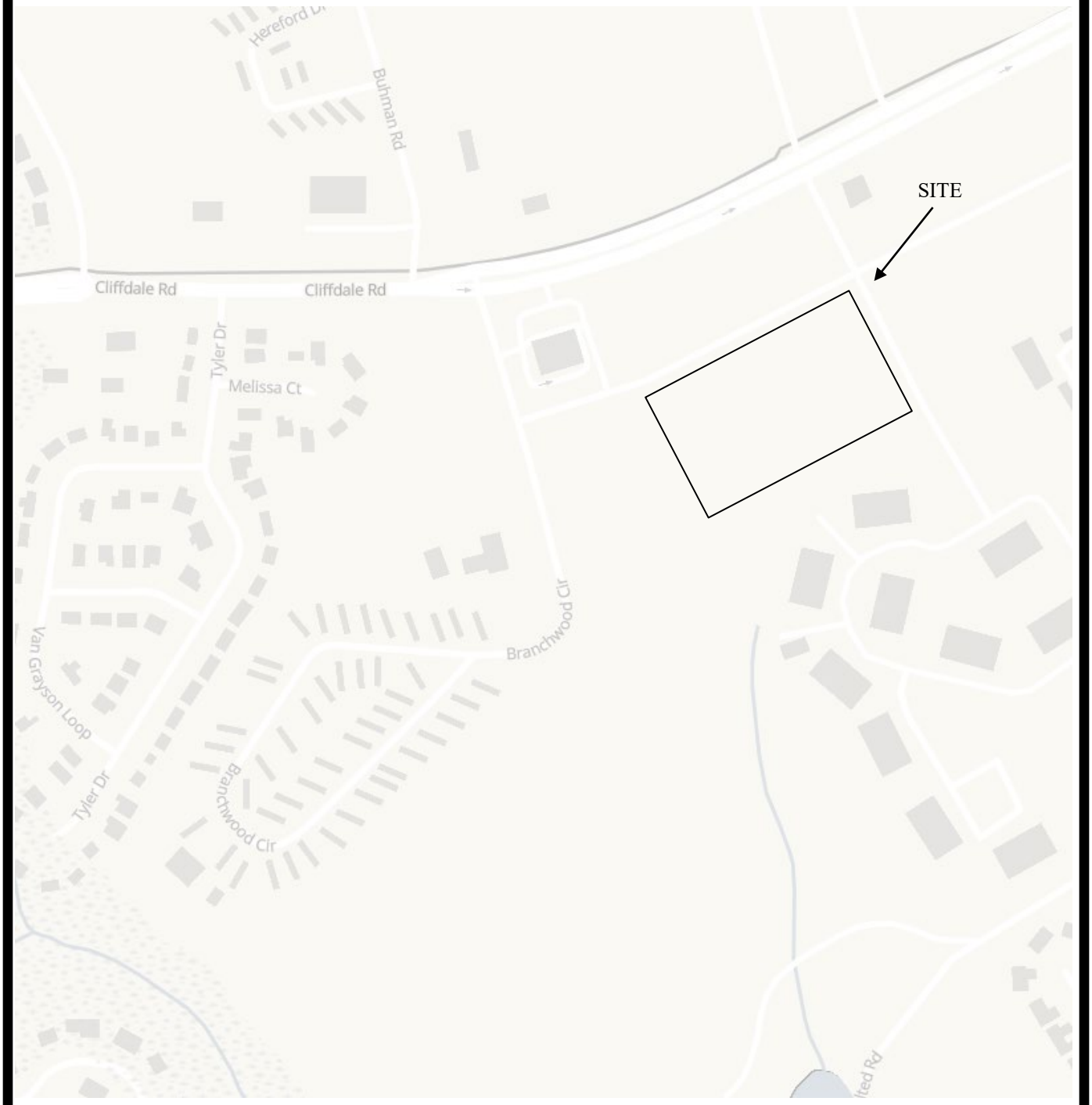
Source: Google Maps

N

Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
January 2022



Not to Scale

FIGURE 3: NATIONAL REGISTRY MAP

Source: National Registry of Historic Places Database

N

Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
January 2022

Not to Scale

FIGURE 2: NC HISTORICAL PROPERTIES

Source: NC Historic Preservation Online Data

N

Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
January 2022

ATTACHMENT 3:

Subject Property Photographs

Photograph 1 – View of the on-site structure looking south

Photograph 2 - View of the on-site structure looking southeast

Photograph 3 - View of interior of the on-site structure

Photograph 5 - View of the site looking northeast

Photograph 6 – View of the southern property line looking west

Photograph 7 – West and northwestern adjacent properties

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Photograph 9 – Vie of trash along the road and northern portion of the site

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Photograph 11 – View of the northern adjacent property and the site looking southwest

Photograph 12 – View of the southern adjacent property

North Carolina Department of Public Safety
Office of Recovery and Resiliency

Roy Cooper, Governor
Eddie M. Buffaloe, Jr., Secretary

Laura H. Hogshead, Director

January 13, 2022

Dr. Wenonah George Haire
ATTN: THPO
Catawba Indian Nation
1536 Tom Steven Road
Rock Hill, SC 29730

RE: Section 106 Review - HUD CDBG-DR Program
Proposed Cliffmore Park Apartments
5133 Identity Lane
Fayetteville, NC 28314
Parcel #9487-45-3559

Dear Dr. Wenonah George Haire:

The North Carolina Office of Recovery and Resiliency (NCORR), as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD), is serving as the responsible entity for compliance with the HUD environmental review procedures set forth in 24 CFR Part 58. NCORR is acting on behalf of HUD in providing the enclosed project information and inviting this discussion with your Nation.

NCORR processes environmental reviews for proposed projects funded with HUD CDBG-DR on a case-by-case basis. In accordance with Section 101(d)(6)(B) of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470f), and its implementing regulations, 36 CFR Part 800, this letter serves as notification of the proposed action. This letter also serves as an invitation to discussion as a consulting party in this review to help identify historic properties in the proposed project area that may have religious and cultural significance to your Nation, and if such properties exist, to help assess how the proposed project might affect them. If the proposed project might have an adverse effect, we would like to discuss possible ways to avoid, minimize or mitigate potential adverse effects.

Mailing Address:
Post Office Box 110465
Durham, NC 27709

NCORR
NORTH CAROLINA OFFICE OF RECOVERY AND RESILIENCY

Phone: (984) 833-5350
www.ncdps.gov
www.rebuild.nc.gov

An Equal Opportunity Employer

Area of Potential Effects (APE) under §800.16(d): We have defined the APE as the boundary of the Subject Property consisting of a 4.1-acre site, located at 5133 Identity Lane, Fayetteville, NC 28314 and identified as Cumberland County Parcel ID number 9487-45-3559. The proposed project location maps are included in **Attachment 2** for your review.

The State of North Carolina was adversely impacted by the landfall of Hurricanes Matthew (October 8, 2016) and Florence (September 14, 2018). These hurricanes damaged or destroyed hundreds of homes worsening the affordable housing shortage. This proposed project will increase affordable housing inventory for low- and moderate-income families.

Proposed Project Description: Cliffmore Park Apartments is a proposed seventy-two (72) unit senior living apartment community for residents fifty-five (55) and older. The single building design consists of three floors with two elevators and a unit mix of thirty-six (36) one-bedroom units and thirty-six (36) two-bedroom units. Outdoor amenities will feature a covered porch, patio with picnic tables and grills, a gazebo and seating areas.

We have completed an initial review of this project in compliance with Section 106 of the NHPA and its implementing regulations 36 CFR Part 800. Based on our research of the Subject Property in the National Register of Historic Places, North Carolina State Historic Preservation Office's (NC SHPO) HPOWEB, and site review performed by Atlantic Shores Environmental Services, Ltd., no publicly recorded historic properties which are locally designated or listed in or eligible for inclusion in the State or National Register of Historic Places are located on or adjacent to the Subject Property. The results are included in **Attachment 2**.

The proposed project information has been sent to the NC SHPO in accordance with Section 106 of the NHPA and its implementing regulations, 36 CFR Part 800. The Lumbee Tribe is being sent a notification of the proposed project. The Subject Property is primarily vacant vegetated land located south of Identity Lane. The Subject Property appears to have been developed as agricultural property some time prior to 1938 and has been agricultural or vacant land since, according to the historic aerials. By 2006, the site was cleared of vegetation and a water feature was present on the southern portion of the site for a short time in 2010. This corresponds to the construction of the southern adjoining Parestone Apartments and is likely a temporary storm water control for the construction.

A site reconnaissance was conducted on November 16, 2021, and only one structure was present on the site. An abandoned house was located on the southwestern portion of the site. Based on aerial photographs, this structure has been present on the site for less than three years. This house was observed on the 2020 and 2021 historical aerial photographs but was not present on the 2018 aerial. The house is situated on a crawl space and there are no written records identified for the structure. Based on visual observations, it appears that this structure was moved to the site from another property. The age of the structure is not known. The proposed development will be a multifamily apartment complex and, therefore, typical clearing and grading will take place on the Subject Property during construction. The Subject Property photographs are included in **Attachment 3**.

With this letter, NCORR respectfully submits for your review the attached documentation for the proposed project described herein. If the APE encompasses historic properties of religious or cultural significance to your Nation, please respond within 30 days of receipt of this letter indicating a desire to consult. If you have any concerns with potential impacts of the proposed project on historic properties, please note them in your response along with your preferred principal representative's point of contact. Please respond within this timeframe, otherwise we will assume that the proposed project will have no effect to historic properties of religious or cultural significance. Please respond via email at Andrea.L.Gievers@Rebuild.NC.gov or in writing to the address listed below.

Ms. Andrea Gievers
NCORR - Environmental
ATTN: THPO Comments
P.O. Box 110465
Durham, NC 27709

If you have any questions or require additional information regarding this request, please feel free to contact Andrea Gievers at (845) 682-1700 or via email at Andrea.L.Gievers@Rebuild.NC.gov. Thank you for your time and assistance.

Sincerely,

Andrea Gievers

Andrea Gievers, JD, MSEL, ERM
NCORR Environmental Subject Matter Expert

Enclosures:
Attachment 1: Consultant Letter
Attachment 2: Proposed Project Location, NRHP and NC HPOWEB Maps
Attachment 3: Subject Property Photographs

cc: Chief Bill Harris, Catawba Indian Nation, 996 Avenue of the Nations, Rock Hill, SC 29730

ATTACHMENT 1:

Consultant Letter

Atlantic Shores
Environmental Services, Ltd

January 5, 2022

Claudia Young
551-F Pylon Road
Raleigh, North Carolina 27606

Reference: Report of No Historical Properties Affected
5133 Identity Lane
Fayetteville, North Carolina
ASE Project No. 1523

Ms. Young,

The site located at 5133 Identity Lane in Fayetteville and includes Cumberland County Parcel ID number 9487-45-3559. The site is an approximate 4.1-acre tract of land owned by East Point Homes, LLC. The site is primarily vacant vegetated land located south of Identity Lane. However, an abandoned residence is located on the southwestern side of the site. Based on aerial photographs, this structure has been present on the site for less than three years. Based on visual observations, it appears that this structure was moved to the site from another property. The age of the structure is not known. The site was used as an agricultural field as far back as 1938. By 2006 the site was cleared of vegetation and a water feature was present on the southern portion of the site for a short time in 2010. This corresponds to the construction of the southern adjoining Parestone Apartments and is likely a temporary storm water control for the construction. Cliffmore Park Apartments is a proposed seventy-two (72) unit senior living apartment community for residents fifty-five (55) and older. The single building design consists of three floors with two elevators and a unit mix of thirty-six (36) one-bedroom units and thirty-six (36) two-bedroom units. Outdoor amenities will feature a covered porch, patio with picnic tables and grills, a gazebo and seating areas. See the attached figures for maps of the area and site.

ASE utilized EDR package historic aerials, topographic maps, city directories, and Sanborn maps during the Phase I Environmental Assessment conducted in accordance with ASTM E1527-13 and ASTM E1527-21. Other databases utilized for historic research include:

- Cumberland County Registry of Deeds
- Cumberland County GIS
- City of Fayetteville
- Fayetteville Clerks Office
- Fayetteville Fire Department
- Physiography of North Carolina, compiled by the North Carolina Geological Society, dated 2004.

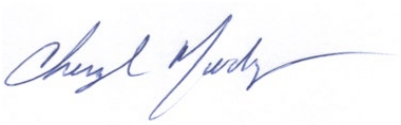
- NCDEQ Records Review
- User Questionnaire prepared by Keith Walker, President of Eastpoint Homes, LLC.
- Google Earth Historic Aerials
- Historicsites.nc.gov
- NC.gov interactive map of the National Registry of Historic Places in NC
- WWW.NPS.gov

The site appears to have been developed as agricultural property some time prior to 1938 and has been agricultural or vacant land since, according to the historic aerials. A site reconnaissance was conducted on November 16, 2021, and only one structure was present on the site. An abandoned house was located on the southwestern portion of the site. This house was observed on the 2020 and 2021 historical aerial photographs but was not present on the 2018 aerial. The house is situated on a crawl space and there are no written records identified for the structure. Neither the National Registry of Historic Places, nor the North Carolina Historic interactive map shows historic sites or buildings on the site. Based on our review, no historic properties will be affected by this project.

ASE appreciates the opportunity to provide our environmental consulting services to you on this project. If there are questions regarding this report, or a need for further information, please contact us at 910-371-5980.

Sincerely,

ATLANTIC SHORES ENVIRONMENTAL SERVICES, LTD.



Cheryl J. Moody, PE, REM
Principal Engineer

Daniel J. Schiwinger
Staff Scientist

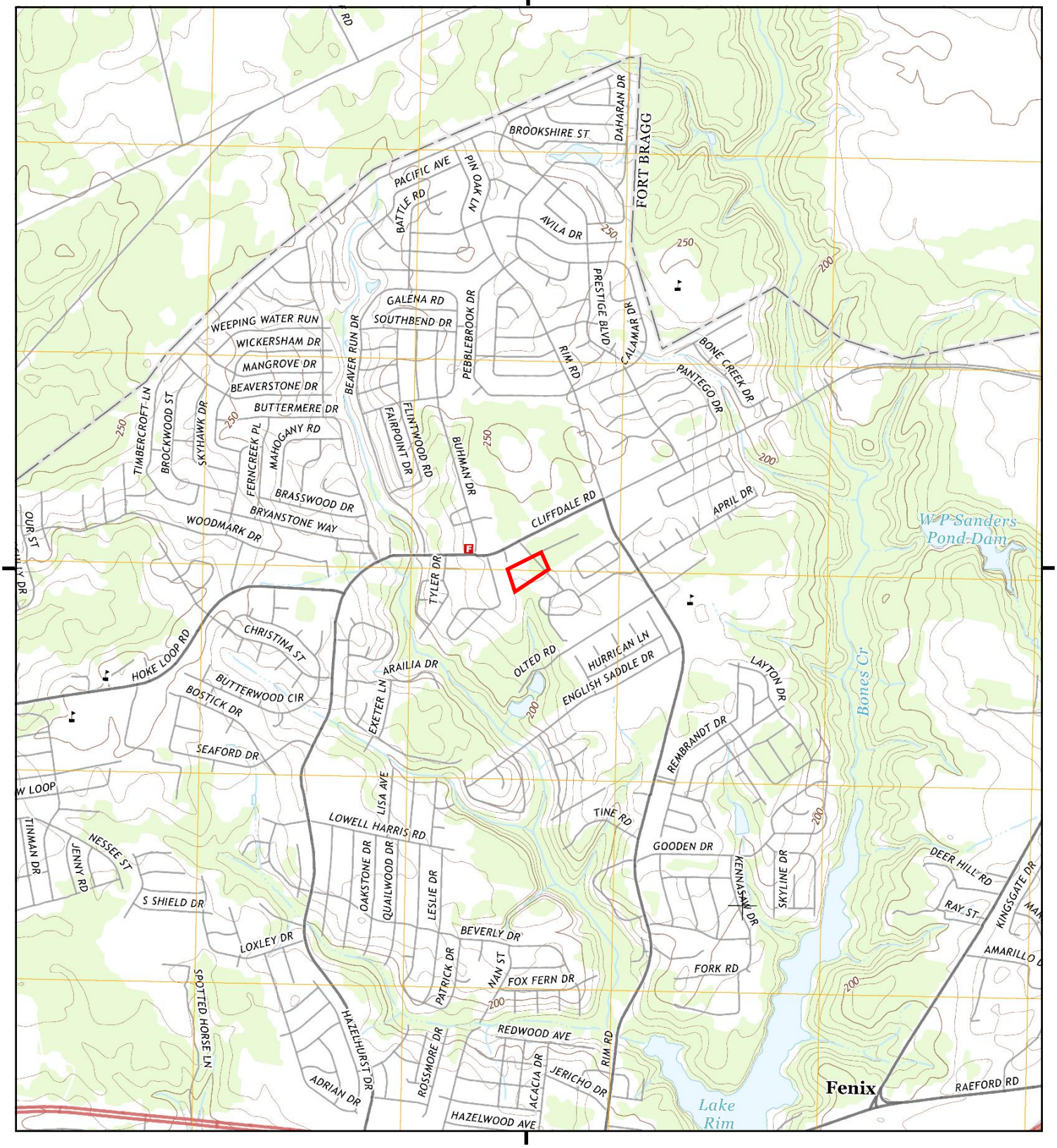
Attachments: USGS Quad Map
Figures
Site Photographs

ATTACHMENT 2:

Proposed Project Location, NRHP and NC HPOWEB Maps

Historical Topo Map

2013



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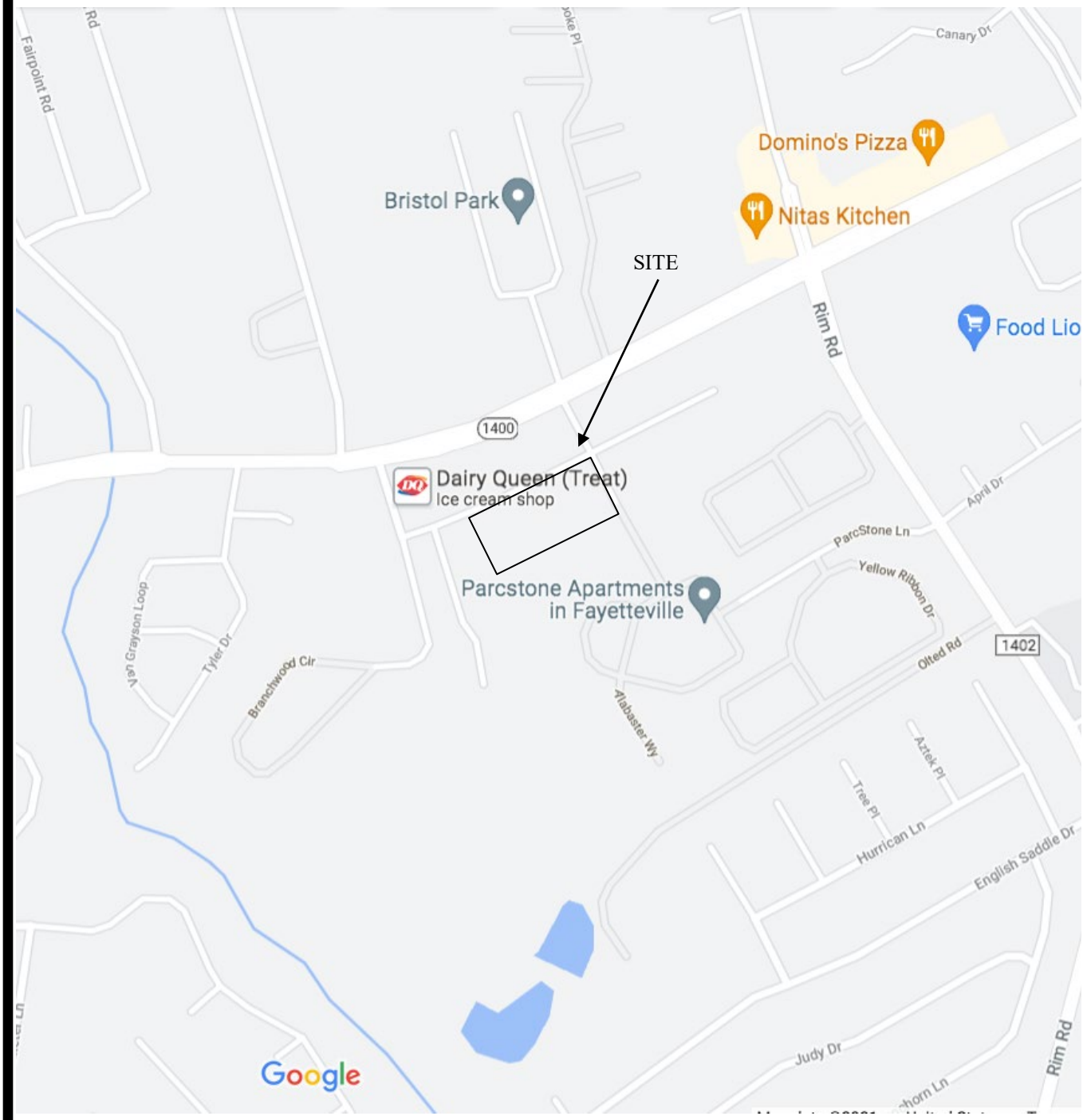

Not to Scale

FIGURE 1: STREET MAP

Source: Google Maps

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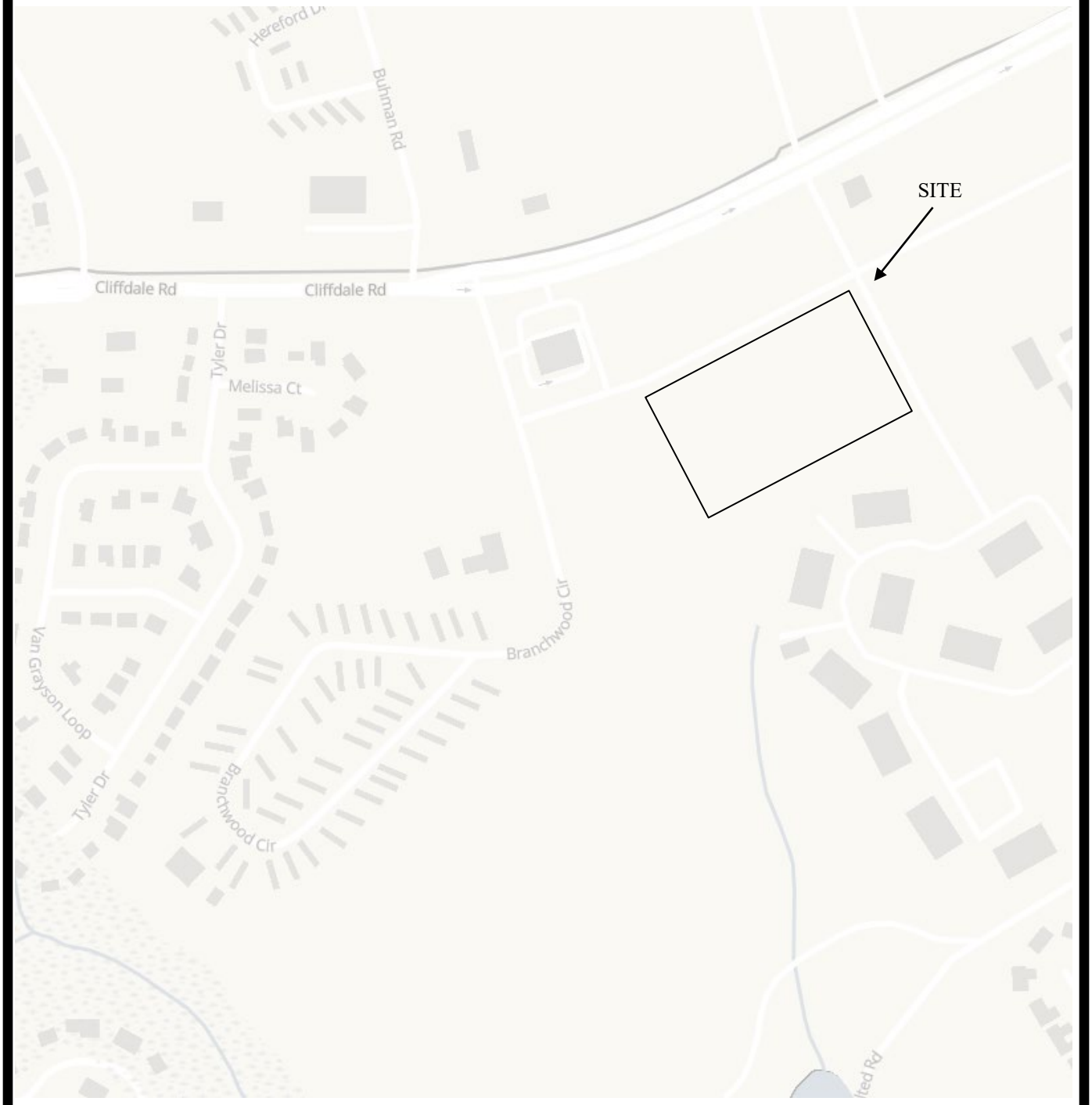
Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
January 2022



Not to Scale

FIGURE 3: NATIONAL REGISTRY MAP

Source: National Registry of Historic Places Database

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Proposed Cliffmore Apartments
5133 Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
January 2022

Not to Scale

FIGURE 2: NC HISTORICAL PROPERTIES

Source: NC Historic Preservation Online Data

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January 2022

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North Carolina Department of Public Safety

Office of Recovery and Resiliency

Roy Cooper, Governor
Eddie M. Buffaloe, Jr., Secretary

Laura H. Hogshead, Director

January 28, 2022

Chairman John Lowery
Lumbee Tribe of North Carolina
P.O. Box 2709
Pembroke, North Carolina 28372

RE: NCORR - HUD CDBG-DR Program
Proposed Cliffmore Park Apartments
5133 Identity Lane
Fayetteville, NC 28314

Dear Chairman Lowery:

The North Carolina Office of Recovery and Resiliency (NCORR) is notifying you as a representative of the Lumbee Tribe of North Carolina that an affordable housing project is proposed within a potential area of interest to your Tribe. NCORR as a recipient of Community Development Block Grant – Disaster Recovery (CDBG-DR) funds from the United States Department of Housing and Urban Development (HUD) is considering funding this proposed project, Cliffmore Park Apartments located on a 4.1-acre site, located at 5133 Identity Lane, Fayetteville, NC 28314 and identified as Cumberland County Parcel ID number 9487-45-3559. The State of North Carolina was adversely impacted by the landfall of Hurricanes Matthew (October 8, 2016) and Florence (September 14, 2018). These hurricanes damaged or destroyed hundreds of homes worsening the affordable housing shortage. This proposed project will increase affordable housing inventory for low- and moderate-income seniors. Therefore, funding for the proposed project will be provided in part by the HUD CDBG-DR program for Hurricane Florence storm recovery activities in North Carolina.

Cliffmore Park Apartments is a proposed seventy-two (72) unit senior living apartment community for residents fifty-five (55) and older. The single building design consists of three floors with two elevators and a unit mix of thirty-six (36) one-bedroom units and thirty-six (36) two-bedroom units. Outdoor amenities will feature a covered porch, patio with picnic tables and grills, a gazebo and seating areas.

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Phone: (984) 833-5350
www.ncdps.gov
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An Equal Opportunity Employer

The proposed project is being officially reviewed by the NC State Historic Preservation Office (SHPO) Office of State Archaeology and the Catawba Indian Nation. The Subject Property is primarily vacant vegetated land located south of Identity Lane. The Subject Property appears to have been developed as agricultural property some time prior to 1938 and has been agricultural or vacant land since, according to the historic aerials. By 2006, the site was cleared of vegetation and a water feature was present on the southern portion of the site for a short time in 2010. This corresponds to the construction of the southern adjoining Parestone Apartments and is likely a temporary storm water control for the construction. A site reconnaissance was conducted on November 16, 2021, and only one structure was present on the site. An abandoned house was located on the southwestern portion of the site. Based on aerial photographs, this structure has been present on the site for less than three years. This house was observed on the 2020 and 2021 historical aerial photographs but was not present on the 2018 aerial. The house is situated on a crawl space and there are no written records identified for the structure. Based on visual observations, it appears that this structure was moved to the site from another property. The age of the structure is not known. The proposed development will be a multifamily apartment complex and, therefore, typical clearing and grading will take place on the Subject Property during construction.

We appreciate the support the Lumbee Tribe has provided to the efforts of ReBuild NC and look forward to a continued productive relationship as we assist North Carolinians.

Respectfully,

Laura H Hogshead

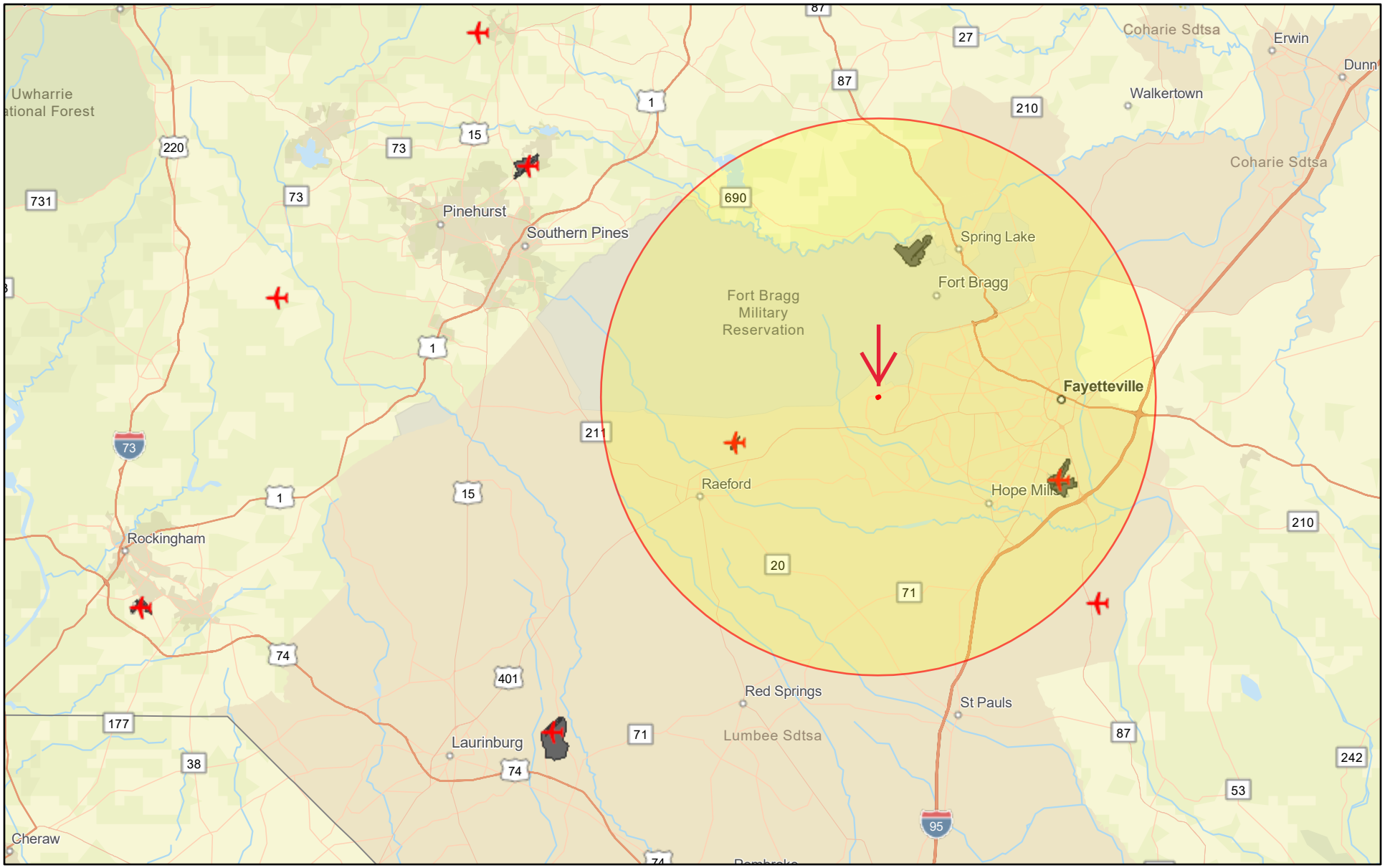
Laura H. Hogshead

ATTACHMENT 13:

Noise Abatement and Control

Airport Map Showing 15-mile Buffer, Airport Operations Data 5010 Records, Noise Contour Maps, HUD Airport Noise Worksheets, Railroad Map Showing 3,000-foot Buffer, Noise Assessment Location (NAL) Map, Major Roads with AADT Data Available Map Showing 1,000-foot Buffer, NC Speed Limit Map, NC DOT Email on Traffic Projections (no growth), DNL Calculations Current Year, and Morton & Morton Design Services, PLLC Traffic Study for Cliffdale Road & Rim Road Intersection

Cliffmore Park - Airports 15-mile Buffer



November 3, 2022

Cliffmore Park - Airports 15-mile Buffer

Project Buffer

Airport Points

Airport Polygons

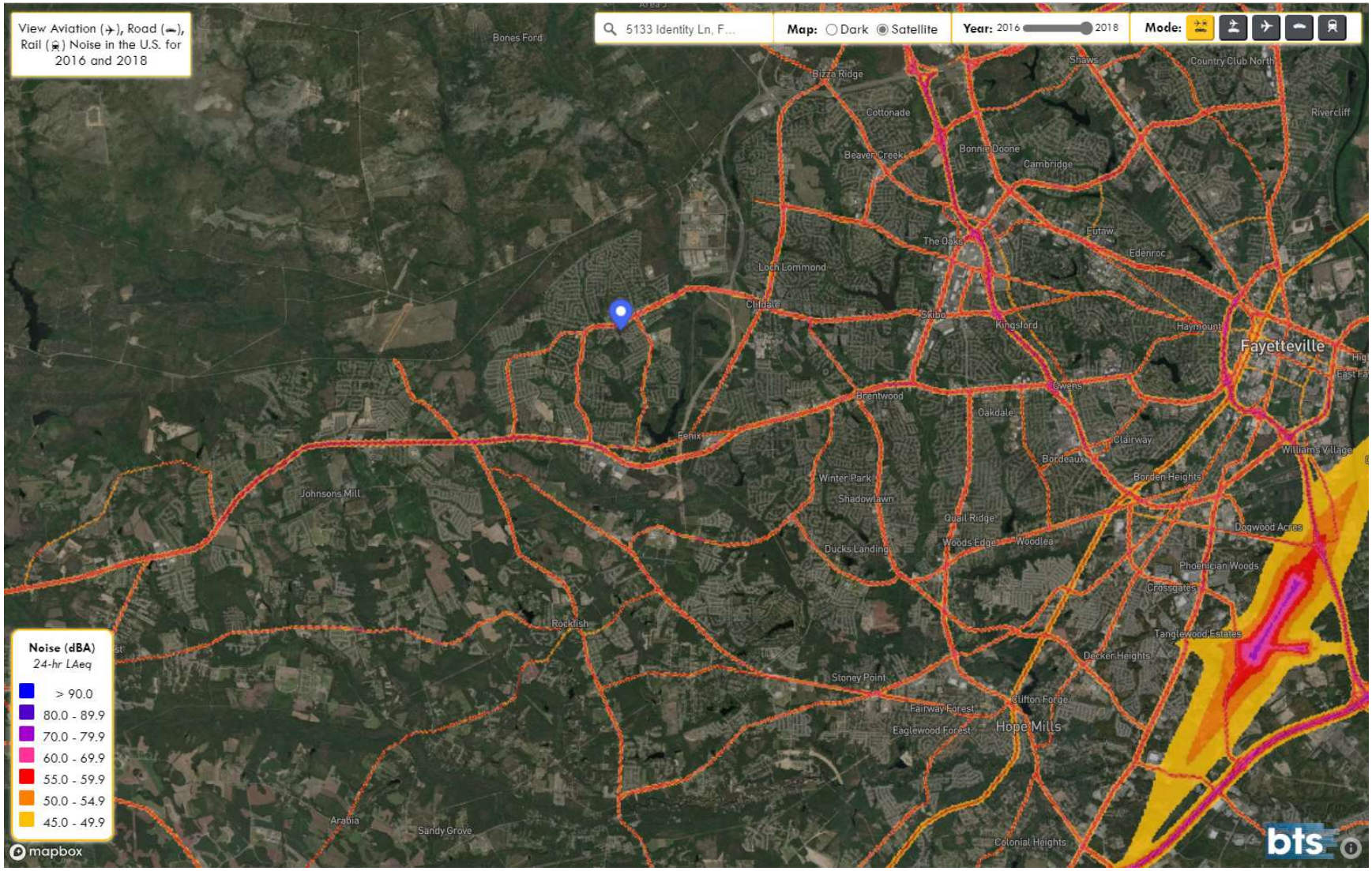
1:577,791

0 4 8 16 mi

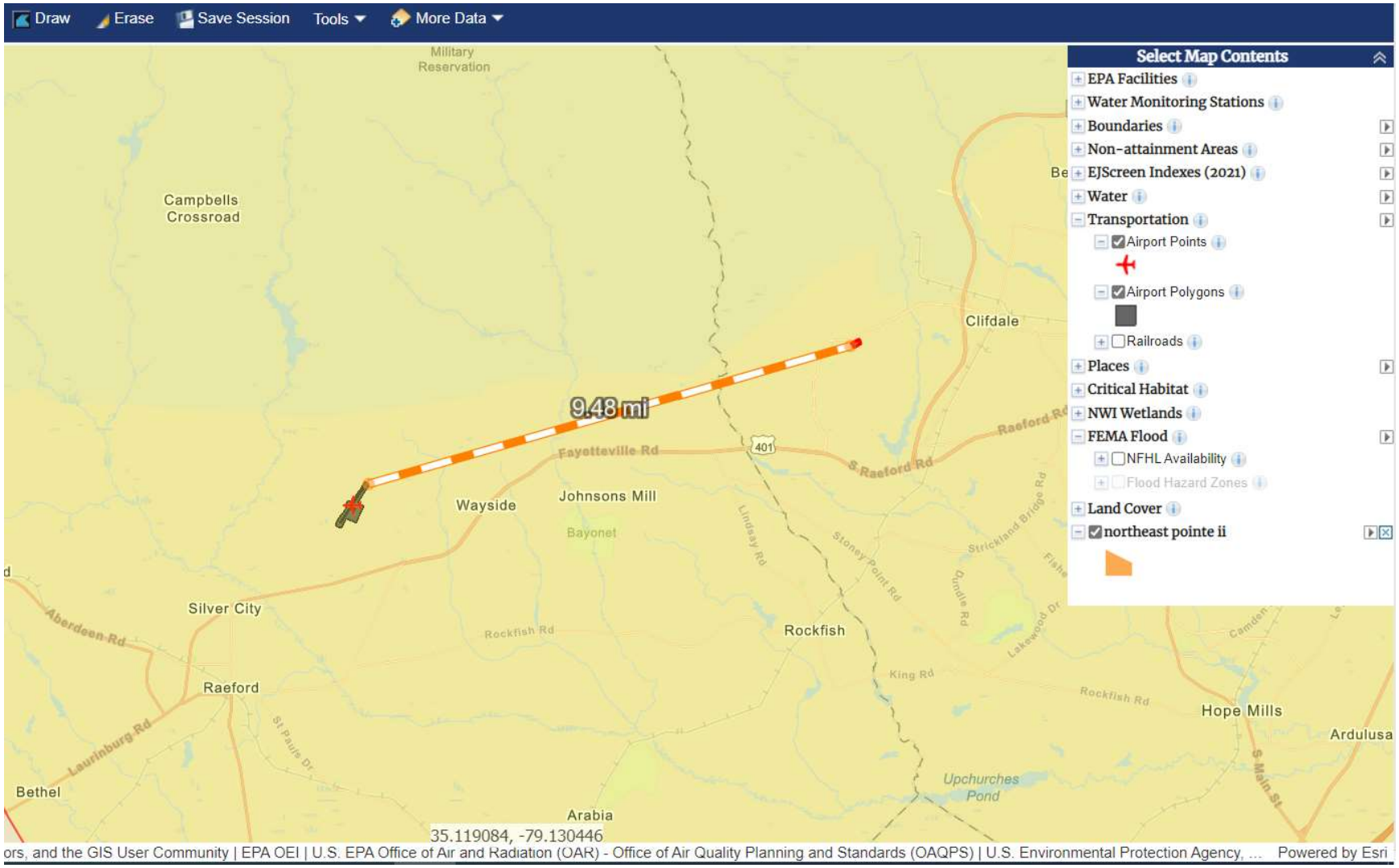
0 5 10 20 km

Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS, EPA OEI

CLIFFMORE PARK – National Transportation Noise Map (Aviation, Road, Rail)



CLIFFMORE PARK – P K Airpark



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRPORT MASTER RECORD

PRINT DATE: 11/23/2022
AFD EFF 11/03/2022
FORM APPROVED OMB 2120-0015

> 1 ASSOC CITY:	RAEFORD	4 STATE: NC	LOC ID: 5W4	FAA SITE NR:	17030.1*A
> 2 AIRPORT NAME:	P K AIRPARK		5 COUNTY: HOKE, NC		
3 CBD TO AIRPORT (NM): 3 NE		6 REGION/ADO: ASO /MEM	7 SECT AERO CHT: CHARLOTTE		

GENERAL

10 OWNERSHIP:	PRIVATE
> 11 OWNER:	BILLIE THACKER
> 12 ADDRESS:	PO DRAWER 1510
	RAEFORD, NC 28376
> 13 PHONE NR:	910-875-3261
> 14 MANAGER:	JOEY D'ANNUNZIO
> 15 ADDRESS:	155 AIRPORT DRIVE
	RAEFORD, NC 28376
> 16 PHONE NR:	(910) 904-0000

> 17 ATTENDANCE SCHEDULE:

MONTHS	DAYS	HOURS
ALL	ALL	0830-DUSK

18 AIRPORT USE:	PUBLIC
19 ARPT LAT:	35-1-11.495N ESTIMATED
20 ARPT LONG:	79-11-27.614W
21 ARPT ELEV:	304.0 SURVEYED
22 ACREAGE:	51
> 23 RIGHT TRAFFIC:	22
> 24 NON-COMM LANDING:	NO
25 NPIAS/FED AGREEMENTS:	
> 26 FAR 139 INDEX:	/

SERVICES

> 70 FUEL:	100LL A+
> 71 AIRFRAME RPRS:	NONE
> 72 PWR PLANT RPRS:	NONE
> 73 BOTTLE OXYGEN:	NONE
> 74 BULK OXYGEN:	NONE
75 TSNT STORAGE:	TIE
76 OTHER SERVICES:	PAJA,SURV

FACILITIES

> 80 ARPT BCN:	
> 81 ARPT LGT SKED:	
BCN LGT SKED:	SS-SR
> 82 UNICOM:	123.000
> 83 WIND INDICATOR:	YES-L
84 SEGMENTED CIRCLE:	YES
85 CONTROL TWR:	NO
86 FSS:	RALEIGH
87 FSS ON ARPT:	NO
88 FSS PHONE NR:	
89 TOLL FREE NR:	1-800-WX-BRIEF

BASED AIRCRAFT

90 SINGLE ENG:	2
91 MULTI ENG:	6
92 JET:	0
93 HELICOPTERS:	0
TOTAL:	8
94 GLIDERS:	0
95 MILITARY:	0
96 ULTRA-LIGHT:	0

OPERATIONS

100 AIR CARRIER:	0
102 AIR TAXI:	0
103 G A LOCAL:	18,000
104 G A ITNRNT:	500
105 MILITARY:	5,000
TOTAL:	23,500

OPERATIONS FOR 12 MONTHS ENDING 07/29/2022

RUNWAY DATA

> 30 RUNWAY IDENT:		**04/22**
> 31 LENGTH:		3,402
> 32 WIDTH:		60
> 33 SURF TYPE-COND:		ASPH-G
> 34 SURF TREATMENT:		
35 GROSS WT:	S	30.0
36 (IN THSDS)	D	
37	2D	
38	2D/2DS	
> 39 PCN / PCR:		

LIGHTING/APCH AIDS

> 40 EDGE INTENSITY:	MED
> 42 RWY MARK TYPE-COND:	NPI- G / NPI- G
> 43 VGSI:	/
44 THR CROSSING HGT:	/
45 VISUAL GLIDE ANGLE:	/
> 46 CNTRLN-TDZ:	- / -
> 47 RVR-RVV:	- / -
> 48 REIL:	/
> 49 APCH LIGHTS:	/

OBSTRUCTION DATA

50 FAR 77 CATEGORY:	A(V) / A(V)
> 51 DISPLACED THR:	/
> 52 CTLG OBSTN:	TREES / TREES
> 53 OBSTN MARKED/LGTD:	/
> 54 HGT ABOVE RWY END:	63 / 41
> 55 DIST FROM RWY END:	631 / 615
> 56 CNTRLN OFFSET:	66R / 42L
57 OBSTN CLNC SLOPE:	6:1 / 10:1
58 CLOSE-IN OBSTN:	N / Y

DECLARED DISTANCES

> 60 TAKE OFF RUN AVBL (TORA):	/
> 61 TAKE OFF DIST AVBL (TODA):	/
> 62 ACLT STOP DIST AVBL (ASDA):	/
> 63 LNDG DIST AVBL (LDA):	/

(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS:

A 058 RWY 22 HAS 15 FT BRUSH 0-200 FT FM THR OFFSET 121 FT R OF CNTRLN.
A 110-001 CAUTION: LOW FLYING MIL ACFT IN AREA; ARPT LCTD WITHIN AN MOA.
A 110-002 FRQ PRCHT ACT TO TARGET 300 FT SE OF TERMINAL APRON.
A 110-003 ACFT IN VICINITY MONITOR 123.5.
A 110-004 FLY ONE MILE DOWN WIND LEG TO PREVENT CONFLICTS WITH PAJA (DROP ZONE SOUTHEAST FROM RWY).
A 110-005 AFTER HOURS SVC 910-578-4401.
A 110-006 MONITOR FREQ 123.5 FOR PAJA.

111 INSPECTOR: (S) 112 LAST INSP: 07/29/2022 113 LAST INFO RES:

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRPORT MASTER RECORD

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25 NPIAS/FED AGREEMENTS:	
> 26 FAR 139 INDEX:	/

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> 72 PWR PLANT RPRS:	NONE
> 73 BOTTLE OXYGEN:	NONE
> 74 BULK OXYGEN:	NONE
75 TSNT STORAGE:	TIE
76 OTHER SERVICES:	PAJA,SURV

FACILITIES

> 80 ARPT BCN:	
> 81 ARPT LGT SKED:	
BCN LGT SKED:	SS-SR
> 82 UNICOM:	123.000
> 83 WIND INDICATOR:	YES-L
84 SEGMENTED CIRCLE:	YES
85 CONTROL TWR:	NO
86 FSS:	RALEIGH
87 FSS ON ARPT:	NO
88 FSS PHONE NR:	
89 TOLL FREE NR:	1-800-WX-BRIEF

BASED AIRCRAFT

90 SINGLE ENG:	2
91 MULTI ENG:	6
92 JET:	0
93 HELICOPTERS:	0
TOTAL:	8
94 GLIDERS:	0
95 MILITARY:	0
96 ULTRA-LIGHT:	0

OPERATIONS

100 AIR CARRIER:	0
102 AIR TAXI:	0
103 G A LOCAL:	18,000
104 G A ITNRNT:	500
105 MILITARY:	5,000
TOTAL:	23,500

OPERATIONS FOR 12 MONTHS ENDING 07/29/2022

RUNWAY DATA

> 30 RUNWAY IDENT:	
> 31 LENGTH:	
> 32 WIDTH:	
> 33 SURF TYPE-COND:	
> 34 SURF TREATMENT:	
35 GROSS WT:	S
36 (IN THSDS)	D
37	2D
38	2D/2DS
> 39 PCN / PCR:	

LIGHTING/APCH AIDS

> 40 EDGE INTENSITY:	
> 42 RWY MARK TYPE-COND:	
> 43 VGSI:	
44 THR CROSSING HGT:	
45 VISUAL GLIDE ANGLE:	
> 46 CNTRLN-TDZ:	
> 47 RVR-RVV:	
> 48 REIL:	
> 49 APCH LIGHTS:	

OBSTRUCTION DATA

50 FAR 77 CATEGORY:	
> 51 DISPLACED THR:	
> 52 CTLG OBSTN:	
> 53 OBSTN MARKED/LGTD:	
> 54 HGT ABOVE RWY END:	
> 55 DIST FROM RWY END:	
> 56 CNTRLN OFFSET:	
57 OBSTN CLNC SLOPE:	
58 CLOSE-IN OBSTN:	

DECLARED DISTANCES

> 60 TAKE OFF RUN AVBL (TORA):	
> 61 TAKE OFF DIST AVBL (TODA):	
> 62 ACLT STOP DIST AVBL (ASDA):	
> 63 LNDG DIST AVBL (LDA):	

(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS:

A 110-007 FOR CD CTC WASHINGTON ARTCC AT 703-771-3587.

A 110-008 CTN DO NOT OVERFLY AIRPORT DUE TO PAJA.

111 INSPECTOR: (S) 112 LAST INSP: 07/29/2022 113 LAST INFO RES:

Airport Noise Worksheet

Use this worksheet to identify information needed to evaluate a site's exposure to aircraft noise.

Name and Location of Project: Cliffmore Park, at 5133 Identity Lane, Fayetteville, Cumberland County, NC 28314
Name of Airport: P K Airpark (5W4)
Person completing worksheet: Andrea Gievers
Date: 11/23/22

1. Determine if the proposed site/project is within 15 miles of a civil or military airport.

☐ No. Attach a map identifying the location of the proposed project site and the location of any airports. This worksheet is not required.
☒ Yes. Attach a map identifying the location of the proposed project site and the location of any airports. Continue

2. Determine the number of operations at the airport by:
   - Going to: http://www.gcr1.com/5010web/
   - Type in the name of the city press search
   - Find your airport.
   - Open the report under "Print 5010"
   - Complete section 3 below by using the information found in the report (see arrow #1 in the example below)

3. Determine if the annual number of operations for air carriers (#100), air taxis (#102), military (#105), and general aviation (#103 plus #104) exceeds thresholds.

   Annual air carrier operations 0. Is this 9000 or more? ☐ Yes ☒ No
   Annual air taxi operations 0. Is this 18,000 or more? ☐ Yes ☒ No
   Annual general aviation operations 18,500. Is this 72000 or more? ☐ Yes ☒ No
   Annual military operations 5,000. Is this 18,000 or more? ☐ Yes ☒ No

A. If you answer "No" on each of the questions above, it is assumed that the noise attributed to the airplanes will not extend beyond the boundaries of the airport. Maintain the documentation in your Environmental Review Record. You are finished with the evaluation of airport noise for this airport. If you have marked any question in #3 with "Yes," continue to 5.

B. Contact the airport manager, (see arrow #2 above) and ask them if the airport has noise contour maps. Are contour maps available?

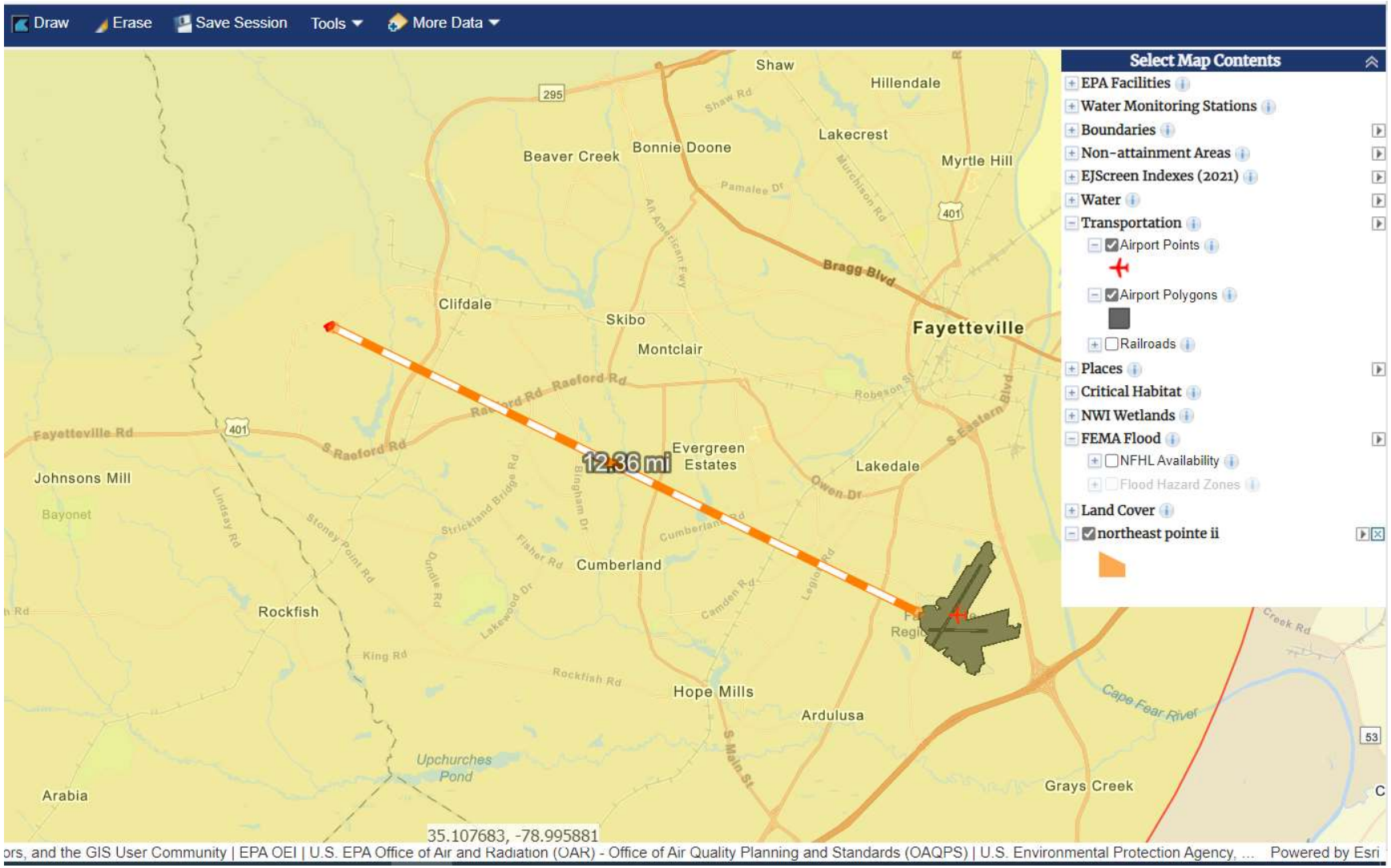
   ☐ Yes. Locate your project on the noise contour map. If there are no roads or railroads that are being considered for noise, utilize the information from the contour map to determine if the site is acceptable. If roads or railroads are being considered input the

Airport Noise Worksheet

information obtained from the airport noise contours, along with the road and railroad information in the HUD Noise Assessment Guidelines (NAG) or the online tool at https://www.hudexchange.info/environmental-review/dnl-calculator.

☐ No. Construct the approximate DNL contours by using the guidance on page 52 and 53 of the NAG. You will need to obtain the following information from the airport: 1). The number of nighttime jet operations (10pm to 7 am) 2). The number of daytime jet operations (7 am to 10 pm) 3). The flight paths of the major runways. 4). Any available information about expected changes in airport traffic (e.g. will the number of operations Increase or decrease in the next 10 to 15 years).

CLIFFMORE PARK – Fayetteville Regional Airport



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRPORT MASTER RECORD

PRINT DATE: 11/23/2022
AFD EFF 11/03/2022
FORM APPROVED OMB 2120-0015

> 1 ASSOC CITY:	FAYETTEVILLE	4 STATE: NC	LOC ID: FAY	FAA SITE NR:	16723.*A
> 2 AIRPORT NAME:	FAYETTEVILLE RGNL/GRANNIS FLD		5 COUNTY: CUMBERLAND, NC		
3 CBD TO AIRPORT (NM): 3 S		6 REGION/ADO: ASO /MEM	7 SECT AERO CHT: CHARLOTTE		

GENERAL

10 OWNERSHIP:	PUBLIC
> 11 OWNER:	CITY OF FAYETTEVILLE
> 12 ADDRESS:	400 AIRPORT RD SUITE 1 FAYETTEVILLE, NC 28306
> 13 PHONE NR:	910-433-1160
> 14 MANAGER:	ALVESTER T. COLEMAN
> 15 ADDRESS:	400 AIRPORT RD SUITE 1 FAYETTEVILLE, NC 28306
> 16 PHONE NR:	910-433-1625

> 17 ATTENDANCE SCHEDULE:

MONTHS	DAYS	HOURS
ALL	ALL	0600-0000

18 AIRPORT USE:	PUBLIC
19 ARPT LAT:	34-59-28.36N ESTIMATED
20 ARPT LONG:	78-52-48.987W
21 ARPT ELEV:	189.4 SURVEYED
22 ACREAGE:	1,343
> 23 RIGHT TRAFFIC:	NO
> 24 NON-COMM LANDING:	NO
25 NPIAS/FED AGREEMENTS:	YES / NGY
> 26 FAR 139 INDEX:	I B S 05/1973

SERVICES

> 70 FUEL:	100LL A
> 71 AIRFRAME RPRS:	MAJOR
> 72 PWR PLANT RPRS:	MAJOR
> 73 BOTTLE OXYGEN:	NONE
> 74 BULK OXYGEN:	NONE
75 TSNT STORAGE:	HGR TIE
76 OTHER SERVICES:	AFRT,AVNCS,CARGO, CHTR,INSTR,RNTL, SALES

FACILITIES

> 80 ARPT BCN:	
> 81 ARPT LGT SKED:	SS-SR
BCN LGT SKED:	SS-SR
> 82 UNICOM:	122.950
> 83 WIND INDICATOR:	YES-L
84 SEGMENTED CIRCLE:	NONE
85 CONTROL TWR:	YES
86 FSS:	RALEIGH
87 FSS ON ARPT:	NO
88 FSS PHONE NR:	
89 TOLL FREE NR:	1-800-WX-BRIEF

BASED AIRCRAFT

90 SINGLE ENG:	38
91 MULTI ENG:	9
92 JET:	4
93 HELICOPTERS:	1
TOTAL:	52
94 GLIDERS:	0
95 MILITARY:	0
96 ULTRA-LIGHT:	0

OPERATIONS

100 AIR CARRIER:	9,541
102 AIR TAXI:	5,485
103 G A LOCAL:	1,256
104 G A ITNRNT:	13,317
105 MILITARY:	5,096
TOTAL:	34,695

OPERATIONS FOR 12 MONTHS ENDING 12/31/2019

RUNWAY DATA

		04/22	10/28
> 30 RUNWAY IDENT:			
> 31 LENGTH:		7,709	4,801
> 32 WIDTH:		150	150
> 33 SURF TYPE-COND:		ASPH-G	ASPH-E
> 34 SURF TREATMENT:		GRVD	NONE
35 GROSS WT:	S	109.0	53.0
36 (IN THSDS)	D	178.0	75.0
37	2D	321.0	
38	2D/2DS		
> 39 PCN / PCR:		42/F/A/X/T (PCN)	17/F/A/X/T (PCN)

LIGHTING/APCH AIDS

> 40 EDGE INTENSITY:	HIGH	MED
> 42 RWY MARK TYPE-COND:	PIR- G / PIR- G	NPI- G / NPI- G
> 43 VGSI:	P4R / P4L	/ P4L
44 THR CROSSING HGT:	47 / 48	/ 36
45 VISUAL GLIDE ANGLE:	3.13 / 3.00	/ 3.00
> 46 CNTRLN-TDZ:	- / -	- / -
> 47 RVR-RVV:	T - N / R -	- / -
> 48 REIL:	/ Y	Y / Y
> 49 APCH LIGHTS:	MALSR /	/

OBSTRUCTION DATA

50 FAR 77 CATEGORY:	PIR / C	C / C
> 51 DISPLACED THR:	598 / 303	/
> 52 CTLG OBSTN:	/	TREES / TREES
> 53 OBSTN MARKED/LGTD:	/	/
> 54 HGT ABOVE RWY END:	/	15 / 15
> 55 DIST FROM RWY END:	0 / 0	800 / 800
> 56 CNTRLN OFFSET:	/	50R / 90L
57 OBSTN CLNC SLOPE:	50:1 / 50:1	40:1 / 40:1
58 CLOSE-IN OBSTN:	N / N	N / N

DECLARED DISTANCES

> 60 TAKE OFF RUN AVBL (TORA):	7,709 / 7,709	/
> 61 TAKE OFF DIST AVBL (TODA):	7,709 / 7,709	/
> 62 ACLT STOP DIST AVBL (ASDA):	7,007 / 6,715	/
> 63 LNDG DIST AVBL (LDA):	6,508 / 6,413	/

(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS:

A 072 MAJOR POWER PLANT REPAIRS AVBL FOR PISTON ENGINES ONLY.

A 110-001 CLSD TO ALL MIL ACFT OVER 17000 LBS FOR ACR RAMP OPNS EXCP 24 HR PPR. CALL AMGR 910-433-1160 MON-FRI.

111 INSPECTOR: (F) 112 LAST INSP: 05/16/2019 113 LAST INFO RES:

Airport Noise Worksheet

Use this worksheet to identify information needed to evaluate a site's exposure to aircraft noise.

Name and Location of Project: Cliffmore Park, at 5133 Identity Lane, Fayetteville, Cumberland County, NC 28314
Name of Airport: Fayetteville Regional Airport (FAY)
Person completing worksheet: Andrea Gievers
Date: 11/23/22

1. Determine if the proposed site/project is within 15 miles of a civil or military airport.

☐ No. Attach a map identifying the location of the proposed project site and the location of any airports. This worksheet is not required.
☒ Yes. Attach a map identifying the location of the proposed project site and the location of any airports. Continue

2. Determine the number of operations at the airport by:
   - Going to: http://www.gcr1.com/5010web/
   - Type in the name of the city press search
   - Find your airport.
   - Open the report under "Print 5010"
   - Complete section 3 below by using the information found in the report (see arrow #1 in the example below)

3. Determine if the annual number of operations for air carriers (#100), air taxis (#102), military (#105), and general aviation (#103 plus #104) exceeds thresholds.

   Annual air carrier operations 9,541. Is this 9000 or more? ☒ Yes ☐ No
   Annual air taxi operations 5,485. Is this 18,000 or more? ☐ Yes ☒ No
   Annual general aviation operations 14,573. Is this 72000 or more? ☐ Yes ☒ No
   Annual military operations 5,096. Is this 18,000 or more? ☐ Yes ☒ No

A. If you answer "No" on each of the questions above, it is assumed that the noise attributed to the airplanes will not extend beyond the boundaries of the airport. Maintain the documentation in your Environmental Review Record. You are finished with the evaluation of airport noise for this airport. If you have marked any question in #3 with "Yes," continue to 5.

B. Contact the airport manager, (see arrow #2 above) and ask them if the airport has noise contour maps. Are contour maps available?

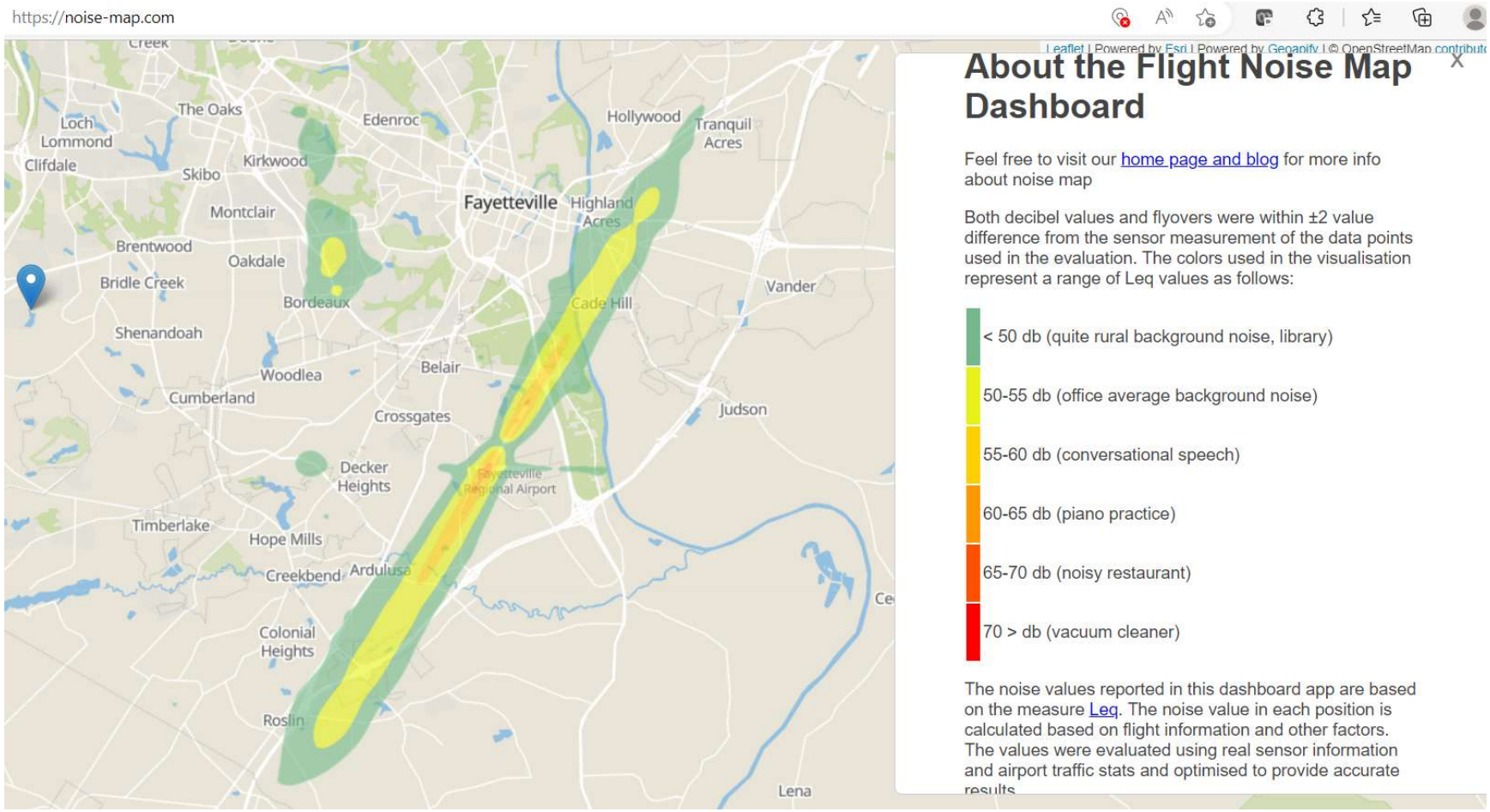
   ☒ Yes. Locate your project on the noise contour map. If there are no roads or railroads that are being considered for noise, utilize the information from the contour map to determine if the site is acceptable. If roads or railroads are being considered input the

Airport Noise Worksheet

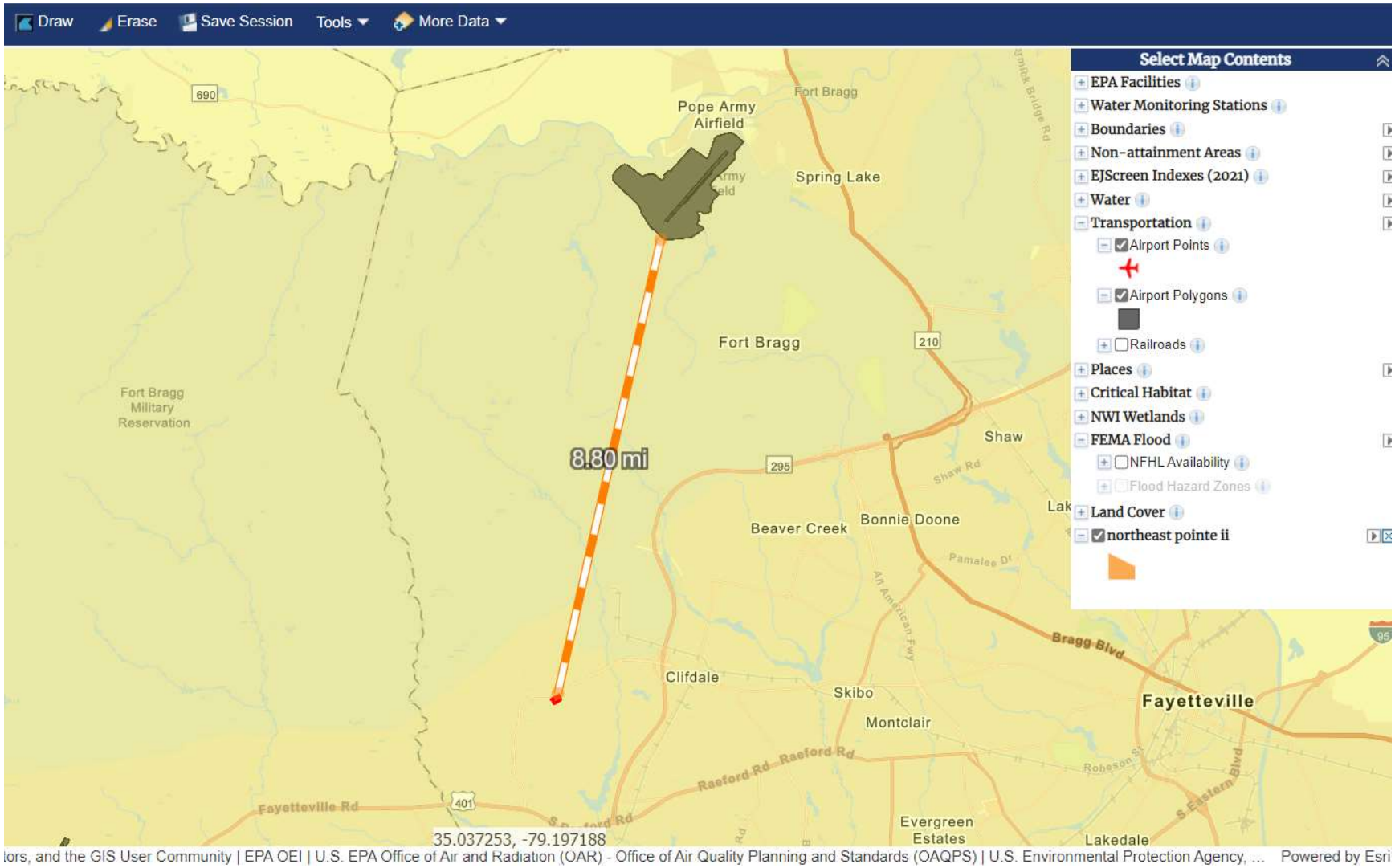
information obtained from the airport noise contours, along with the road and railroad information in the HUD Noise Assessment Guidelines (NAG) or the online tool at https://www.hudexchange.info/environmental-review/dnl-calculator.

☐ No. Construct the approximate DNL contours by using the guidance on page 52 and 53 of the NAG. You will need to obtain the following information from the airport: 1). The number of nighttime jet operations (10pm to 7 am) 2). The number of daytime jet operations (7 am to 10 pm) 3). The flight paths of the major runways. 4). Any available information about expected changes in airport traffic (e.g. will the number of operations Increase or decrease in the next 10 to 15 years).

Fayetteville Regional Airport (FAY) Noise Contour Map



CLIFFMORE PARK – Pope Army Airfield



U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRPORT MASTER RECORD

PRINT DATE: 10/26/2021
AFD EFF 10/07/2021
FORM APPROVED OMB 2120-0015

> 1 ASSOC CITY: FAYETTEVILLE | 4 STATE: NC | LOC ID: POB | FAA SITE NR: 16723.03*A
> 2 AIRPORT NAME: POPE AAF | 5 COUNTY: CUMBERLAND NC
3 CBD TO AIRPORT (NM): 12 NW | 6 REGION/ADO: ASO/MEM | 7 SECT AERO CHT: CHARLOTTE

GENERAL

10 OWNERSHIP: ARMY
> 11 OWNER: POPE AAF
> 12 ADDRESS: BASE OPERATIONS, 393 SURVEYUR ST BLDG 708
FAYETTEVILLE, NC 28308
> 13 PHONE NR: 910-396-0011
> 14 MANAGER: AIRFIELD MANAGEMENT
> 15 ADDRESS: POPE FIELD, 393 SURVEYUR ST BLDG 708
FAYETTEVILLE, NC 28308
> 16 PHONE NR: 910-396-0371
> 17 ATTENDANCE SCHEDULE:

ALL	ALL	ALL

18 AIRPORT USE: PRIVATE
19 ARPT LAT: 35-10-15.2000N ESTIMATED
20 ARPT LONG: 079-00-52.1850W
21 ARPT ELEV: 218.0 ESTIMATED
22 ACREAGE:
> 23 RIGHT TRAFFIC: 23, 051
> 24 NON-COMM LANDING: NO

SERVICES

> 70 FUEL: A

FACILITIES

> 80 ARPT BCN: CG
> 81 ARPT LGT SKED :
BCN LGT SKED: SS-SR
> 82 UNICOM:
> 83 WIND INDICATOR: YES
84 SEGMENTED CIRCLE: NONE
85 CONTROL TWR: YES
86 FSS: RALEIGH
87 FSS ON ARPT: NO
88 FSS PHONE NR:
89 TOLL FREE NR: 1-800-WX-BRIEF

BASED AIRCRAFT

90 SINGLE ENG:	1
91 MULTI ENG:	10
92 JET:	2
93 HELICOPTERS:	0
TOTAL:	13
94 GLIDERS:	0
95 MILITARY:	3
96 ULTRA-LIGHT:	0

RUNWAY DATA

	05/23	051/231		
> 30 RUNWAY INDENT:				
> 31 LENGTH:	7,501	3,000		
> 32 WIDTH:	150	60		
> 33 SURF TYPE-COND:	PEM-G	ASPH		

LIGHTING/APCH AIDS

> 40 EDGE INTENSITY:	HIGH	LOW		
> 42 RWY MARK TYPE-COND:	PIR - G / PIR - G	NPI - G / NPI - G	- / -	- / -
	48 53			

OBSTRUCTION DATA

50 FAR 77 CATEGORY	/	/	/	/
> 51 DISPLACED THR:	/	/	/	/
> 52 CTLG OBSTN:	/	/	/	/
> 53 OBSTN MARKED/LGTD:	/	/	/	/
> 54 HGT ABOVE RWY END:	/	/	/	/
> 55 DIST FROM RWY END:	/	/	/	/

(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS

A 013	BASE OPERATIONS
A 017	SEE FLIP AP/1 SUPPLEMENTARY ARPT RMK.
A 030	RWY 051/231 RY USED AS AN ASSULT STRIP.
A 110-001	BEARING STRENGTH RY 05-23: ST175; TDT760; TRT585.
A 110-002	LGT: HIRL LCTD 16 FT FR RY EDGE.
A 110-003	JASU: (A/M32A-86) (M32-95)
A 110-004	FUEL: JET A++
A 110-005	FLUID: SP LPOX LOX
A 110-006	OIL: O-128-IN CAN ONLY; -133-148
A 110-007	24 HR PPR CTC AMOPS DSN 424-6508/09/10 OR C910 394-6508/09/10. ALL INBD ACFT WITH VIP CTC POPE AMCC 30 MIN OUT. PPR EXC DV ACFT DSN 424-6508/09/10.
A 110-008	RSTD: CAT E APCH MIN UNAVBL DUE R5311 LCTD 2.5 NM DEP END RY 23. TWY LEADING TO GOLDEN KNIGHTS RAMP CLSD TO USAF C130 AND LARGER ACFT DUE TO TWY WIDTH LESS THAN 75 FT.

111 INSPECTOR: (N) | 112 LAST INSP: | 113 LAST INFO REQ: 01/09/2013

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRPORT MASTER RECORD

PRINT DATE: 10/26/2021
AFD EFF 10/07/2021
FORM APPROVED OMB 2120-0015

> 1 ASSOC CITY: ***CONTINUED*** 4 STATE: NC LOC ID: POB FAA SITE NR: 16723.03*A
> 2 AIRPORT NAME: 5 COUNTY:
3 CBD TO AIRPORT (NM): 6 REGION/ADO: ASO/MEM 7 SECT AERO CHT:

GENERAL

10 OWNERSHIP:
> 11 OWNER:
> 12 ADDRESS:

> 13 PHONE NR:
> 14 MANAGER:
> 15 ADDRESS:

> 16 PHONE NR:
> 17 ATTENDANCE SCHEDULE:

SERVICES

> 70 FUEL:

BASED AIRCRAFT

90 SINGLE ENG:
91 MULTI ENG:
92 JET:
93 HELICOPTERS:
TOTAL:

94 GLIDERS:
95 MILITARY:
96 ULTRA-LIGHT:

FACILITIES

> 80 ARPT BCN:
> 81 ARPT LGT SKED :
BCN LGT SKED:
> 82 UNICOM:
> 83 WIND INDICATOR:
84 SEGMENTED CIRCLE:
85 CONTROL TWR:
86 FSS:
87 FSS ON ARPT:
88 FSS PHONE NR:
89 TOLL FREE NR:

18 AIRPORT USE:
19 ARPT LAT:
20 ARPT LONG:
21 ARPT ELEV:
22 ACREAGE:
> 23 RIGHT TRAFFIC:
> 24 NON-COMM LANDING:

RUNWAY DATA

> 30 RUNWAY INDENT:				
> 31 LENGTH:				
> 32 WIDTH:				
> 33 SURF TYPE-COND:				

LIGHTING/APCH AIDS

> 40 EDGE INTENSITY:				
> 42 RWY MARK TYPE-COND:	- / -	- / -	- / -	- / -

OBSTRUCTION DATA

50 FAR 77 CATEGORY	/	/	/	/
> 51 DISPLACED THR:	/	/	/	/
> 52 CTLG OBSTN:	/	/	/	/
> 53 OBSTN MARKED/LGTD:	/	/	/	/
> 54 HGT ABOVE RWY END:	/	/	/	/
> 55 DIST FROM RWY END:	/	/	/	/

(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS

A 110-009 RSTD: AMC/AFRC ACFT OPR RSTD DUR BIRD WATCH COND MODERATE (TKOF OR LDG PERMITTED ONLY WHEN DEP AND ARR RTE AVOID IDENT BIRD ACT. NO LCL IFR/VFR TFC PAT ACT) DUR SEVERE (TKOF AND LDG PROH WO AMOG/CC APVL), CTC AMOPS FOR CURRENT BIRD WATCH COND CODE.
A 110-011 CAUTION: DENSE AIR TFC ALL QUAD, ALL ALT. ILS GS ANT 30 FT HI, 1111 FT FR APCH END AND 400 FT LEFT OF CNTRLINE RY 23.
A 110-012 CAUTION: RY 23 DEP AND RY 05 ARR, AVOID R5311, 2.5 NM W OF POPE. CTC POPE TWR FOR TRNS THRU SCTR IV. TWR 417 FT LCTD 5780 FT BRG 205DEG FR DEP END RY 23/APCH END RY 05. HILL 313 LCTD 1297 FT BRG 170DEG FR DEP END RY 23/APCH END RY 05.
A 110-013 CAUTION: TWR 430 FT LCTD 6878 FT BRG 220 DEG FR DEP END RY 23/APCH END RY 05. ACFT SHOULD EXER EXTREME CAUTION WHEN TAXIING ON THE GREEN, YELLOW AND RED RAMPS DUE TO WG TIP CLNC. UNCTL VEH ON TWY AND RAMPS.
A 110-014 TFC PAT: OVHD 2000 FT, RWY 23 ENTER 3 NM INITIAL, R BRK. NO OVHD RWY 05. RECTANGULAR 1500 FT. RWY 23 R TFC, RWY 05 L TFC.
A 110-015 CSTMS/AG/IMG: CSTMS AND AG FOR ACTIVE DUTY PERS RQR 3 HR PN TO AMCC DSN 424-9000 OR C910-394-9000.
A 110-017 MISC: AMOPS DSN 424-6508/09/10, AFLD MGR DSN 424-0011/0371, C910-396-0011/0371, FAX EXTN 6516/6520.
A 110-018 MISC: FIRST 1000 FT RY 23 AND FIRST 300 FT RY 05 ARE CONCRETE. MID 6200 FT ASPHALT. 1000 FT KEELED OVRN, EITHER END, MAY BE USED TO BEGII TKOF AND FOR LDG ROLLOUT.

111 INSPECTOR: (N) 112 LAST INSP: 113 LAST INFO REQ:

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRPORT MASTER RECORD

PRINT DATE: 10/26/2021
AFD EFF 10/07/2021
FORM APPROVED OMB 2120-0015

> 1 ASSOC CITY: ***CONTINUED*** 4 STATE: NC LOC ID: POB FAA SITE NR: 16723.03*A
> 2 AIRPORT NAME: 5 COUNTY:
3 CBD TO AIRPORT (NM): 6 REGION/ADO: ASO/MEM 7 SECT AERO CHT:

GENERAL

10 OWNERSHIP:
> 11 OWNER:
> 12 ADDRESS:

> 13 PHONE NR:
> 14 MANAGER:
> 15 ADDRESS:

> 16 PHONE NR:
> 17 ATTENDANCE SCHEDULE:

SERVICES

> 70 FUEL:

BASED AIRCRAFT

90 SINGLE ENG:
91 MULTI ENG:
92 JET:
93 HELICOPTERS:
TOTAL:

94 GLIDERS:
95 MILITARY:
96 ULTRA-LIGHT:

FACILITIES

> 80 ARPT BCN:
> 81 ARPT LGT SKED :
BCN LGT SKED:
> 82 UNICOM:
> 83 WIND INDICATOR:
84 SEGMENTED CIRCLE:
85 CONTROL TWR:
86 FSS:
87 FSS ON ARPT:
88 FSS PHONE NR:
89 TOLL FREE NR:

18 AIRPORT USE:
19 ARPT LAT:
20 ARPT LONG:
21 ARPT ELEV:
22 ACREAGE:
> 23 RIGHT TRAFFIC:
> 24 NON-COMM LANDING:

RUNWAY DATA

> 30 RUNWAY INDENT:				
> 31 LENGTH:				
> 32 WIDTH:				
> 33 SURF TYPE-COND:				

LIGHTING/APCH AIDS

> 40 EDGE INTENSITY:				
> 42 RWY MARK TYPE-COND:	- / -	- / -	- / -	- / -

OBSTRUCTION DATA

50 FAR 77 CATEGORY	/	/	/	/
> 51 DISPLACED THR:	/	/	/	/
> 52 CTLG OBSTN:	/	/	/	/
> 53 OBSTN MARKED/LGTD:	/	/	/	/
> 54 HGT ABOVE RWY END:	/	/	/	/
> 55 DIST FROM RWY END:	/	/	/	/

(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS

A 110-019 MISC: CTC CTL TWR WITH INTENTION TO BACK TAXI. WHEN BACK TAXIING, TURNING RAD IS LCTD AT END OF SFC. SEE US TERMINAL LOW IAPS, AIRPOR DIAGRAM. WX BRIEFING DSN 424-6543/44. ENG RUNS WILL NML BE CONDUCTED ON TWY 'A' AND 'M' RUN-UP AREAS. ROMEO ROW WILL NOT BE USED FOR ENG RUNS ABV IDLE SPEED.
A 110-020 MISC: RY 05-23 GROOVED. ALL INBD ACFT CTC TWR ON UHF. RY DIST MKR NOT AVBL EAST SIDE OF RY. REQ FOR CONCURRENT SVCG SHOULD BE MADI TO POPE AMCC AND APVL IS DEPENDENT UPON MSN NEED, STN WORKLOAD, AND CRASH/FIRE/RESCUE AVBL.
A 110-022 MISC: ASSAULT STRIP PANELS ARE ALL INTL ORANGE IN COLOR. ALL ACFT WITH NON-AIRCREW PAX, CTC ATOC DSN 424-7303 UPON ARR AND PRIOR TC DEP.
A 110-023 MISC: NO CSMSEC MATERIAL AVBL. TRAN AIRCREWS SHOULD PLAN TO ARR WITH APPROPRIATE AMOUNT OF COMSEC TO COMPLETE ENTIRE MSN.
A 110-025 CAUTION: AFLD LGTING INTMT BTN SS AND SR DUE TO LCL NGT VISION DEVICE TNG, NON-PARTICIPATING ACFT CTC CTL TWR INCREASE LGTING.
A 110-026 MISC: ALL ACFT CARRING EXPLOSIVE CARGO ARE RQR TO PASS THE EXPLOSIVE CLASS AND THE NET EXPLOSIVE WT CLASS. NEW ARR CALL POPE AMCC ON INBD.
A 110-027 AUGMENTED AN/FMQ-19 IN USE. OPERATING HOURS 0400Z++MON THRU 0400Z++ SAT. DSN 424-6543/6544.

111 INSPECTOR: (N) 112 LAST INSP: 113 LAST INFO REQ:

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRPORT MASTER RECORD

PRINT DATE: 10/26/2021
AFD EFF 10/07/2021
FORM APPROVED OMB 2120-0015

> 1 ASSOC CITY: ***CONTINUED*** | 4 STATE: NC | LOC ID: POB | FAA SITE NR: 16723.03*A
> 2 AIRPORT NAME: | 5 COUNTY:
3 CBD TO AIRPORT (NM): | 6 REGION/ADO: ASO/MEM | 7 SECT AERO CHT:

GENERAL

10 OWNERSHIP:
> 11 OWNER:
> 12 ADDRESS:

> 13 PHONE NR:
> 14 MANAGER:
> 15 ADDRESS:

> 16 PHONE NR:
> 17 ATTENDANCE SCHEDULE:

SERVICES

> 70 FUEL:

BASED AIRCRAFT

90 SINGLE ENG:
91 MULTI ENG:
92 JET:
93 HELICOPTERS:
TOTAL:

94 GLIDERS:
95 MILITARY:
96 ULTRA-LIGHT:

FACILITIES

> 80 ARPT BCN:
> 81 ARPT LGT SKED :
BCN LGT SKED:
> 82 UNICOM:
> 83 WIND INDICATOR:
84 SEGMENTED CIRCLE:
85 CONTROL TWR:
86 FSS:
87 FSS ON ARPT:
88 FSS PHONE NR:
89 TOLL FREE NR:

18 AIRPORT USE:
19 ARPT LAT:
20 ARPT LONG:
21 ARPT ELEV:
22 ACREAGE:
> 23 RIGHT TRAFFIC:
> 24 NON-COMM LANDING:

RUNWAY DATA

> 30 RUNWAY INDENT:				
> 31 LENGTH:				
> 32 WIDTH:				
> 33 SURF TYPE-COND:				

LIGHTING/APCH AIDS

> 40 EDGE INTENSITY:				
> 42 RWY MARK TYPE-COND:	- / -	- / -	- / -	- / -

OBSTRUCTION DATA

50 FAR 77 CATEGORY	/	/	/	/
> 51 DISPLACED THR:	/	/	/	/
> 52 CTLG OBSTN:	/	/	/	/
> 53 OBSTN MARKED/LGTD:	/	/	/	/
> 54 HGT ABOVE RWY END:	/	/	/	/
> 55 DIST FROM RWY END:	/	/	/	/

(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS

A 110-029	MISC: 60 DAY NOTICE REQ FOR UTILIZATION OF POPE AFB RAMPS FOR EXERCISES. CTC POPE AFB HEAVY OPS, DSN 424-7388 FOR COORD AND SCHED
A 110-030	MISC: PRIM WX SENSORS AUTOMATED. DURG PERIODS OF BACK-UP/MAN PREVAILING VIS MAY NOT BE REP OF ENTIRE AFLD DUE TO OBST FROM OBSN PT.
A 110-031	MISC: INBD/OUTBF ACFT RQR 'IMT' PACKAGES, CTC POPE AMCC 30 MIN OUT.
A 110-032	RSTD: PHASE II BASG 1 SEP - 30 NOV DUE TO INCREASED MIGRATORY BIRD ACT PEAK ACT OCCURS 1 HR OF SR & SS.
A 110-034	MISC: NO COMSEC AVBL.
A 110-036	PMSV-METRO: AUTOMATED AN/FMQ-19 IN USE.
A 110-037	CSTMS/AG/IMG: CSTMS FOR NON-US ACTIVE DUTY PERS RQR 5 HR PN TO POPE AMCC DSN 424-9000 OR 910 394-9000.
A 110-040	MISC: OBSN PT FIELD OF VIEW LTD DUE TO BLDG, HANGARS, AND TREE LINES. SPECIFICALLY THE FIELD OF VIEW LTD TO LESS THAN 1 MILE EXC SSW-WSW. NOT A CLEAR VIEW OF RUNWAY FROM ALT OPERATING LCTN.
A 110-041	RMK: 5,000 FT DISTANCE MARKER MISSING WEST SIDE OF RY.
A 110-042	ALL VIP/DV AIRCRAFT WILL PRK ON PARKING ROW AA, BB OR SIVER RAMP. 24 HOUR PRIOR COORDINATION WITH AIRFIELD MGMT REQUIRED FOR USE OF ALTN PARKING LCTN. AIRFIELD MGMT: 910 394-6508, DSN 424-6508.

111 INSPECTOR: (N) | 112 LAST INSP: | 113 LAST INFO REQ:

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRPORT MASTER RECORD

PRINT DATE: 10/26/2021
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> 11 OWNER:
> 12 ADDRESS:

> 13 PHONE NR:
> 14 MANAGER:
> 15 ADDRESS:

> 16 PHONE NR:
> 17 ATTENDANCE SCHEDULE:

SERVICES

> 70 FUEL:

BASED AIRCRAFT

90 SINGLE ENG:
91 MULTI ENG:
92 JET:
93 HELICOPTERS:
TOTAL:

94 GLIDERS:
95 MILITARY:
96 ULTRA-LIGHT:

FACILITIES

> 80 ARPT BCN:
> 81 ARPT LGT SKED :
BCN LGT SKED:
> 82 UNICOM:
> 83 WIND INDICATOR:
84 SEGMENTED CIRCLE:
85 CONTROL TWR:
86 FSS:
87 FSS ON ARPT:
88 FSS PHONE NR:
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20 ARPT LONG:
21 ARPT ELEV:
22 ACREAGE:
> 23 RIGHT TRAFFIC:
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> 30 RUNWAY INDENT:				
> 31 LENGTH:				
> 32 WIDTH:				
> 33 SURF TYPE-COND:				

LIGHTING/APCH AIDS

> 40 EDGE INTENSITY:				
> 42 RWY MARK TYPE-COND:	- / -	- / -	- / -	- / -

OBSTRUCTION DATA

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> 51 DISPLACED THR:	/	/	/	/
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> 54 HGT ABOVE RWY END:	/	/	/	/
> 55 DIST FROM RWY END:	/	/	/	/

(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS

A 110-043 RSTD-TWY LEADING TO GOLDEN KNIGHTS RAMP CLSD TO USAF C130 AND LARGER ACFT DUE TO TWY WIDTH LESS THAN 75'. ADD-GRADIENT FOR TWY G BTN AIRBORNE BOARD RAMP AND GOLDEN KNIGHTS RAMP EXCEEDS ACCEPTABLE GRADE FOR PRIMARY MOVEMENT AREA INCLUDING SHOULDERS.

111 INSPECTOR: (N) | 112 LAST INSP: | 113 LAST INFO REQ:

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

AIRPORT MASTER RECORD

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90 SINGLE ENG:
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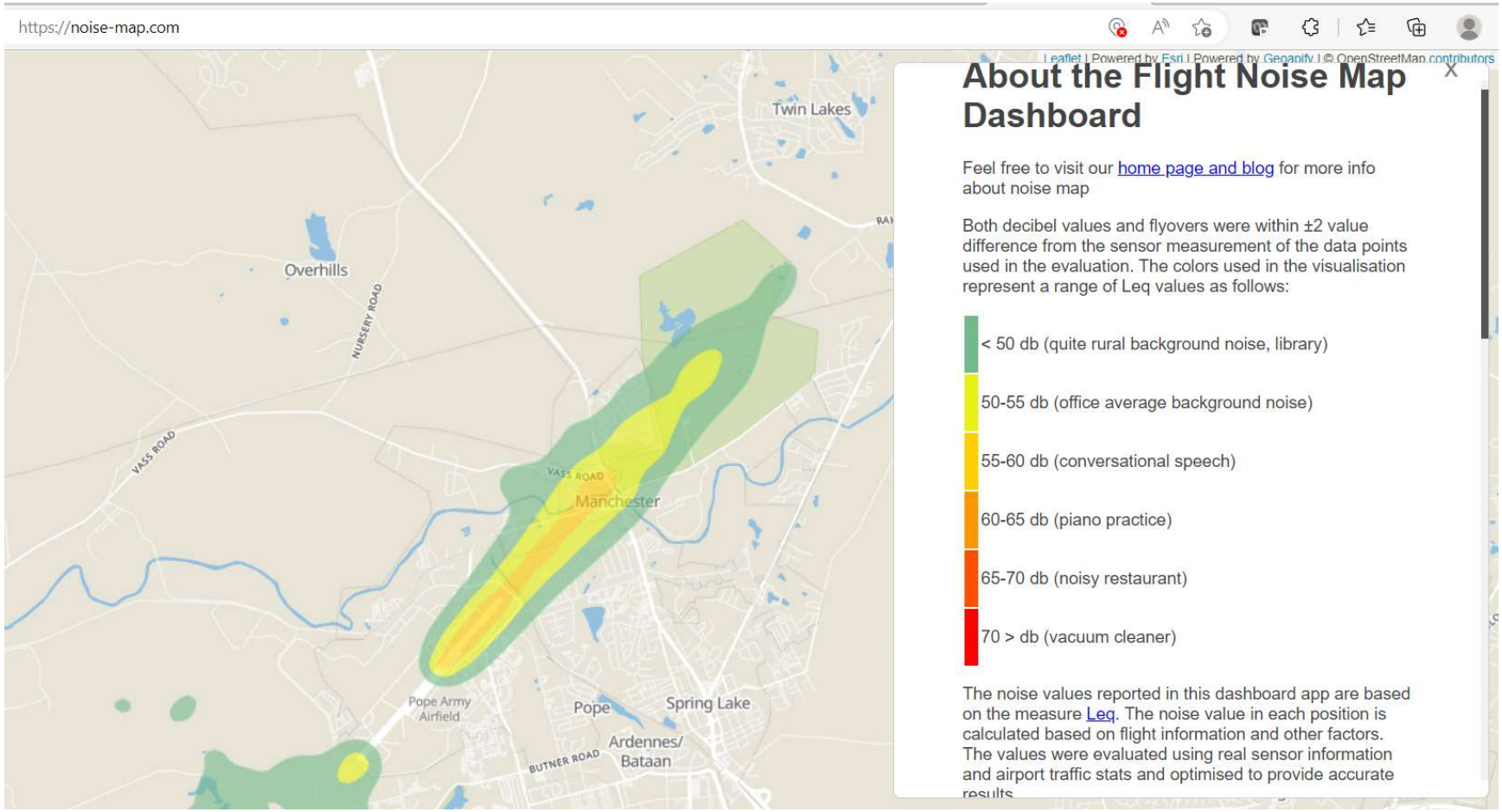
(>) ARPT MGR PLEASE ADVISE FSS IN ITEM 86 WHEN CHANGES OCCUR TO ITEMS PRECEDED BY >

> 110 REMARKS

111 INSPECTOR: (N) | 112 LAST INSP: | 113 LAST INFO REQ:

Pope Army Airfield (POB) Noise Contour Maps



Pope Army Airfield (POB) Noise Contour Maps

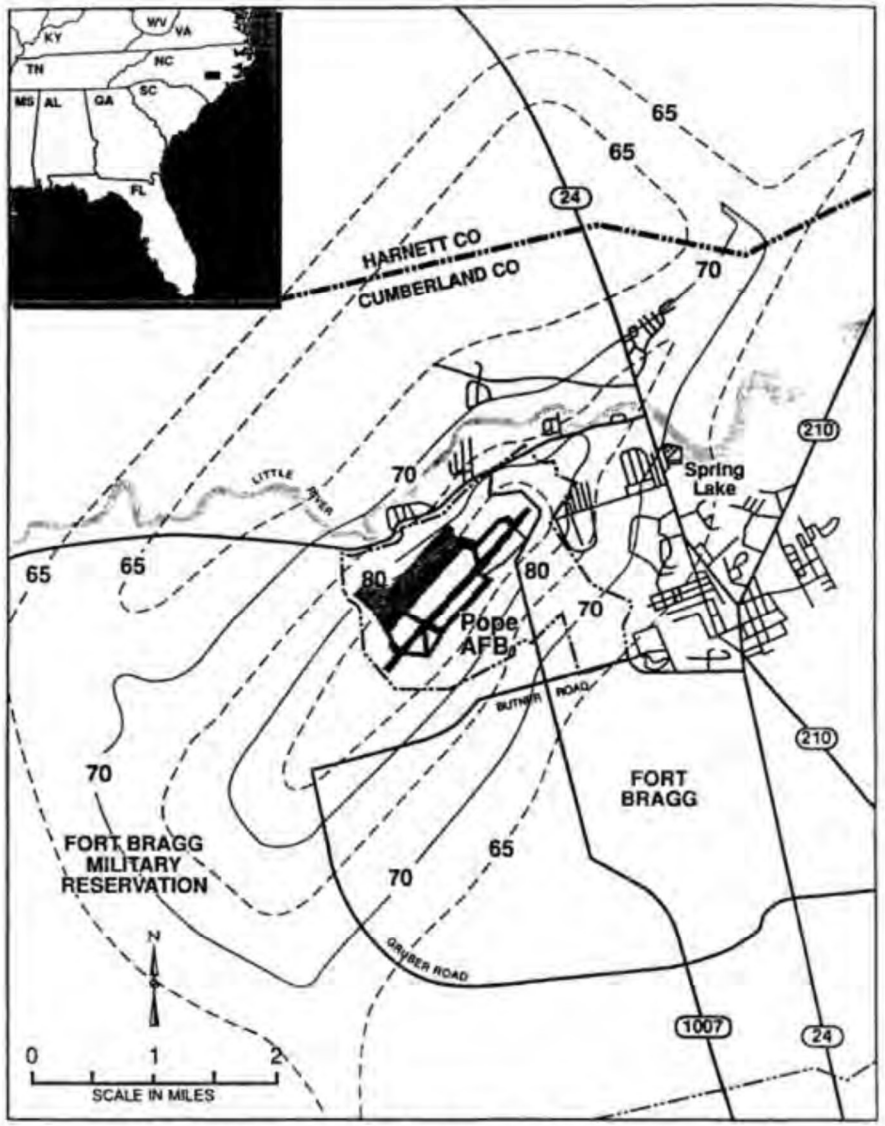
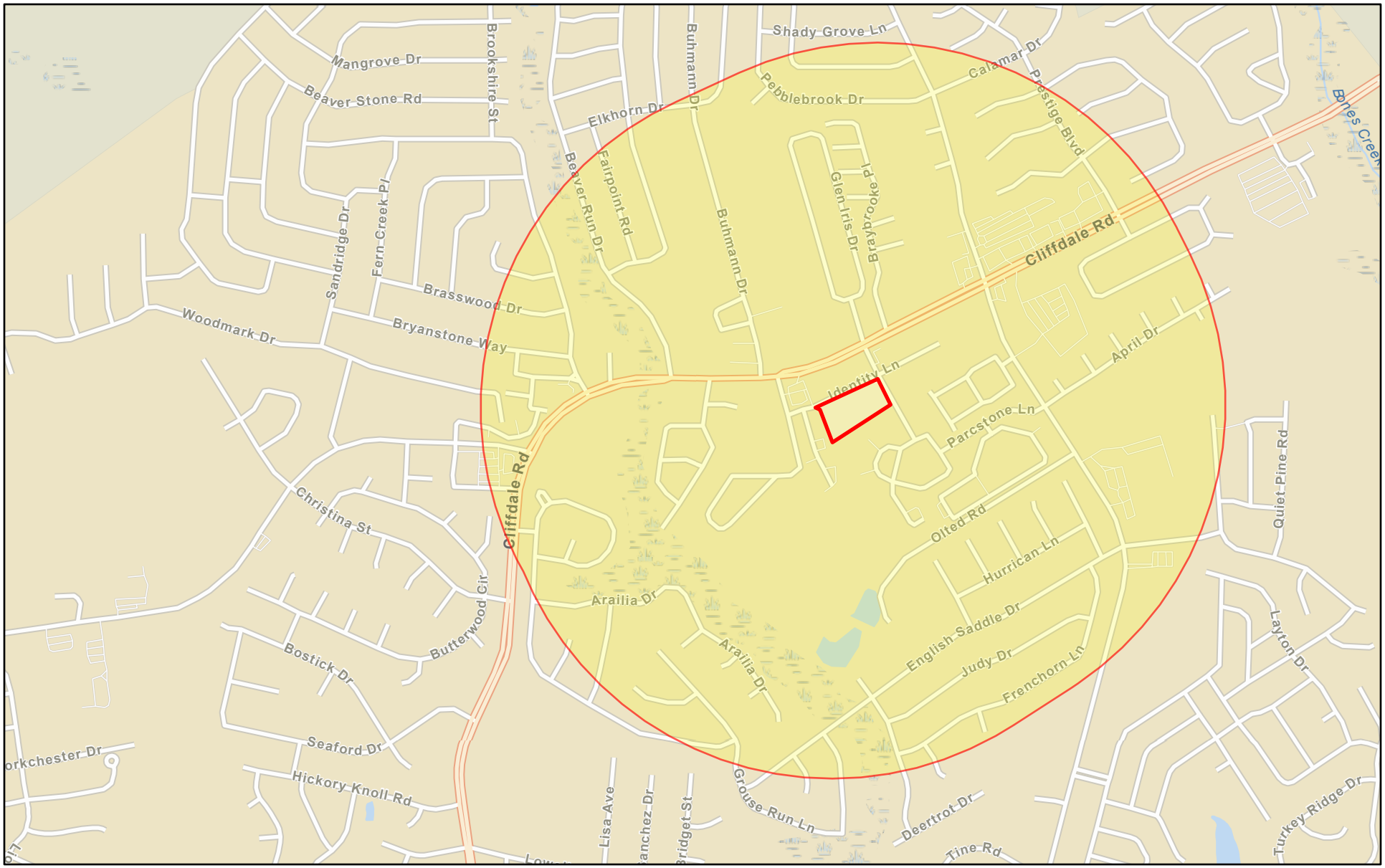


Figure 4.1-2. Noise Contours at Pope AFB Under the Maximum Equipage Scenario

Cliffmore Park - Railroads 3,000-foot Buffer



November 3, 2022

Cliffmore Park - Airports 15-mile Buffer

Railroads

Project Buffer

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Esri Community Maps Contributors, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA,

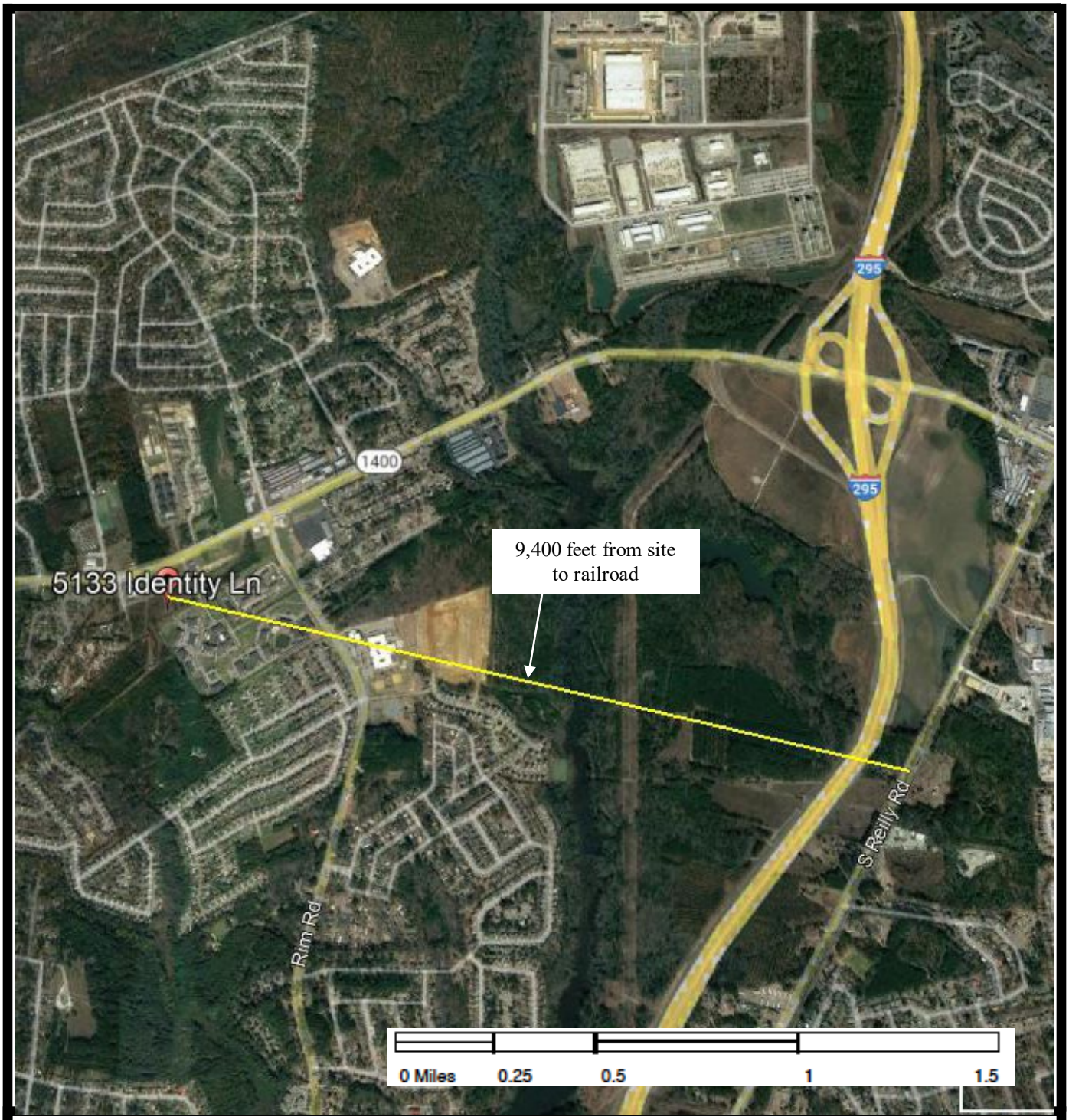


FIGURE 1: RAILROAD

Source: Google Earth

N

Proposed Cliffmore Park Apartments
Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
February 2022

0 50 100

FIGURE 2: ROAD MAP

Source: Cumberland County GIS 2021 aerial

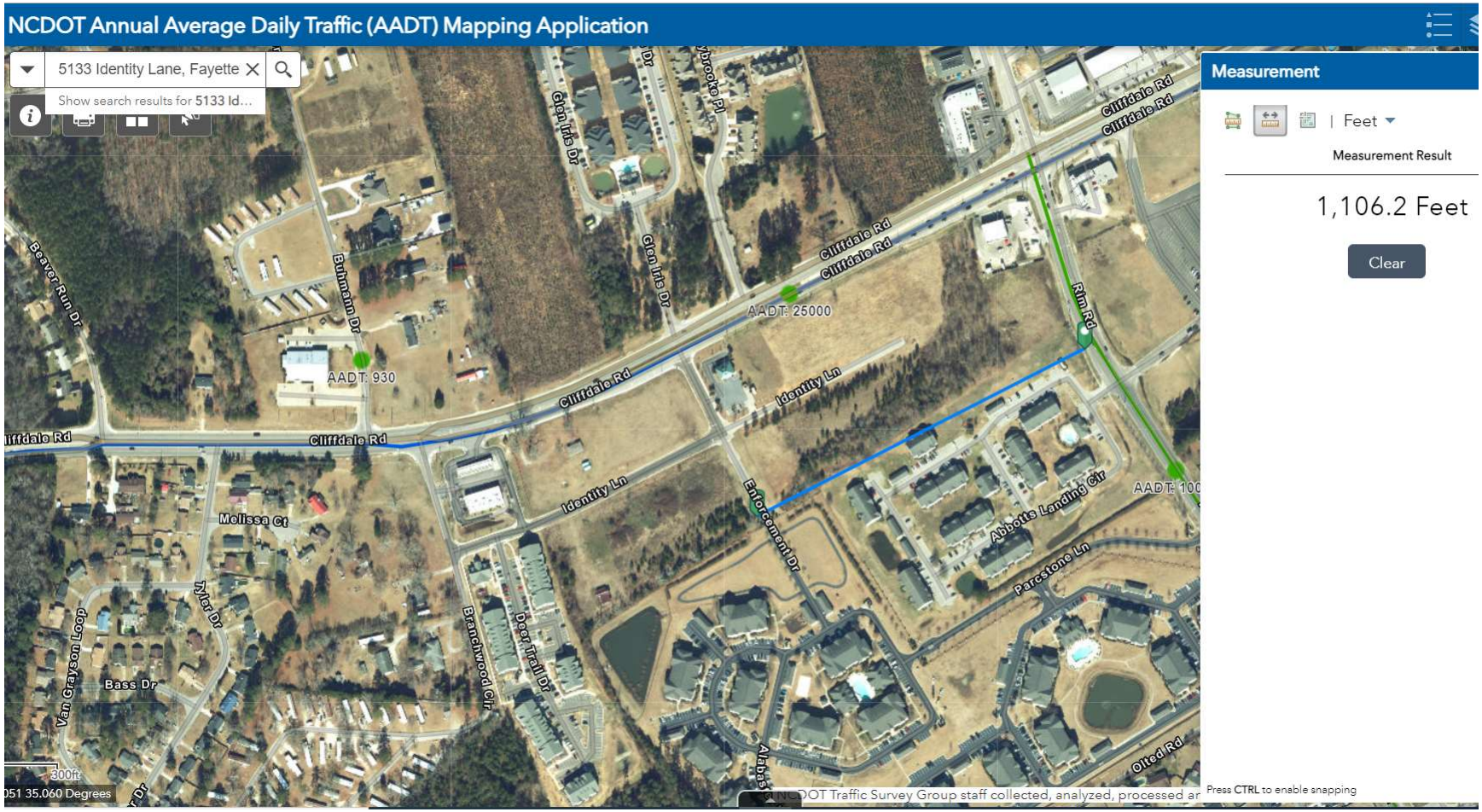
N

Proposed Cliffmore Park Apartments
Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

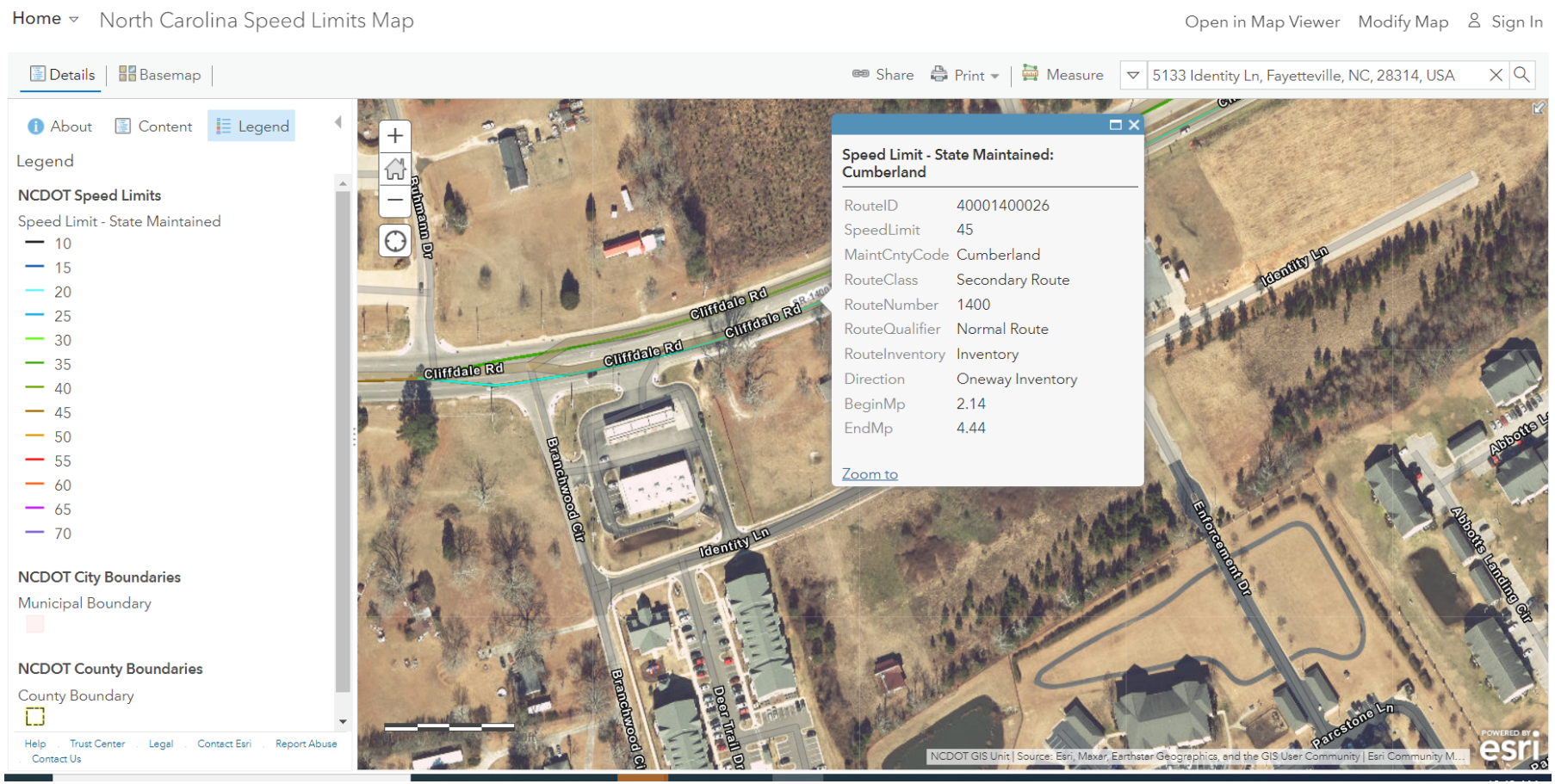
ASE Project No. 1523
February 2022

CLIFFMORE PARK – Rim Road Distance

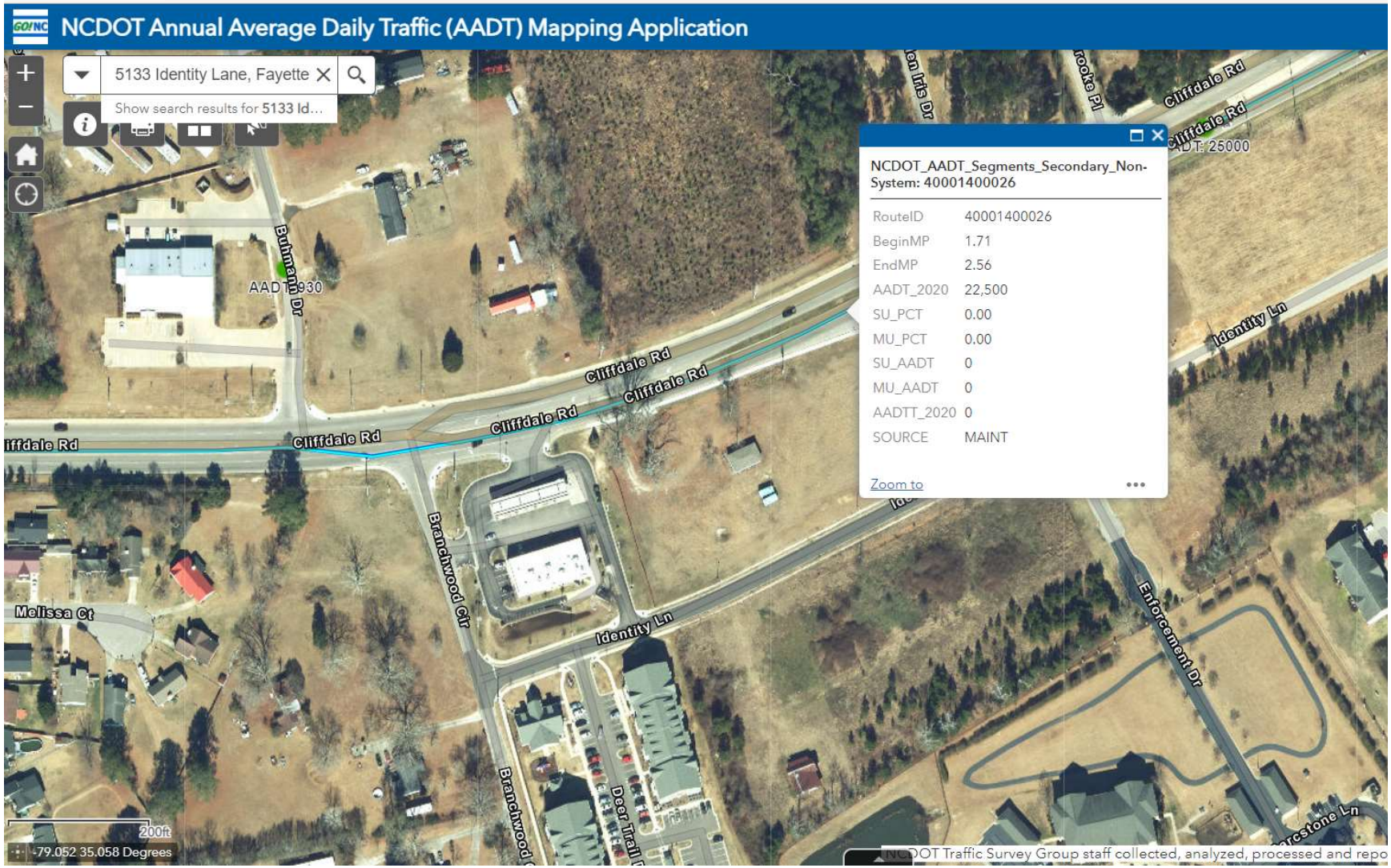


CLIFFMORE PARK – Closest NAL to Cliffdale Road (conservative)

CLIFFMORE PARK – Cliffdale Road 45 MPH



CLIFFMORE PARK – NC DOT AADT Cliffdale Road



DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Site ID	Cliffmore Park
Record Date	11/18/2022
User's Name	Andrea Gievers

Road # 1 Name:	**Cliffdale Rd - 1400 WEST OF SR 1402 (Current Year)**

Road #1

Vehicle Type	Cars ☑	Medium Trucks ☑	Heavy Trucks ☑
Effective Distance	353	353	353
Distance to Stop Sign			
Average Speed	45	45	45
Average Daily Trips (ADT)	19575	900	2025
Night Fraction of ADT	15	15	15
Road Gradient (%)			2
Vehicle DNL	56	53	65

Calculate Road #1 DNL | 65 | Reset

Add Road Source | Add Rail Source

Airport Noise Level	0
Loud Impulse Sounds?	○Yes ◉No
Combined DNL for all Road and Rail sources	**65**
Combined DNL including Airport	**N/A**
Site DNL with Loud Impulse Sound	

Calculate | Reset

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
  - Incorporate natural or man-made barriers. See ***The Noise Guidebook (/resource/313/hud-noise-guidebook/)***
  - Construct noise barrier. See the **Barrier Performance Module (/programs/environmental-review/bpm-calculator/)**

Tools and Guidance

Day/Night Noise Level Assessment Tool User Guide (/resource/3822/day-night-noise-level-assessment-tool-user-guide/)

Day/Night Noise Level Assessment Tool Flowcharts (/resource/3823/day-night-noise-level-assessment-tool-flowcharts/)

Gievers, Andrea

From: Dixon, Keith G
Sent: Tuesday, November 22, 2022 8:29 AM
To: Gievers, Andrea
Subject: RE: Cliffdale Road CAGR

Follow Up Flag: Follow up
Flag Status: Flagged

Yes, that's likely and is also shown in the model at that location. And to be clear, no growth between 2022 and 2045. . . there probably will be a decrease when the Fayetteville Loop opens, then traffic will slowly rise to equal little growth.

Keith G. Dixon
State Traffic Forecast Engineer
Transportation Planning Division
North Carolina Department of Transportation

919 707 0984 office
919 593 5270 mobile
kgdixon@ncdot.gov

1 South Wilmington St
1554 Mail Service Center
Raleigh, NC 27699-1554

Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: Gievers, Andrea <andrea.l.gievers@rebuild.nc.gov>
Sent: Friday, November 18, 2022 2:23 PM
To: Dixon, Keith G <kgdixon@ncdot.gov>
Subject: FW: Cliffdale Road CAGR

Hi Keith:

I am looking at a site on Cliffdale Road further down at SR 1400 W OF SR 1402, location # 0260001091. You mentioned no growth for Cliffdale due to construction. Is that true at this part of Cliffdale Road? Thanks and have a great weekend!

Sincerely,

Andrea Gievers

From: Dixon, Keith G
Sent: Tuesday, November 8, 2022 8:17 AM
To: Gievers, Andrea <andrea.l.gievers@rebuild.nc.gov>
Subject: RE: Cliffdale Road CAGR

Hey Andrea,

Based upon the 2045 MTP Fayetteville Area MPO Travel Demand Model v2.3 there no growth projected on Cliffdale Rd.

2015	2045	CAGR
18947	17401	-0.28%

This is primarily due to the continuing construction of the Fayetteville loop which is diverting trips from Cliffdale Rd.

Keith G. Dixon
State Traffic Forecast Engineer
Transportation Planning Division
North Carolina Department of Transportation

919 707 0984 office
919 593 5270 mobile
kgdixon@ncdot.gov

1 South Wilmington St
1554 Mail Service Center
Raleigh, NC 27699-1554

Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: Gievers, Andrea <andrea.l.gievers@rebuild.nc.gov>
Sent: Friday, November 4, 2022 12:52 PM
To: Dixon, Keith G <kgdixon@ncdot.gov>
Subject: Cliffdale Road CAGR

Hi Keith:

Do you have an expected annual growth rate for SR 1400 (Cliffdale Road) West of McPherson Church Road? The site is located at 5133 Identity Lane, Fayetteville. Thanks!

Sincerely,

Andrea

Andrea Gievers, JD, MSEL, ERM
Environmental SME
Community Development

NC Office of Recovery and Resiliency
Andrea.L.Gievers@Rebuild.NC.Gov
(845) 682-1700

Email correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties by an authorized state official.

Email correspondence to and from this sender is subject to the N.C. Public Records Law and may be disclosed to third parties.

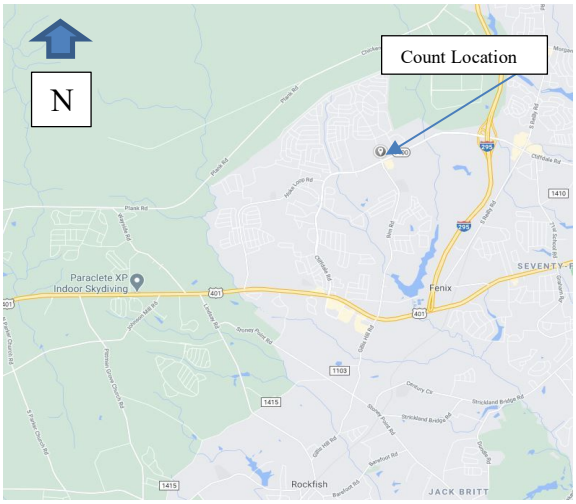
Morton & Morton
Design Services, PLLC

Count Number: 7240
NCDOT Division Number: 6
County: Cumberland
City: Fayetteville
Count Type: Turning Movement (Classification)
13 Hour Count Volume: 25,997

Intersection: SR 1400 (Cliffdale Rd) and SR 1402 (Rim Rd)			
Count Date	**Count Time**	**Weather Conditions**	**Precipitation**
3/16/2020	6am to 7pm	45-48° Cloudy	80%

Comments:

Counted by:	Chase Arthur
Data Processor:	Chase Arthur
Method Used:	Jamar Countboard/Video
Equipment Operating:	Yes
School in Session:	Yes
Break Times:	N/A
Area Lighting Present:	Yes
Traffic Control:	Traffic Signal
Signal Cabinet Number:	06-0779
Disabled Pedestrians:	No
Construction:	No
Traffic Flow Disruption:	No

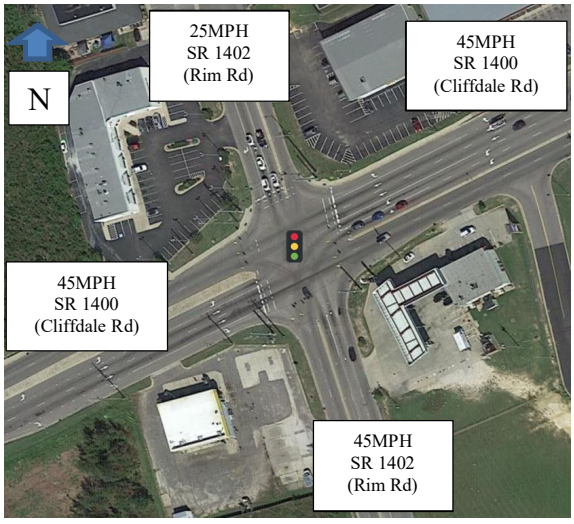


Northbound Approach: SR 1402 (Rim Rd)
Stop sign within 300 feet: No
Signal within 300 feet: No
Railroad within 200 feet: No If Yes:__feet

Southbound Approach: SR 1402 (Rim Rd)
Stop sign within 300 feet: No
Signal within 300 feet: No
Railroad within 200 feet: No If Yes:__feet

Westbound Approach: SR 1400 (Cliffdale Rd)
Stop sign within 300 feet: No
Signal within 300 feet: No
Railroad within 200 feet: No If Yes:__feet

Eastbound Approach: SR 1400 (Cliffdale Rd)
Stop sign within 300 feet: No
Signal within 300 feet: No
Railroad within 200 feet: No If Yes:__feet



Morton & Morton
Design Services, PLLC

Count Number: 7240
NCDOT Division Number: 6
County: Cumberland
City: Fayetteville
Count Type: Turning Movement (Classification)
13 Hour Count Volume: 25,997

SR 1400 (Cliffdale Rd) looking east away from SR 1402 (Rim Rd).

SR 1400 (Cliffdale Rd) looking west towards SR 1402 (Rim Rd).

Morton & Morton
Design Services, PLLC

Count Number: 7240
NCDOT Division Number: 6
County: Cumberland
City: Fayetteville
Count Type: Turning Movement (Classification)
13 Hour Count Volume: 25,997

SR 1402 (Rim Rd) looking south away from SR 1400 (Cliffdale Rd).

SR 1402 (Rim Rd) looking north towards SR 1400 (Cliffdale Rd).

Morton & Morton
Design Services, PLLC

Count Number: 7240
NCDOT Division Number: 6
County: Cumberland
City: Fayetteville
Count Type: Turning Movement (Classification)
13 Hour Count Volume: 25,997

SR 1400 (Cliffdale Rd) looking west away from SR 1402 (Rim Rd).

SR 1400 (Cliffdale Rd) looking east towards SR 1402 (Rim Rd).

Morton & Morton
Design Services, PLLC

Count Number: 7240
NCDOT Division Number: 6
County: Cumberland
City: Fayetteville
Count Type: Turning Movement (Classification)
13 Hour Count Volume: 25,997

SR 1402 (Rim Rd) looking north away from SR 1400 (Cliffdale Rd).

SR 1402 (Rim Rd) looking south towards SR 1400 (Cliffdale Rd).

Morton & Morton
Design Services, PLLC

Count Number: 7240
NCDOT Division Number: 6
County: Cumberland
City: Fayetteville
Count Type: Turning Movement (Classification)
13 Hour Count Volume: 25,997

Signal Cabinet

Morton & Morton Design Services, PLLC

4700 Homewood Ct, Suite 200
Raleigh, North Carolina 27609
Ph. (919) 882-6066

www.mortonmorton.com

File Name : 7240
Site Code : 00007240
Start Date : 3/16/2021
Page No : 1

Groups Printed- Passenger Vehicles - Duals - TTST - Twins

	SR 1402 (Rim Rd) Southbound					SR 1400 (Cliffdale Rd) Westbound					SR 1402 (Rim Rd) Northbound					SR 1400 (Cliffdale Rd) Eastbound							
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
06:00 AM	24	4	3	0	31	12	37	4	0	53	8	2	37	0	47	2	131	3	0	136	0	267	267
06:15 AM	18	4	4	0	26	16	49	3	0	68	5	5	48	0	58	4	117	4	0	125	0	277	277
06:30 AM	17	4	4	0	25	31	81	0	0	112	4	3	46	0	53	3	183	4	0	190	0	380	380
06:45 AM	15	8	5	0	28	36	97	8	0	141	3	3	33	0	39	6	170	5	0	181	0	389	389
Total	74	20	16	0	110	95	264	15	0	374	20	13	164	0	197	15	601	16	0	632	0	1313	1313
07:00 AM	31	7	4	0	42	36	74	7	0	117	5	7	40	0	52	4	209	9	0	222	0	433	433
07:15 AM	41	7	5	0	53	33	127	7	0	167	10	5	36	0	51	9	223	3	0	235	0	506	506
07:30 AM	55	5	3	0	63	49	127	12	0	188	9	18	68	0	95	5	270	12	0	287	0	633	633
07:45 AM	27	9	10	0	46	70	114	9	0	193	10	21	53	0	84	22	226	17	0	265	0	588	588
Total	154	28	22	0	204	188	442	35	0	665	34	51	197	0	282	40	928	41	0	1009	0	2160	2160
08:00 AM	35	8	14	0	57	45	70	12	0	127	15	15	48	0	78	12	169	10	0	191	0	453	453
08:15 AM	30	8	7	0	45	49	93	5	0	147	9	7	53	0	69	7	202	8	0	217	0	478	478
08:30 AM	29	14	2	0	45	55	105	4	0	164	14	8	92	0	114	6	239	13	0	258	0	581	581
08:45 AM	26	8	7	0	41	38	83	5	0	126	12	14	57	0	83	1	210	18	0	229	0	479	479
Total	120	38	30	0	188	187	351	26	0	564	50	44	250	0	344	26	820	49	0	895	0	1991	1991
09:00 AM	34	9	2	0	45	35	80	10	0	125	13	7	50	0	70	5	137	9	0	151	0	391	391
09:15 AM	18	11	0	0	29	37	83	8	0	128	13	14	26	0	53	10	118	10	0	138	0	348	348
09:30 AM	14	4	5	0	23	44	73	5	0	122	9	14	38	0	61	3	153	6	0	162	0	368	368
09:45 AM	27	5	2	0	34	29	81	7	0	117	12	6	31	0	49	8	102	13	0	123	0	323	323
Total	93	29	9	0	131	145	317	30	0	492	47	41	145	0	233	26	510	38	0	574	0	1430	1430
10:00 AM	22	6	4	0	32	44	93	5	0	142	13	8	43	0	64	2	108	17	0	127	0	365	365
10:15 AM	16	10	1	0	27	26	75	5	0	106	16	10	30	0	56	7	106	8	0	121	0	310	310
10:30 AM	20	7	2	0	29	36	83	6	0	125	11	10	36	0	57	5	128	9	0	142	0	353	353
10:45 AM	20	6	3	0	29	37	108	10	1	155	13	6	45	0	64	1	116	14	0	131	1	379	380
Total	78	29	10	0	117	143	359	26	1	528	53	34	154	0	241	15	458	48	0	521	1	1407	1408
11:00 AM	14	9	7	0	30	36	104	14	0	154	12	9	35	0	56	4	109	18	0	131	0	371	371
11:15 AM	14	9	3	0	26	68	99	11	0	178	14	9	39	0	62	5	115	6	0	126	0	392	392
11:30 AM	16	9	5	0	30	62	128	15	0	205	16	12	29	0	57	9	115	12	0	136	0	428	428
11:45 AM	17	9	6	0	32	57	135	9	0	201	23	11	29	0	63	8	109	18	0	135	0	431	431
Total	61	36	21	0	118	223	466	49	0	738	65	41	132	0	238	26	448	54	0	528	0	1622	1622
12:00 PM	24	14	7	0	45	54	145	16	0	215	14	13	45	0	72	7	119	8	0	134	0	466	466
12:15 PM	24	17	6	0	47	54	137	4	0	195	16	8	55	0	79	13	123	11	0	147	0	468	468
12:30 PM	23	10	6	0	39	52	154	17	0	223	12	14	36	0	62	8	150	14	0	172	0	496	496
12:45 PM	23	6	4	0	33	46	134	8	0	188	15	15	45	0	75	5	147	15	0	167	0	463	463
Total	94	47	23	0	164	206	570	45	0	821	57	50	181	0	288	33	539	48	0	620	0	1893	1893
01:00 PM	25	12	7	0	44	50	136	14	0	200	15	11	46	0	72	6	126	12	0	144	0	460	460
01:15 PM	18	11	1	0	30	69	144	18	0	231	16	15	45	0	76	7	124	16	0	147	0	484	484
01:30 PM	24	7	2	0	33	65	136	10	0	211	17	10	26	0	53	9	126	10	0	145	0	442	442
01:45 PM	18	14	7	0	39	51	146	13	1	210	14	15	38	0	67	10	110	9	0	129	1	445	446
Total	85	44	17	0	146	235	562	55	1	852	62	51	155	0	268	32	486	47	0	565	1	1831	1832
02:00 PM	16	14	2	1	32	60	129	18	0	207	19	17	41	0	77	8	131	17	0	156	1	472	473
02:15 PM	20	9	3	1	32	65	153	14	0	232	16	15	43	0	74	9	141	11	0	161	1	499	500
02:30 PM	24	12	4	0	40	50	145	21	0	216	30	15	43	0	88	8	133	13	0	154	0	498	498
02:45 PM	21	14	8	0	43	72	179	7	0	258	11	16	41	0	68	15	140	15	0	170	0	539	539
Total	81	49	17	2	147	247	606	60	0	913	76	63	168	0	307	40	545	56	0	641	2	2008	2010

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Groups Printed- Passenger Vehicles - Duals - TTST - Twins

	SR 1402 (Rim Rd) Southbound					SR 1400 (Cliffdale Rd) Westbound					SR 1402 (Rim Rd) Northbound					SR 1400 (Cliffdale Rd) Eastbound							
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Exclu. Total	Inclu. Total	Int. Total
03:00 PM	17	14	6	0	37	67	185	18	0	270	23	16	57	1	96	7	127	14	0	148	1	551	552
03:15 PM	18	19	11	0	48	93	195	18	0	306	25	15	38	1	78	8	131	15	0	154	1	586	587
03:30 PM	30	17	10	0	57	72	199	19	0	290	29	27	59	1	115	9	126	16	0	151	1	613	614
03:45 PM	25	20	10	0	55	98	187	20	1	305	26	19	51	0	96	13	150	12	0	175	1	631	632
Total	90	70	37	0	197	330	766	75	1	1171	103	77	205	3	385	37	534	57	0	628	4	2381	2385
04:00 PM	20	15	14	0	49	94	236	25	0	355	19	15	59	0	93	19	128	17	0	164	0	661	661
04:15 PM	20	17	7	0	44	111	206	22	0	339	27	25	38	0	90	15	145	17	0	177	0	650	650
04:30 PM	33	15	9	0	57	86	217	25	0	328	23	19	60	0	102	10	137	17	0	164	0	651	651
04:45 PM	30	22	14	0	66	89	224	26	0	339	17	29	56	0	102	21	126	24	0	171	0	678	678
Total	103	69	44	0	216	380	883	98	0	1361	86	88	213	0	387	65	536	75	0	676	0	2640	2640
05:00 PM	32	14	15	0	61	114	281	21	0	416	28	32	39	0	99	23	166	19	0	208	0	784	784
05:15 PM	22	13	10	0	45	109	264	21	0	394	33	19	38	0	90	20	158	22	0	200	0	729	729
05:30 PM	34	19	13	0	66	113	281	27	0	421	21	26	40	0	87	22	138	20	0	180	0	754	754
05:45 PM	27	21	8	0	56	107	263	29	0	399	24	27	41	0	92	22	145	14	1	181	1	728	729
Total	115	67	46	0	228	443	1089	98	0	1630	106	104	158	0	368	87	607	75	1	769	1	2995	2996
06:00 PM	22	11	17	0	50	84	232	25	0	341	24	19	46	0	89	20	155	22	0	197	0	677	677
06:15 PM	23	13	6	0	42	87	196	16	0	299	31	17	30	0	78	17	132	16	0	165	0	584	584
06:30 PM	24	13	7	0	44	81	178	13	0	272	20	23	33	0	76	9	105	23	0	137	0	529	529
06:45 PM	22	11	6	0	39	69	179	7	0	255	21	13	43	0	77	12	137	16	0	165	0	536	536
Total	91	48	36	0	175	321	785	61	0	1167	96	72	152	0	320	58	529	77	0	664	0	2326	2326
Grand Total	1239	574	328	2	2141	3143	7460	673	3	11276	855	729	2274	3	3858	500	7541	681	1	8722	9	25997	26006
Apprch %	57.9	26.8	15.3			27.9	66.2	6			22.2	18.9	58.9			5.7	86.5	7.8					
Total %	4.8	2.2	1.3		8.2	12.1	28.7	2.6		43.4	3.3	2.8	8.7		14.8	1.9	29	2.6		33.6	0	100	
Passenger Vehicles	1224	564	312		2102	3089	7323	659		11074	839	712	2235		3789	489	7409	662		8561	0	0	25526
% Passenger Vehicles	98.8	98.3	95.1	100	98.1	98.3	98.2	97.9	100	98.2	98.1	97.7	98.3	100	98.1	97.8	98.2	97.2	100	98.1	0	0	98.2
Duals	15	10	15		40	45	106	13		164	14	15	33		62	11	114	16		141	0	0	407
% Duals	1.2	1.7	4.6	0	1.9	1.4	1.4	1.9	0	1.5	1.6	2.1	1.5	0	1.6	2.2	1.5	2.3	0	1.6	0	0	1.6
TTST	0	0	1		1	9	31	1		41	2	2	6		10	0	18	3		21	0	0	73
% TTST	0	0	0.3	0	0	0.3	0.4	0.1	0	0.4	0.2	0.3	0.3	0	0.3	0	0.2	0.4	0	0.2	0	0	0.3
Twins	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0		0	0	0	0
% Twins	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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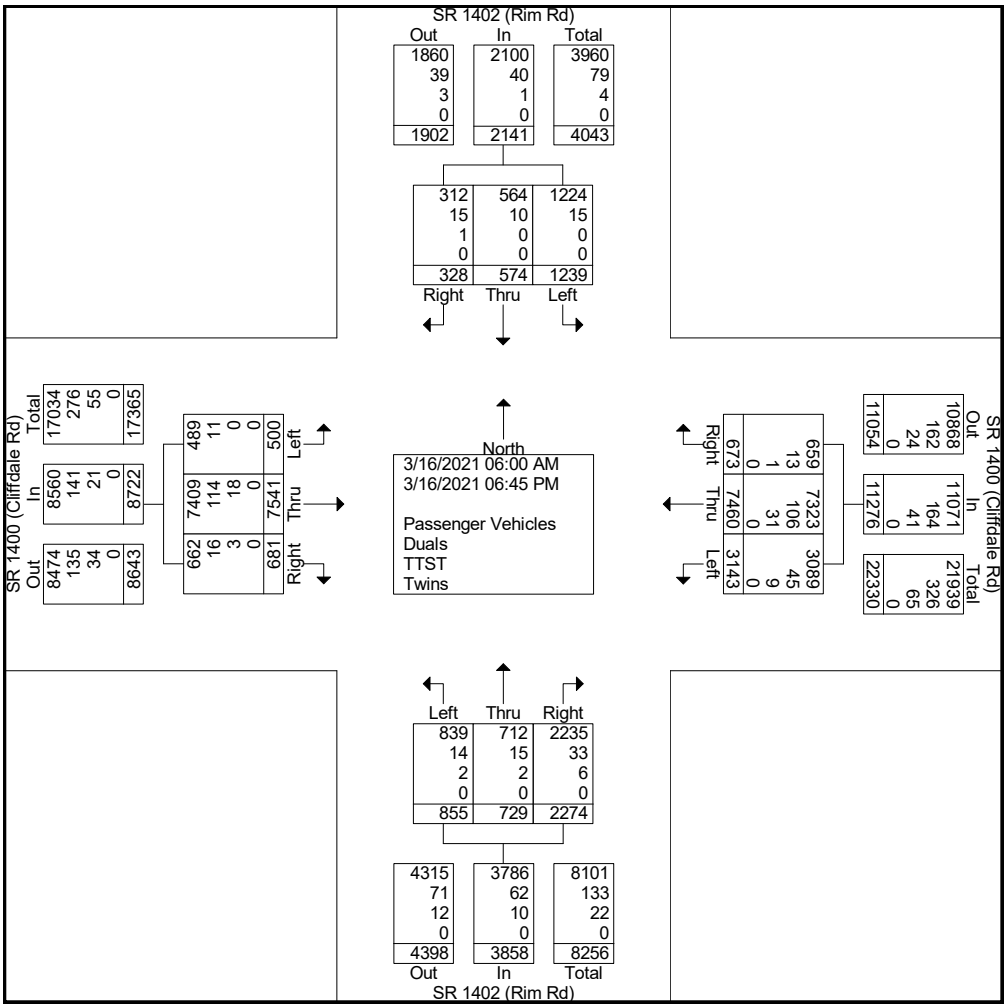

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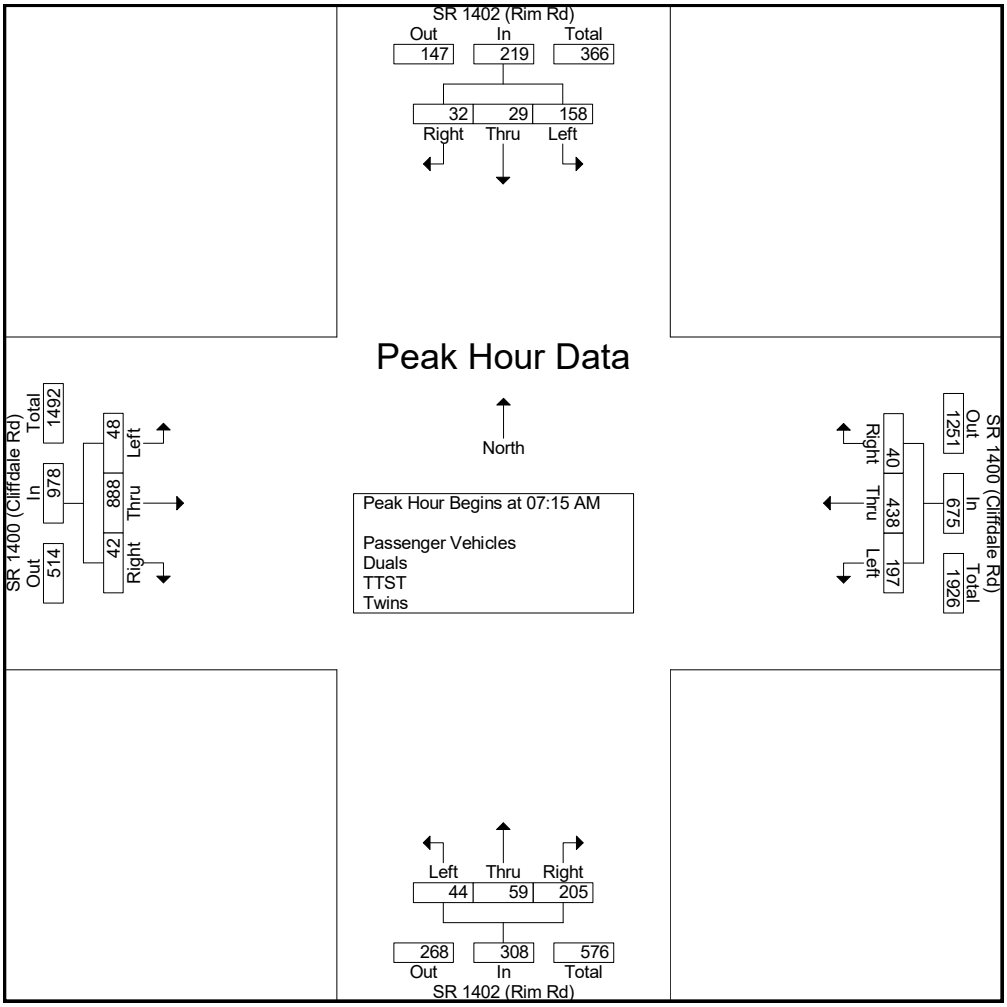
	SR 1402 (Rim Rd) Southbound				SR 1400 (Cliffdale Rd) Westbound				SR 1402 (Rim Rd) Northbound				SR 1400 (Cliffdale Rd) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	41	7	5	53	33	**127**	7	167	10	5	36	51	9	223	3	235	506
07:30 AM	**55**	5	3	**63**	49	127	**12**	188	9	18	**68**	**95**	5	**270**	12	**287**	**633**
07:45 AM	27	**9**	10	46	**70**	114	9	**193**	10	**21**	53	84	**22**	226	**17**	265	588
08:00 AM	35	8	**14**	57	45	70	12	127	**15**	15	48	78	12	169	10	191	453
Total Volume	158	29	32	219	197	438	40	675	44	59	205	308	48	888	42	978	2180
% App. Total	72.1	13.2	14.6		29.2	64.9	5.9		14.3	19.2	66.6		4.9	90.8	4.3		
PHF	.718	.806	.571	.869	.704	.862	.833	.874	.733	.702	.754	.811	.545	.822	.618	.852	.861



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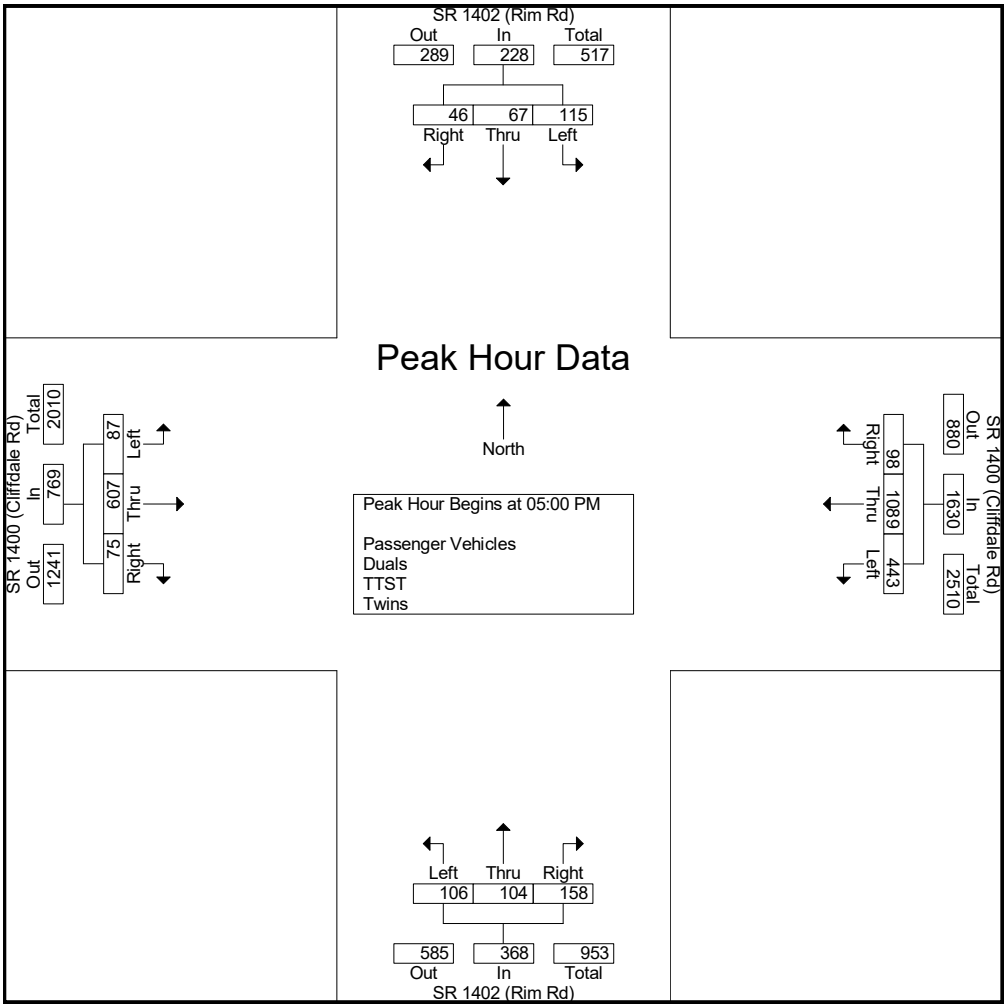
	SR 1402 (Rim Rd) Southbound				SR 1400 (Cliffdale Rd) Westbound				SR 1402 (Rim Rd) Northbound				SR 1400 (Cliffdale Rd) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	32	14	**15**	61	**114**	**281**	21	416	28	**32**	39	**99**	**23**	**166**	19	**208**	**784**
05:15 PM	22	13	10	45	109	264	21	394	**33**	19	38	90	20	158	**22**	200	729
05:30 PM	**34**	19	13	**66**	113	281	27	**421**	21	26	40	87	22	138	20	180	754
05:45 PM	27	**21**	8	56	107	263	**29**	399	24	27	**41**	92	22	145	14	181	728
Total Volume	115	67	46	228	443	1089	98	1630	106	104	158	368	87	607	75	769	2995
% App. Total	50.4	29.4	20.2		27.2	66.8	6		28.8	28.3	42.9		11.3	78.9	9.8		
PHF	.846	.798	.767	.864	.971	.969	.845	.968	.803	.813	.963	.929	.946	.914	.852	.924	.955



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Groups Printed- Passenger Vehicles

	SR 1402 (Rim Rd) Southbound				SR 1400 (Cliffdale Rd) Westbound				SR 1402 (Rim Rd) Northbound				SR 1400 (Cliffdale Rd) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	23	4	2	29	12	36	4	52	7	2	37	46	2	131	3	136	263
06:15 AM	18	4	4	26	16	48	3	67	5	4	46	55	4	115	4	123	271
06:30 AM	17	3	4	24	30	79	0	109	1	2	46	49	3	183	4	190	372
06:45 AM	15	7	5	27	36	96	8	140	3	3	31	37	6	167	4	177	381
Total	73	18	15	106	94	259	15	368	16	11	160	187	15	596	15	626	1287
07:00 AM	30	7	3	40	35	73	7	115	5	7	40	52	4	207	9	220	427
07:15 AM	41	7	5	53	32	124	6	162	9	5	36	50	9	220	3	232	497
07:30 AM	55	5	3	63	49	126	10	185	8	18	67	93	5	270	11	286	627
07:45 AM	26	8	7	41	69	108	8	185	10	21	50	81	21	222	15	258	565
Total	152	27	18	197	185	431	31	647	32	51	193	276	39	919	38	996	2116
08:00 AM	35	8	10	53	45	69	12	126	15	12	47	74	10	168	10	188	441
08:15 AM	30	8	7	45	47	93	5	145	8	7	53	68	7	201	8	216	474
08:30 AM	29	13	2	44	54	102	4	160	14	7	92	113	6	235	13	254	571
08:45 AM	26	8	7	41	38	81	5	124	12	13	56	81	1	205	17	223	469
Total	120	37	26	183	184	345	26	555	49	39	248	336	24	809	48	881	1955
09:00 AM	34	9	2	45	35	75	10	120	13	7	49	69	5	134	8	147	381
09:15 AM	18	11	0	29	36	80	7	123	13	14	26	53	10	116	8	134	339
09:30 AM	14	4	5	23	41	67	5	113	9	14	38	61	3	149	6	158	355
09:45 AM	27	5	2	34	26	81	7	114	12	5	31	48	8	99	13	120	316
Total	93	29	9	131	138	303	29	470	47	40	144	231	26	498	35	559	1391
10:00 AM	22	6	4	32	42	90	5	137	13	8	42	63	2	102	16	120	352
10:15 AM	16	10	0	26	26	74	5	105	16	9	30	55	7	102	8	117	303
10:30 AM	20	7	2	29	34	83	6	123	11	10	36	57	5	126	9	140	349
10:45 AM	20	6	3	29	36	104	10	150	13	6	45	64	1	114	13	128	371
Total	78	29	9	116	138	351	26	515	53	33	153	239	15	444	46	505	1375
11:00 AM	14	9	7	30	34	99	13	146	11	9	32	52	4	104	17	125	353
11:15 AM	13	9	3	25	67	96	11	174	14	9	37	60	5	109	6	120	379
11:30 AM	16	9	5	30	61	125	15	201	16	11	29	56	9	114	12	135	422
11:45 AM	17	9	6	32	56	133	9	198	22	10	28	60	8	106	17	131	421
Total	60	36	21	117	218	453	48	719	63	39	126	228	26	433	52	511	1575
12:00 PM	24	14	7	45	52	142	16	210	14	13	43	70	7	119	8	134	459
12:15 PM	24	16	6	46	53	133	4	190	16	8	54	78	13	119	11	143	457
12:30 PM	23	10	6	39	52	151	17	220	12	14	36	62	8	147	14	169	490
12:45 PM	22	6	4	32	46	128	8	182	15	15	43	73	5	143	14	162	449
Total	93	46	23	162	203	554	45	802	57	50	176	283	33	528	47	608	1855
01:00 PM	24	12	7	43	45	133	13	191	15	11	46	72	6	123	12	141	447
01:15 PM	18	11	1	30	69	140	18	227	15	15	44	74	7	121	14	142	473
01:30 PM	24	7	2	33	65	136	10	211	16	10	25	51	9	125	9	143	438
01:45 PM	17	13	7	37	51	145	13	209	14	15	38	67	10	106	8	124	437
Total	83	43	17	143	230	554	54	838	60	51	153	264	32	475	43	550	1795
02:00 PM	16	14	2	32	58	129	17	204	18	17	41	76	8	129	17	154	466
02:15 PM	20	9	2	31	65	151	13	229	16	15	43	74	9	137	10	156	490
02:30 PM	24	11	4	39	50	143	21	214	30	13	42	85	5	131	13	149	487
02:45 PM	20	14	7	41	70	174	7	251	11	16	41	68	14	137	15	166	526
Total	80	48	15	143	243	597	58	898	75	61	167	303	36	534	55	625	1969

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Groups Printed- Passenger Vehicles

	SR 1402 (Rim Rd) Southbound				SR 1400 (Cliffdale Rd) Westbound				SR 1402 (Rim Rd) Northbound				SR 1400 (Cliffdale Rd) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	16	13	6	35	65	180	18	263	22	16	55	93	7	122	13	142	533
03:15 PM	18	17	9	44	89	193	17	299	25	14	37	76	8	127	15	150	569
03:30 PM	30	17	9	56	71	196	19	286	28	25	58	111	7	124	16	147	600
03:45 PM	25	20	10	55	98	184	19	301	26	19	49	94	13	148	12	173	623
Total	89	67	34	190	323	753	73	1149	101	74	199	374	35	521	56	612	2325
04:00 PM	20	15	13	48	93	229	23	345	18	15	57	90	19	126	17	162	645
04:15 PM	20	17	7	44	108	204	22	334	27	24	35	86	14	139	17	170	634
04:30 PM	32	15	9	56	85	215	25	325	22	19	60	101	10	133	17	160	642
04:45 PM	29	22	14	65	89	222	26	337	17	29	54	100	21	125	24	170	672
Total	101	69	43	213	375	870	96	1341	84	87	206	377	64	523	75	662	2593
05:00 PM	31	14	15	60	113	275	20	408	28	32	39	99	23	166	19	208	775
05:15 PM	22	13	10	45	107	264	21	392	33	19	38	90	20	156	22	198	725
05:30 PM	33	19	13	65	112	281	27	420	21	26	40	87	22	137	20	179	751
05:45 PM	27	21	8	56	107	262	29	398	24	27	41	92	22	144	14	180	726
Total	113	67	46	226	439	1082	97	1618	106	104	158	368	87	603	75	765	2977
06:00 PM	22	11	17	50	83	226	25	334	24	19	46	89	20	154	22	196	669
06:15 PM	23	13	6	42	86	192	16	294	31	17	30	78	17	131	16	164	578
06:30 PM	24	13	7	44	81	176	13	270	20	23	33	76	9	105	23	137	527
06:45 PM	20	11	6	37	69	177	7	253	21	13	43	77	11	136	16	163	530
Total	89	48	36	173	319	771	61	1151	96	72	152	320	57	526	77	660	2304
Grand Total	1224	564	312	2100	3089	7323	659	11071	839	712	2235	3786	489	7409	662	8560	25517
Apprch %	58.3	26.9	14.9		27.9	66.1	6		22.2	18.8	59		5.7	86.6	7.7		
Total %	4.8	2.2	1.2	8.2	12.1	28.7	2.6	43.4	3.3	2.8	8.8	14.8	1.9	29	2.6	33.5	

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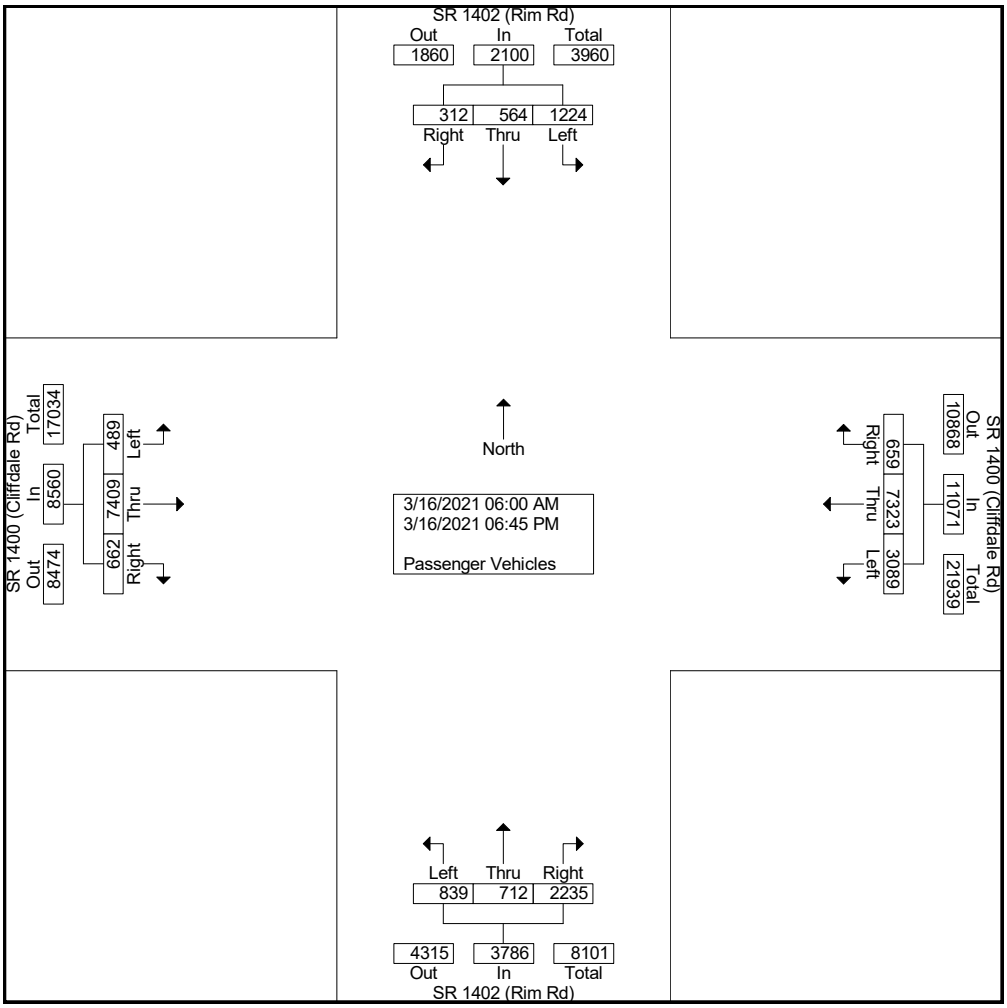

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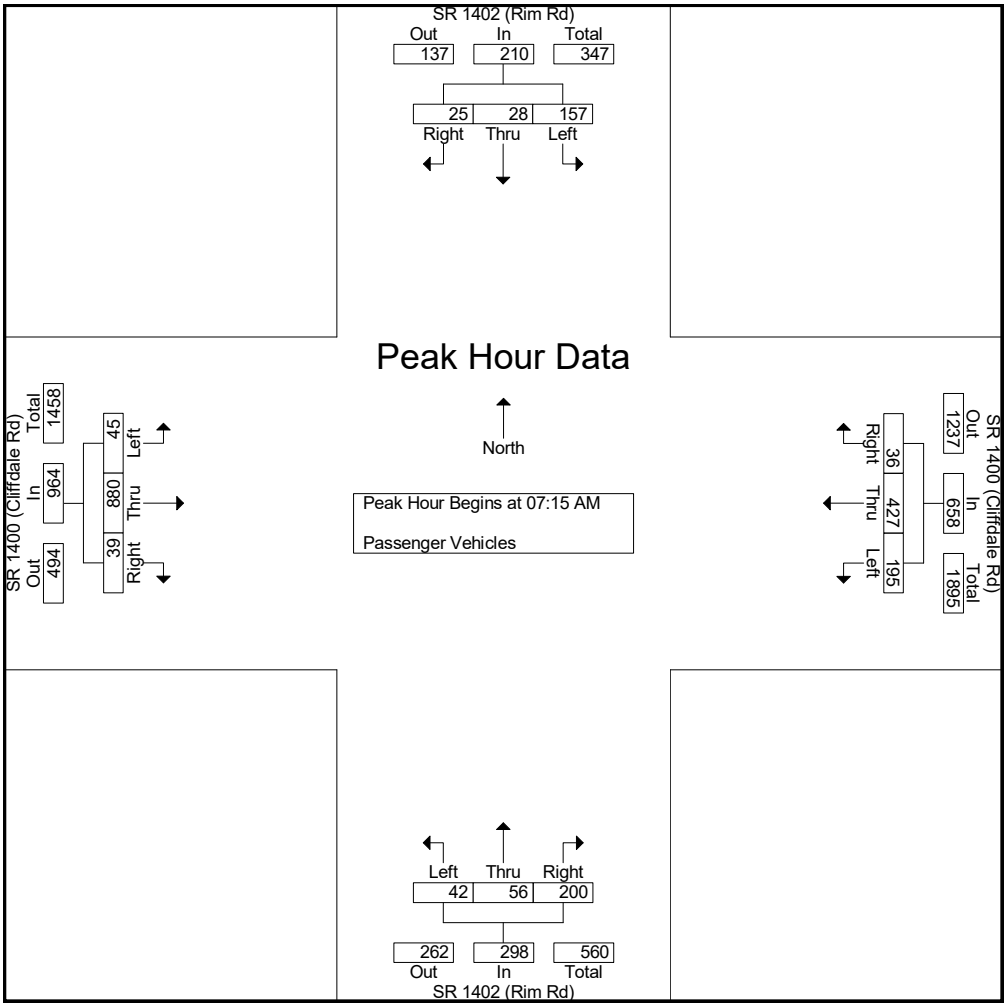
Start Date : 3/16/2021

	SR 1402 (Rim Rd) Southbound				SR 1400 (Cliffdale Rd) Westbound				SR 1402 (Rim Rd) Northbound				SR 1400 (Cliffdale Rd) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	41	7	5	53	32	124	6	162	9	5	36	50	9	220	3	232	497
07:30 AM	**55**	5	3	**63**	49	**126**	10	**185**	8	18	**67**	**93**	5	**270**	11	**286**	**627**
07:45 AM	26	**8**	7	41	**69**	108	8	185	10	**21**	50	81	**21**	222	**15**	258	565
08:00 AM	35	8	**10**	53	45	69	**12**	126	**15**	12	47	74	10	168	10	188	441
Total Volume	157	28	25	210	195	427	36	658	42	56	200	298	45	880	39	964	2130
% App. Total	74.8	13.3	11.9		29.6	64.9	5.5		14.1	18.8	67.1		4.7	91.3	4		
PHF	.714	.875	.625	.833	.707	.847	.750	.889	.700	.667	.746	.801	.536	.815	.650	.843	.849



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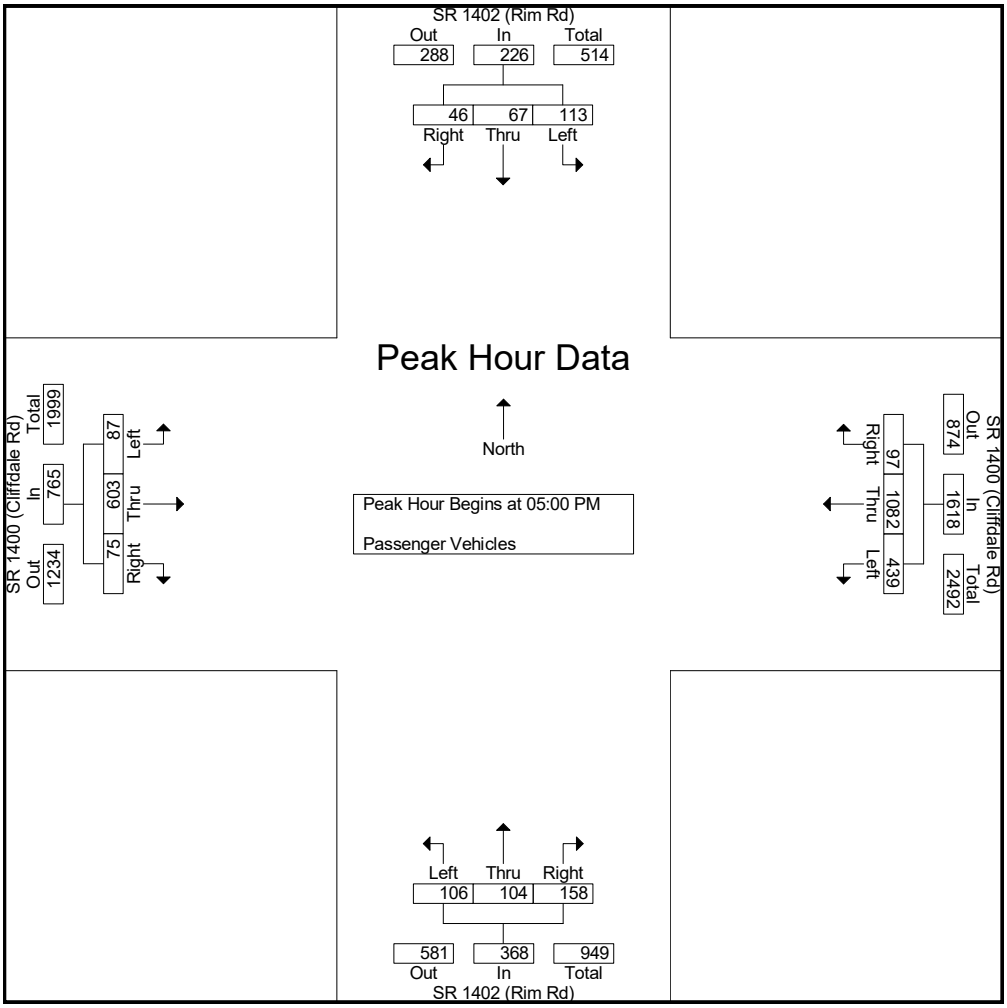
	SR 1402 (Rim Rd) Southbound				SR 1400 (Cliffdale Rd) Westbound				SR 1402 (Rim Rd) Northbound				SR 1400 (Cliffdale Rd) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	31	14	**15**	60	**113**	275	20	408	28	**32**	39	**99**	**23**	**166**	19	**208**	**775**
05:15 PM	22	13	10	45	107	264	21	392	**33**	19	38	90	20	156	**22**	198	725
05:30 PM	**33**	19	13	**65**	112	**281**	27	**420**	21	26	40	87	22	137	20	179	751
05:45 PM	27	**21**	8	56	107	262	**29**	398	24	27	**41**	92	22	144	14	180	726
Total Volume	113	67	46	226	439	1082	97	1618	106	104	158	368	87	603	75	765	2977
% App. Total	50	29.6	20.4		27.1	66.9	6		28.8	28.3	42.9		11.4	78.8	9.8		
PHF	.856	.798	.767	.869	.971	.963	.836	.963	.803	.813	.963	.929	.946	.908	.852	.919	.960



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Groups Printed- Duals

	SR 1402 (Rim Rd) Southbound				SR 1400 (Cliffdale Rd) Westbound				SR 1402 (Rim Rd) Northbound				SR 1400 (Cliffdale Rd) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	1	0	0	1	0	1	0	1	1	0	0	1	0	0	0	0	3
06:15 AM	0	0	0	0	0	0	0	0	0	1	1	2	0	2	0	2	4
06:30 AM	0	1	0	1	1	2	0	3	3	1	0	4	0	0	0	0	8
06:45 AM	0	1	0	1	0	1	0	1	0	0	1	1	0	3	1	4	7
Total	1	2	0	3	1	4	0	5	4	2	2	8	0	5	1	6	22
07:00 AM	1	0	1	2	1	1	0	2	0	0	0	0	0	2	0	2	6
07:15 AM	0	0	0	0	1	2	1	4	1	0	0	1	0	3	0	3	8
07:30 AM	0	0	0	0	0	1	2	3	1	0	1	2	0	0	1	1	6
07:45 AM	1	1	3	5	1	6	1	8	0	0	3	3	1	4	2	7	23
Total	2	1	4	7	3	10	4	17	2	0	4	6	1	9	3	13	43
08:00 AM	0	0	4	4	0	1	0	1	0	3	1	4	2	1	0	3	12
08:15 AM	0	0	0	0	1	0	0	1	1	0	0	1	0	0	0	0	2
08:30 AM	0	1	0	1	1	1	0	2	0	1	0	1	0	4	0	4	8
08:45 AM	0	0	0	0	0	1	0	1	0	1	1	2	0	5	1	6	9
Total	0	1	4	5	2	3	0	5	1	5	2	8	2	10	1	13	31
09:00 AM	0	0	0	0	0	3	0	3	0	0	1	1	0	2	1	3	7
09:15 AM	0	0	0	0	1	3	1	5	0	0	0	0	0	2	0	2	7
09:30 AM	0	0	0	0	3	5	0	8	0	0	0	0	0	3	0	3	11
09:45 AM	0	0	0	0	3	0	0	3	0	0	0	0	0	1	0	1	4
Total	0	0	0	0	7	11	1	19	0	0	1	1	0	8	1	9	29
10:00 AM	0	0	0	0	1	1	0	2	0	0	0	0	0	6	1	7	9
10:15 AM	0	0	1	1	0	1	0	1	0	1	0	1	0	4	0	4	7
10:30 AM	0	0	0	0	2	0	0	2	0	0	0	0	0	2	0	2	4
10:45 AM	0	0	0	0	1	4	0	5	0	0	0	0	0	1	0	1	6
Total	0	0	1	1	4	6	0	10	0	1	0	1	0	13	1	14	26
11:00 AM	0	0	0	0	2	3	0	5	0	0	3	3	0	5	1	6	14
11:15 AM	1	0	0	1	0	2	0	2	0	0	2	2	0	5	0	5	10
11:30 AM	0	0	0	0	1	2	0	3	0	0	0	0	0	0	0	0	3
11:45 AM	0	0	0	0	1	1	0	2	1	1	1	3	0	2	1	3	8
Total	1	0	0	1	4	8	0	12	1	1	6	8	0	12	2	14	35
12:00 PM	0	0	0	0	2	3	0	5	0	0	1	1	0	0	0	0	6
12:15 PM	0	1	0	1	0	4	0	4	0	0	1	1	0	3	0	3	9
12:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	3	0	3	5
12:45 PM	1	0	0	1	0	5	0	5	0	0	2	2	0	4	1	5	13
Total	1	1	0	2	2	14	0	16	0	0	4	4	0	10	1	11	33
01:00 PM	1	0	0	1	4	2	1	7	0	0	0	0	0	2	0	2	10
01:15 PM	0	0	0	0	0	1	0	1	1	0	1	2	0	3	2	5	8
01:30 PM	0	0	0	0	0	0	0	0	1	0	1	2	0	1	1	2	4
01:45 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	3	1	4	6
Total	2	1	0	3	4	3	1	8	2	0	2	4	0	9	4	13	28
02:00 PM	0	0	0	0	2	0	1	3	1	0	0	1	0	1	0	1	5
02:15 PM	0	0	1	1	0	2	1	3	0	0	0	0	0	4	1	5	9
02:30 PM	0	1	0	1	0	1	0	1	0	2	1	3	3	2	0	5	10
02:45 PM	1	0	1	2	2	5	0	7	0	0	0	0	1	3	0	4	13
Total	1	1	2	4	4	8	2	14	1	2	1	4	4	10	1	15	37

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Groups Printed- Duals

	SR 1402 (Rim Rd) Southbound				SR 1400 (Cliffdale Rd) Westbound				SR 1402 (Rim Rd) Northbound				SR 1400 (Cliffdale Rd) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	1	0	2	2	3	0	5	1	0	1	2	0	5	1	6	15
03:15 PM	0	2	2	4	2	2	1	5	0	1	1	2	0	4	0	4	15
03:30 PM	0	0	1	1	1	2	0	3	1	2	1	4	2	2	0	4	12
03:45 PM	0	0	0	0	0	2	1	3	0	0	2	2	0	2	0	2	7
Total	1	3	3	7	5	9	2	16	2	3	5	10	2	13	1	16	49
04:00 PM	0	0	1	1	1	7	2	10	1	0	2	3	0	0	0	0	14
04:15 PM	0	0	0	0	2	1	0	3	0	1	2	3	1	6	0	7	13
04:30 PM	1	0	0	1	1	2	0	3	0	0	0	0	0	2	0	2	6
04:45 PM	1	0	0	1	0	2	0	2	0	0	2	2	0	1	0	1	6
Total	2	0	1	3	4	12	2	18	1	1	6	8	1	9	0	10	39
05:00 PM	1	0	0	1	1	6	1	8	0	0	0	0	0	0	0	0	9
05:15 PM	0	0	0	0	2	0	0	2	0	0	0	0	0	1	0	1	3
05:30 PM	1	0	0	1	1	0	0	1	0	0	0	0	0	1	0	1	3
05:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	2	0	0	2	4	7	1	12	0	0	0	0	0	3	0	3	17
06:00 PM	0	0	0	0	1	4	0	5	0	0	0	0	0	1	0	1	6
06:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	1	0	1	4
06:30 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
06:45 PM	2	0	0	2	0	2	0	2	0	0	0	0	1	1	0	2	6
Total	2	0	0	2	1	11	0	12	0	0	0	0	1	3	0	4	18
Grand Total	15	10	15	40	45	106	13	164	14	15	33	62	11	114	16	141	407
Apprch %	37.5	25	37.5		27.4	64.6	7.9		22.6	24.2	53.2		7.8	80.9	11.3		
Total %	3.7	2.5	3.7	9.8	11.1	26	3.2	40.3	3.4	3.7	8.1	15.2	2.7	28	3.9	34.6	

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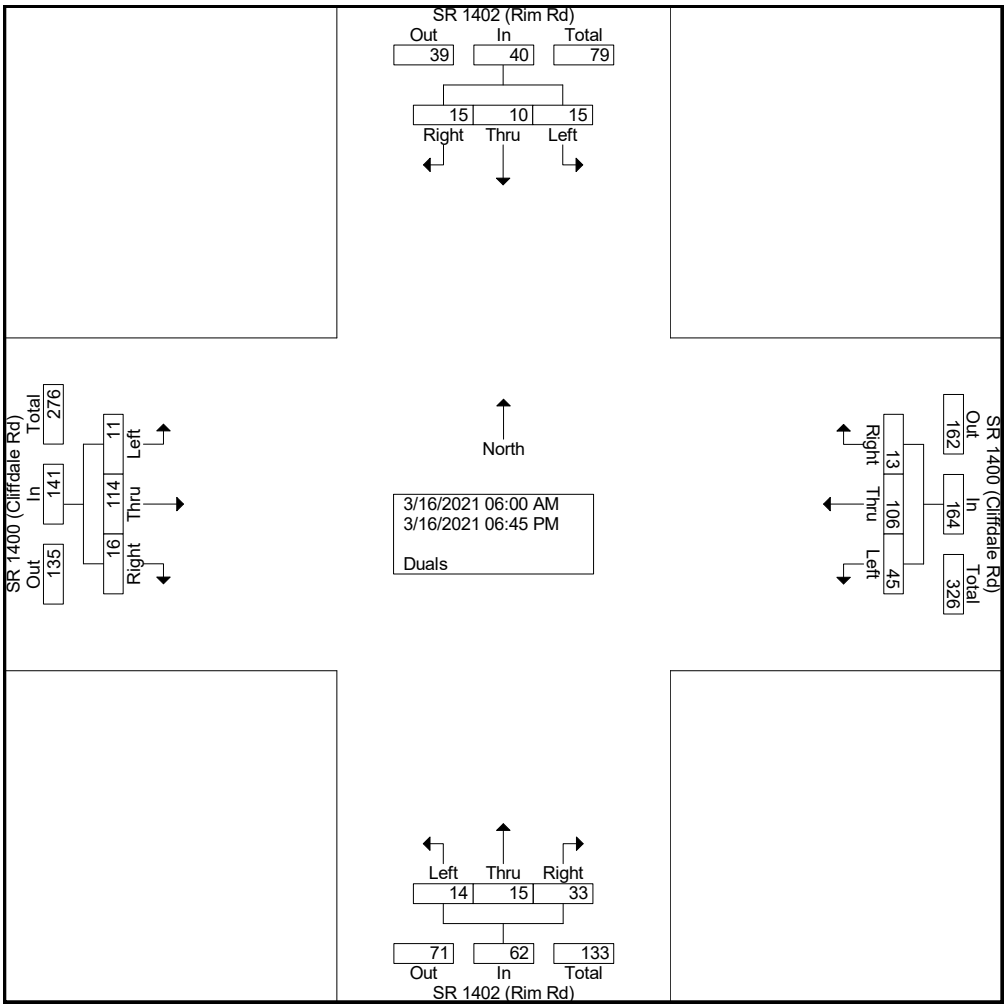

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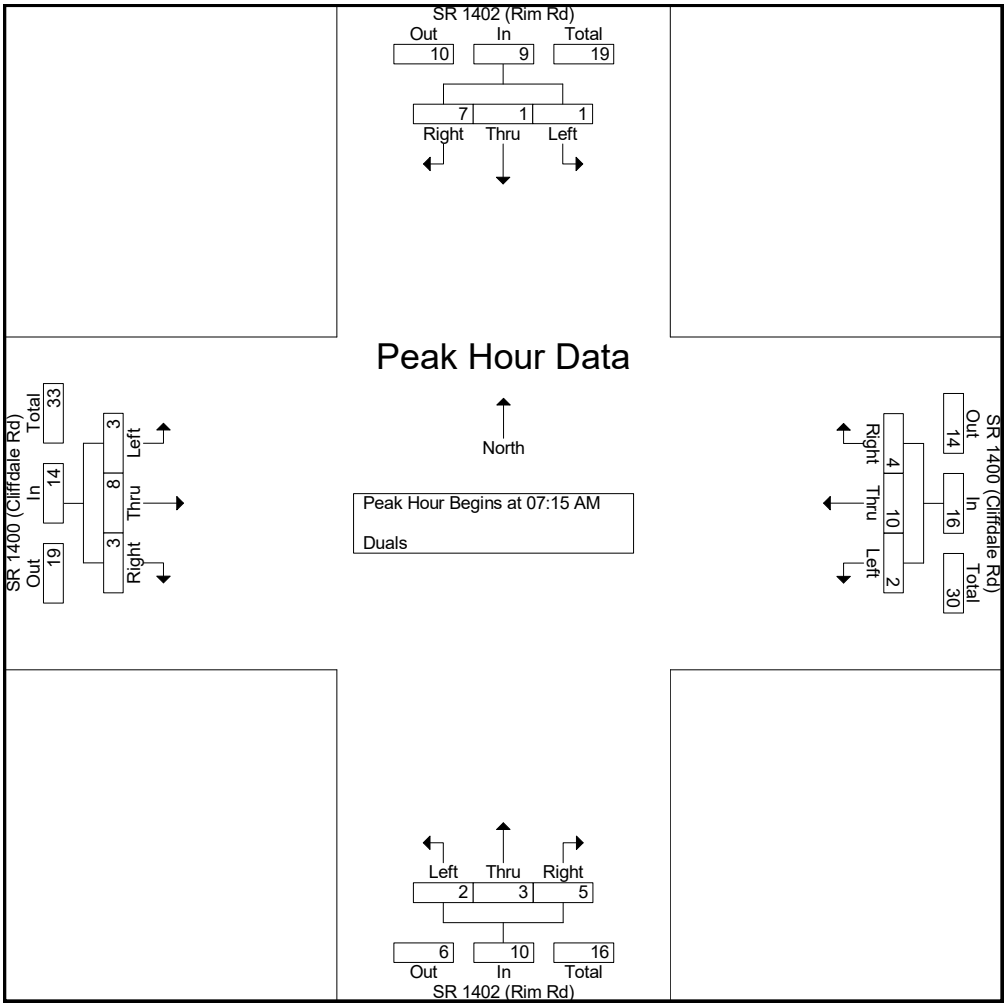
	SR 1402 (Rim Rd) Southbound				SR 1400 (Cliffdale Rd) Westbound				SR 1402 (Rim Rd) Northbound				SR 1400 (Cliffdale Rd) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	**1**	2	1	4	**1**	0	0	1	0	3	0	3	8
07:30 AM	0	0	0	0	0	1	**2**	3	1	0	1	2	0	0	1	1	6
07:45 AM	**1**	**1**	3	**5**	1	**6**	1	**8**	0	0	**3**	3	1	**4**	**2**	**7**	**23**
08:00 AM	0	0	**4**	4	0	1	0	1	0	**3**	1	**4**	**2**	1	0	3	12
Total Volume	1	1	7	9	2	10	4	16	2	3	5	10	3	8	3	14	49
% App. Total	11.1	11.1	77.8		12.5	62.5	25		20	30	50		21.4	57.1	21.4		
PHF	.250	.250	.438	.450	.500	.417	.500	.500	.500	.250	.417	.625	.375	.500	.375	.500	.533



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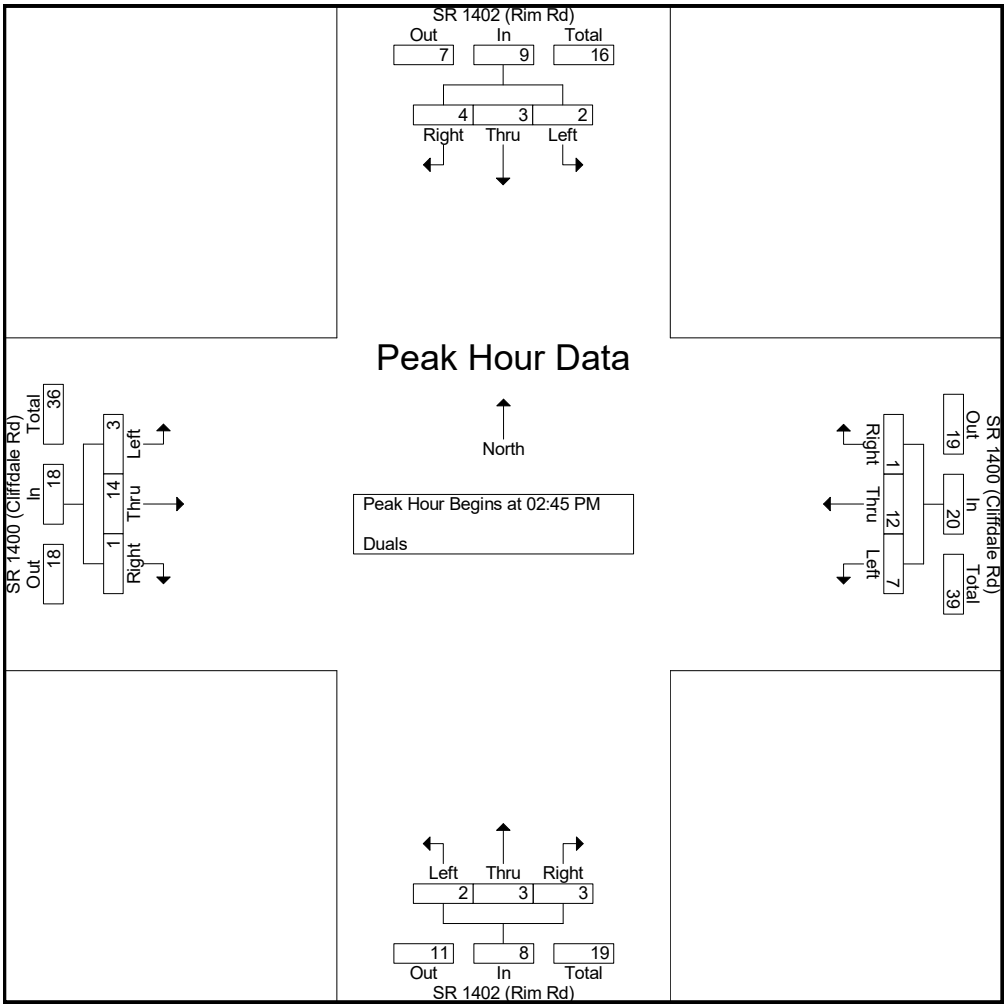
	SR 1402 (Rim Rd) Southbound				SR 1400 (Cliffdale Rd) Westbound				SR 1402 (Rim Rd) Northbound				SR 1400 (Cliffdale Rd) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 02:45 PM																	
02:45 PM	**1**	0	1	2	**2**	**5**	0	**7**	0	0	0	0	1	3	0	4	13
03:00 PM	1	1	0	2	2	3	0	5	**1**	0	**1**	2	0	**5**	**1**	**6**	**15**
03:15 PM	0	**2**	**2**	**4**	2	2	**1**	5	0	1	1	2	0	4	0	4	15
03:30 PM	0	0	1	1	1	2	0	3	1	**2**	1	**4**	**2**	2	0	4	12
Total Volume	2	3	4	9	7	12	1	20	2	3	3	8	3	14	1	18	55
% App. Total	22.2	33.3	44.4		35	60	5		25	37.5	37.5		16.7	77.8	5.6		
PHF	.500	.375	.500	.563	.875	.600	.250	.714	.500	.375	.750	.500	.375	.700	.250	.750	.917



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Groups Printed- TTST

	SR 1402 (Rim Rd) Southbound				SR 1400 (Cliffdale Rd) Westbound				SR 1402 (Rim Rd) Northbound				SR 1400 (Cliffdale Rd) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
06:15 AM	0	0	0	0	0	1	0	1	0	0	1	1	0	0	0	0	2
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
Total	0	0	1	1	0	1	0	1	0	0	2	2	0	0	0	0	4
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
08:30 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
08:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	1	3	0	4	0	0	0	0	0	1	0	1	5
09:00 AM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	2
09:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
09:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	2	3
Total	0	0	0	0	0	3	0	3	0	1	0	1	0	4	2	6	10
10:00 AM	0	0	0	0	1	2	0	3	0	0	1	1	0	0	0	0	4
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2
Total	0	0	0	0	1	2	0	3	0	0	1	1	0	1	1	2	6
11:00 AM	0	0	0	0	0	2	1	3	1	0	0	1	0	0	0	0	4
11:15 AM	0	0	0	0	1	1	0	2	0	0	0	0	0	1	0	1	3
11:30 AM	0	0	0	0	0	1	0	1	0	1	0	1	0	1	0	1	3
11:45 AM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	1	5	1	7	1	1	0	2	0	3	0	3	12
12:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1
12:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	1	2
12:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
12:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	1	2	0	3	0	0	1	1	0	1	0	1	5
01:00 PM	0	0	0	0	1	1	0	2	0	0	0	0	0	1	0	1	3
01:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	0	0	3
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
Total	0	0	0	0	1	5	0	6	0	0	0	0	0	2	0	2	8
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2

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Groups Printed- TTST

	SR 1402 (Rim Rd) Southbound				SR 1400 (Cliffdale Rd) Westbound				SR 1402 (Rim Rd) Northbound				SR 1400 (Cliffdale Rd) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	2	0	2	0	0	1	1	0	0	0	0	3
03:15 PM	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2
03:30 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
03:45 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	2	4	0	6	0	0	1	1	0	0	0	0	7
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
04:15 PM	0	0	0	0	1	1	0	2	0	0	1	1	0	0	0	0	3
04:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	2	3
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	1	0	2	1	0	1	2	0	4	0	4	8
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
06:00 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	2
06:15 PM	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	2
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	3	0	4	0	0	0	0	0	0	0	0	4
Grand Total	0	0	1	1	9	31	1	41	2	2	6	10	0	18	3	21	73
Apprch %	0	0	100		22	75.6	2.4		20	20	60		0	85.7	14.3		
Total %	0	0	1.4	1.4	12.3	42.5	1.4	56.2	2.7	2.7	8.2	13.7	0	24.7	4.1	28.8	

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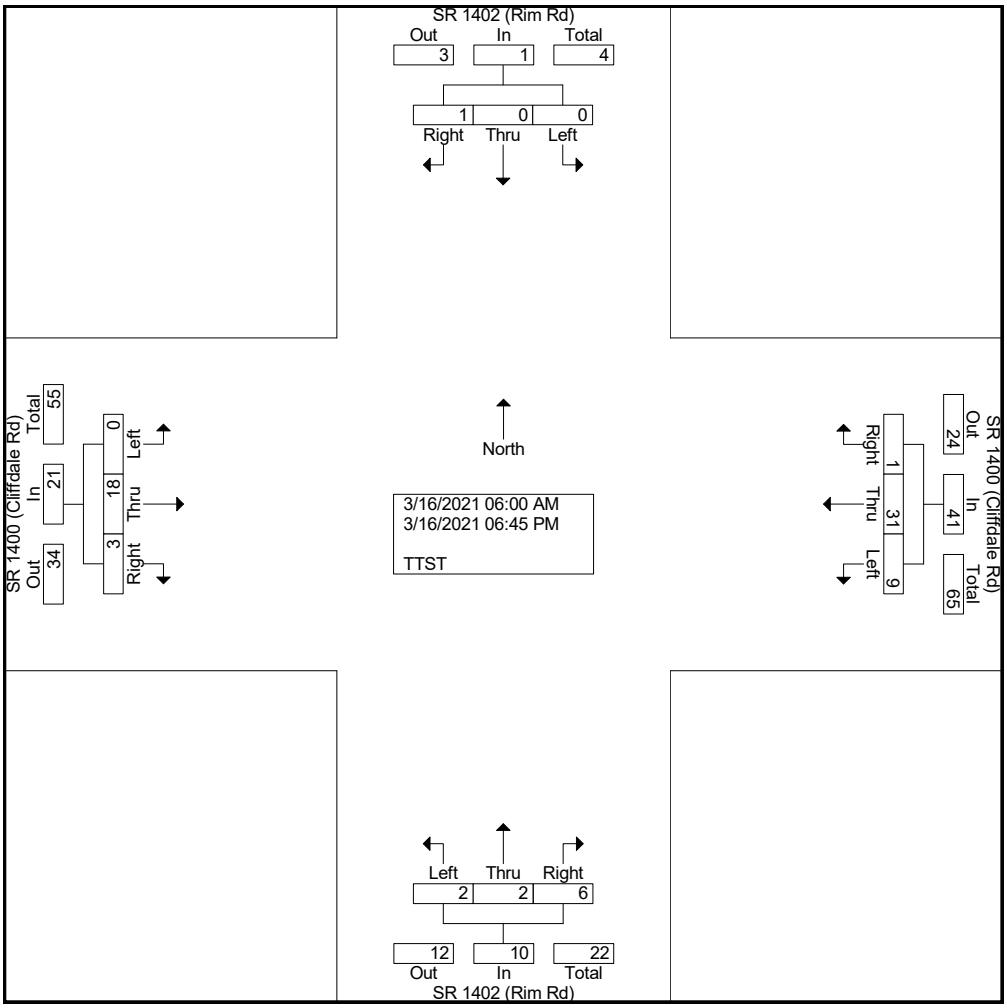

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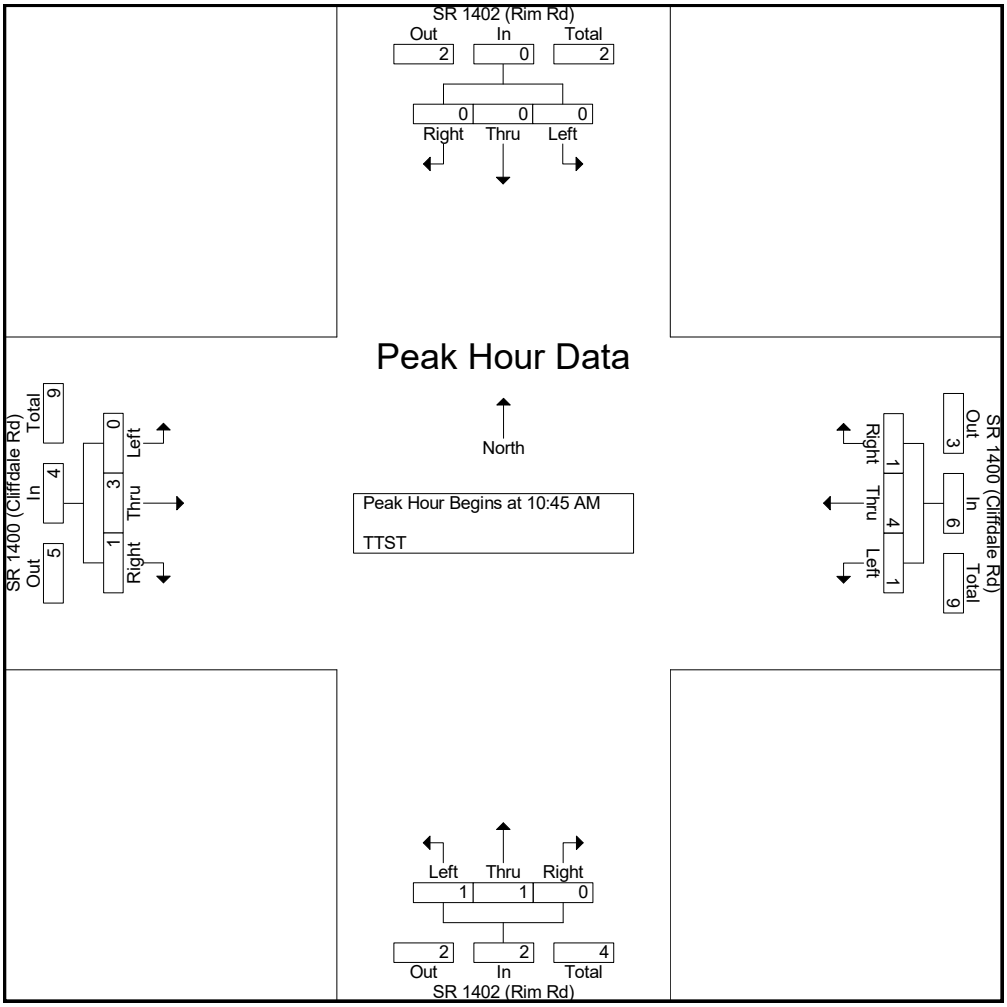
	SR 1402 (Rim Rd) Southbound				SR 1400 (Cliffdale Rd) Westbound				SR 1402 (Rim Rd) Northbound				SR 1400 (Cliffdale Rd) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 10:45 AM																	
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**	**1**	**2**	2
11:00 AM	0	0	0	0	0	**2**	**1**	**3**	**1**	0	0	**1**	0	0	0	0	**4**
11:15 AM	0	0	0	0	**1**	1	0	2	0	0	0	0	0	1	0	1	3
11:30 AM	0	0	0	0	0	1	0	1	0	**1**	0	1	0	1	0	1	3
Total Volume	0	0	0	0	1	4	1	6	1	1	0	2	0	3	1	4	12
% App. Total	0	0	0		16.7	66.7	16.7		50	50	0		0	75	25		
PHF	.000	.000	.000	.000	.250	.500	.250	.500	.250	.250	.000	.500	.000	.750	.250	.500	.750



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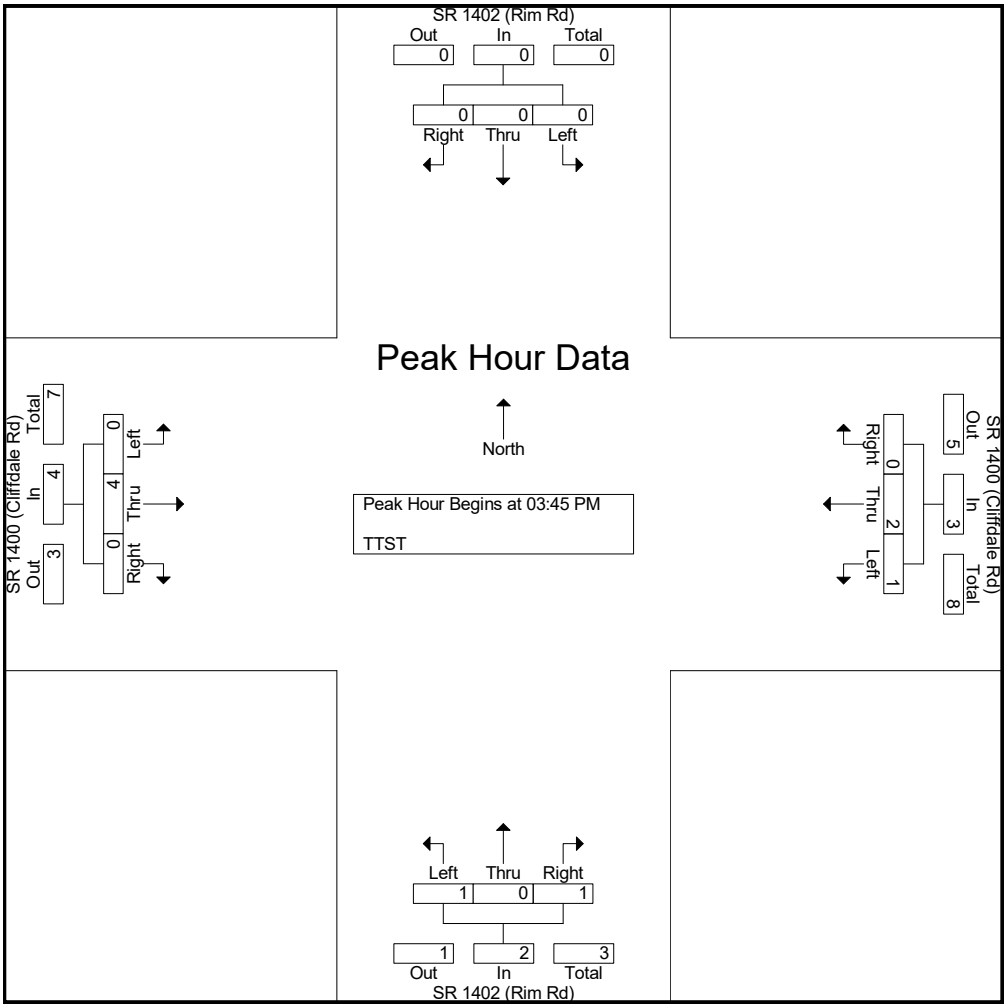
	SR 1402 (Rim Rd) Southbound				SR 1400 (Cliffdale Rd) Westbound				SR 1402 (Rim Rd) Northbound				SR 1400 (Cliffdale Rd) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:45 PM																	
03:45 PM	0	0	0	0	0	**1**	0	1	0	0	0	0	0	0	0	0	1
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**	0	**2**	2
04:15 PM	0	0	0	0	**1**	1	0	**2**	0	0	**1**	**1**	0	0	0	0	**3**
04:30 PM	0	0	0	0	0	0	0	0	**1**	0	0	1	0	2	0	2	3
Total Volume	0	0	0	0	1	2	0	3	1	0	1	2	0	4	0	4	9
% App. Total	0	0	0		33.3	66.7	0		50	0	50		0	100	0		
PHF	.000	.000	.000	.000	.250	.500	.000	.375	.250	.000	.250	.500	.000	.500	.000	.500	.750



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Groups Printed- Twins

	SR 1402 (Rim Rd) Southbound				SR 1400 (Cliffdale Rd) Westbound				SR 1402 (Rim Rd) Northbound				SR 1400 (Cliffdale Rd) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
02:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Groups Printed- Twins

	SR 1402 (Rim Rd) Southbound				SR 1400 (Cliffdale Rd) Westbound				SR 1402 (Rim Rd) Northbound				SR 1400 (Cliffdale Rd) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Apprch %	0	0	0		0	0	0		0	0	0		0	0	0		
Total %																	

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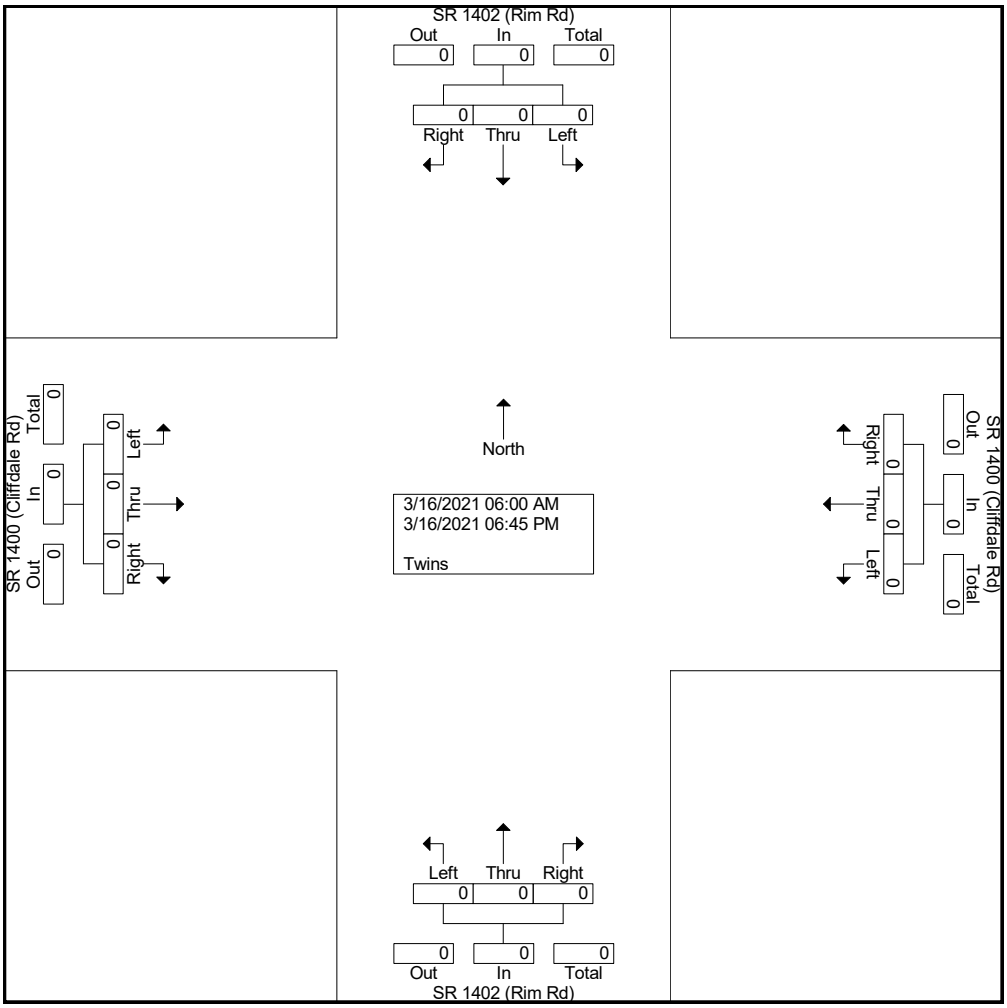

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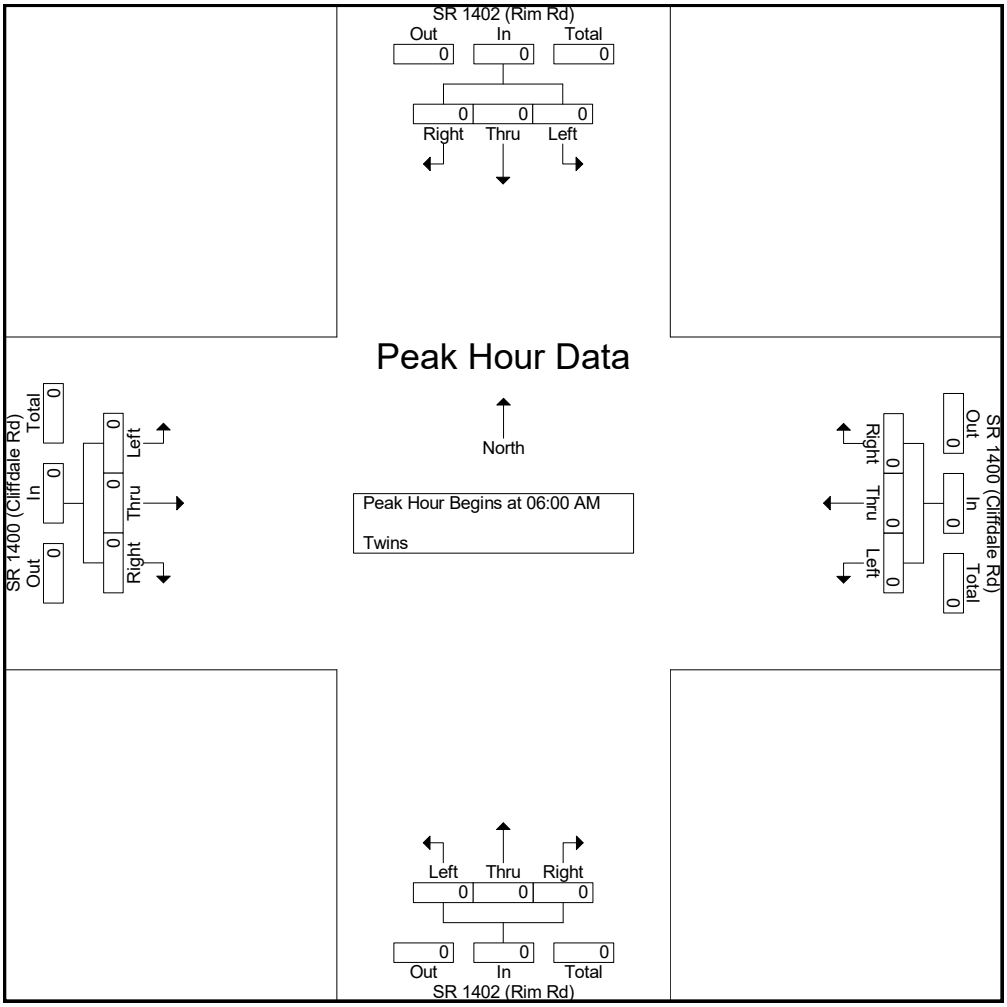
	SR 1402 (Rim Rd) Southbound				SR 1400 (Cliffdale Rd) Westbound				SR 1402 (Rim Rd) Northbound				SR 1400 (Cliffdale Rd) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 06:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 06:00 AM																	
06:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000



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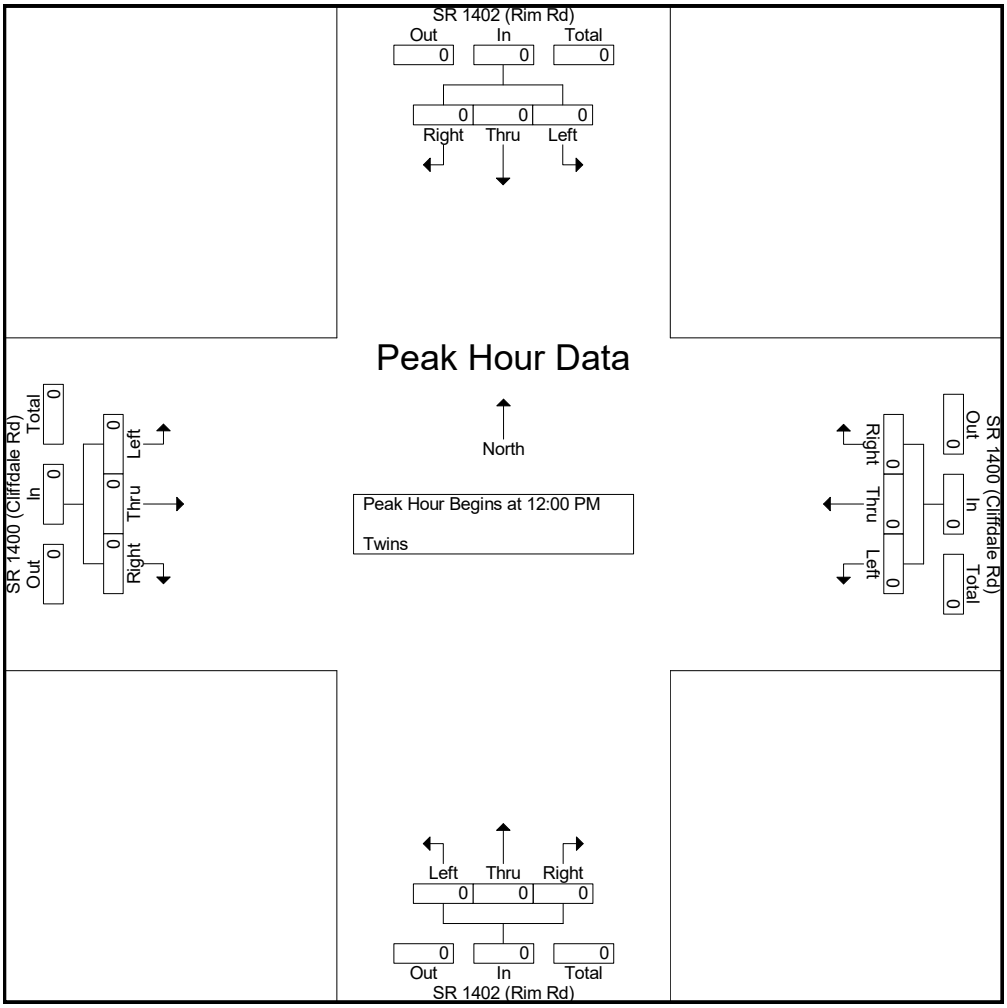
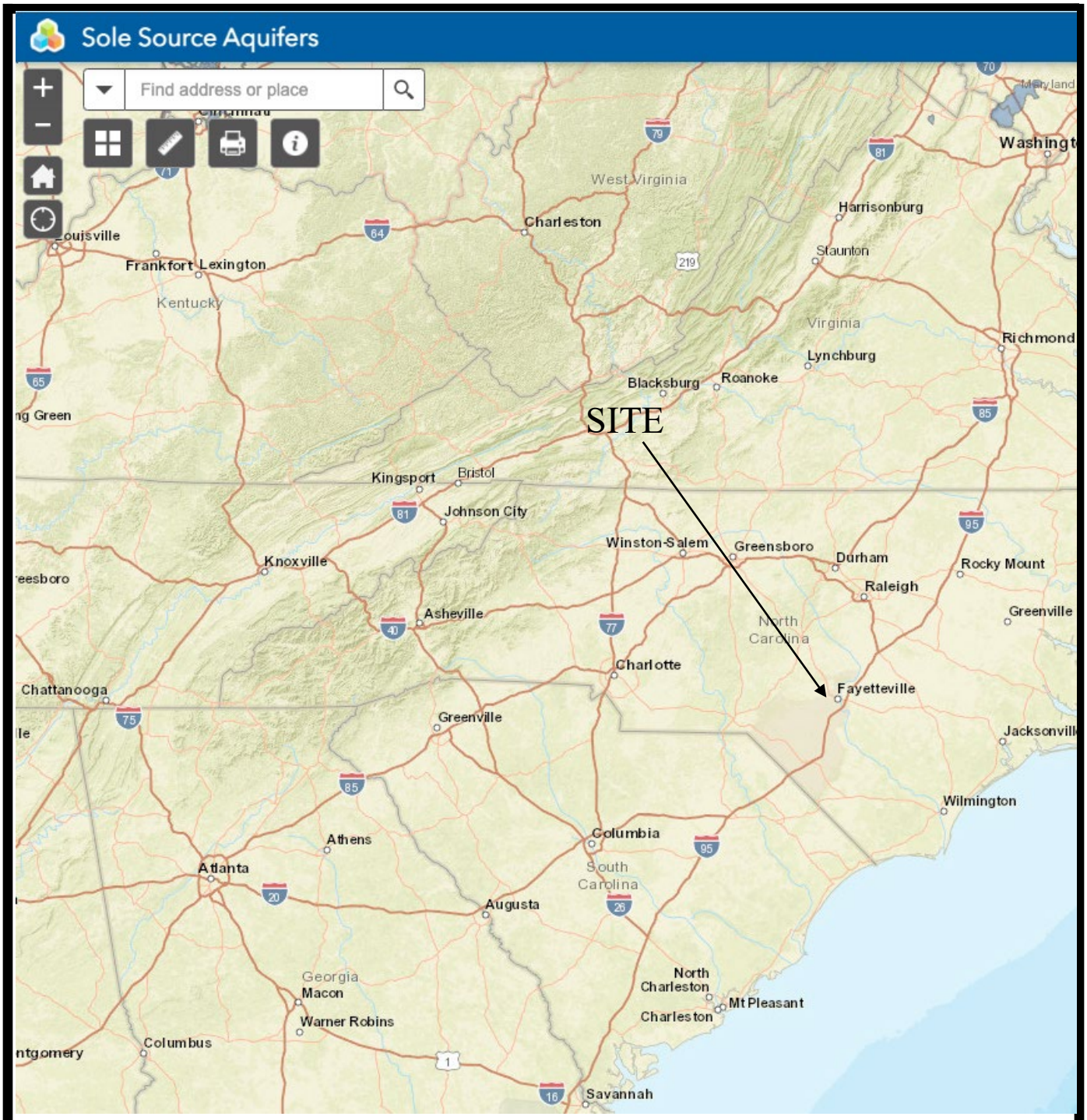
	SR 1402 (Rim Rd) Southbound				SR 1400 (Cliffdale Rd) Westbound				SR 1402 (Rim Rd) Northbound				SR 1400 (Cliffdale Rd) Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	0		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000



ATTACHMENT 14:

Sole Source Aquifers



Not to Scale

FIGURE 4: SOLE SOURCE AQUIFERS

Source: EPA

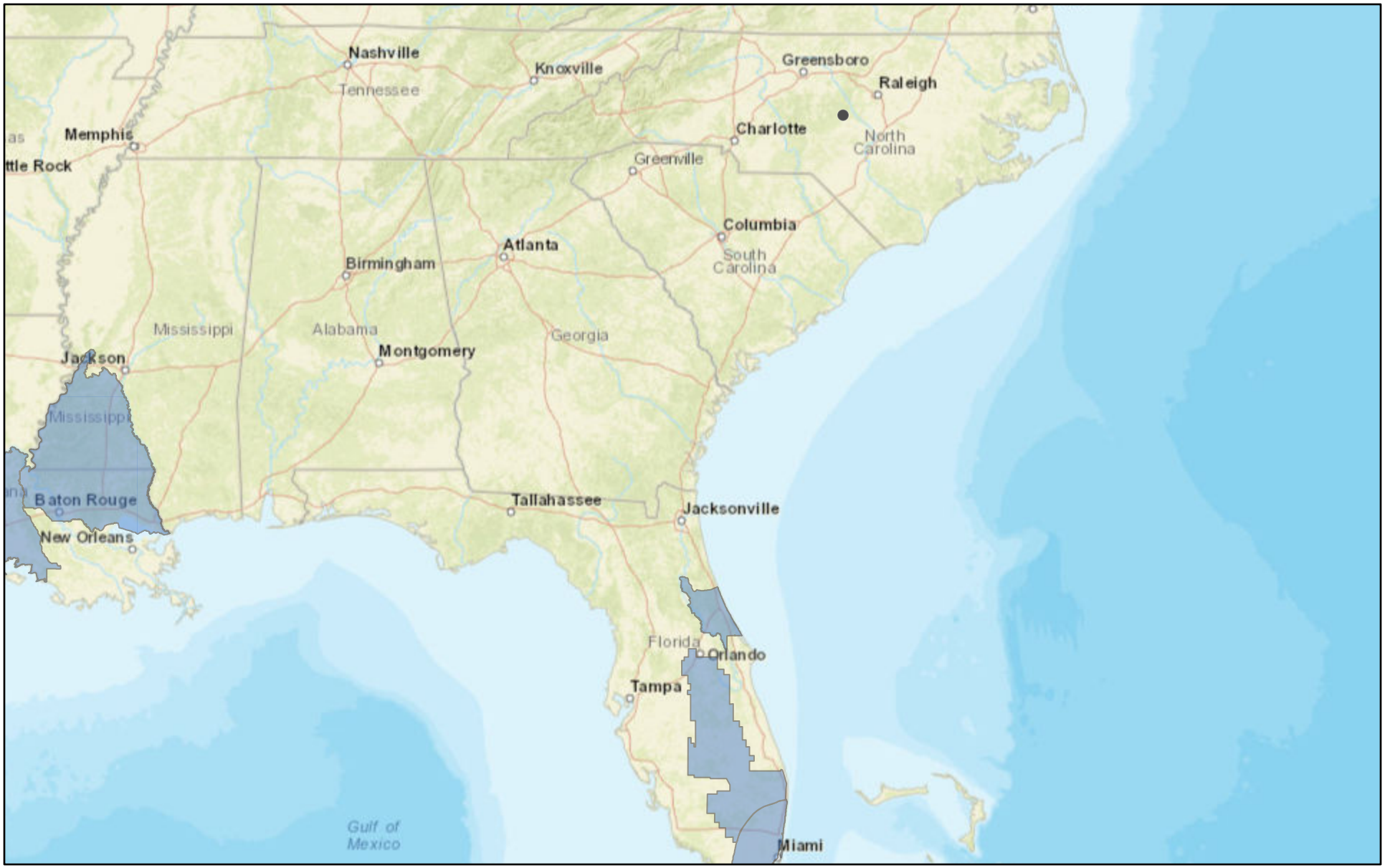
N

Proposed Cliffmore Park Apartments
Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
February 2022

North Carolina Sole Source Aquifer Map



6/7/2022, 1:53:09 PM

Sole_Source_Aquifers

1:9,244,649

0 65 130 260 mi

0 105 210 420 km

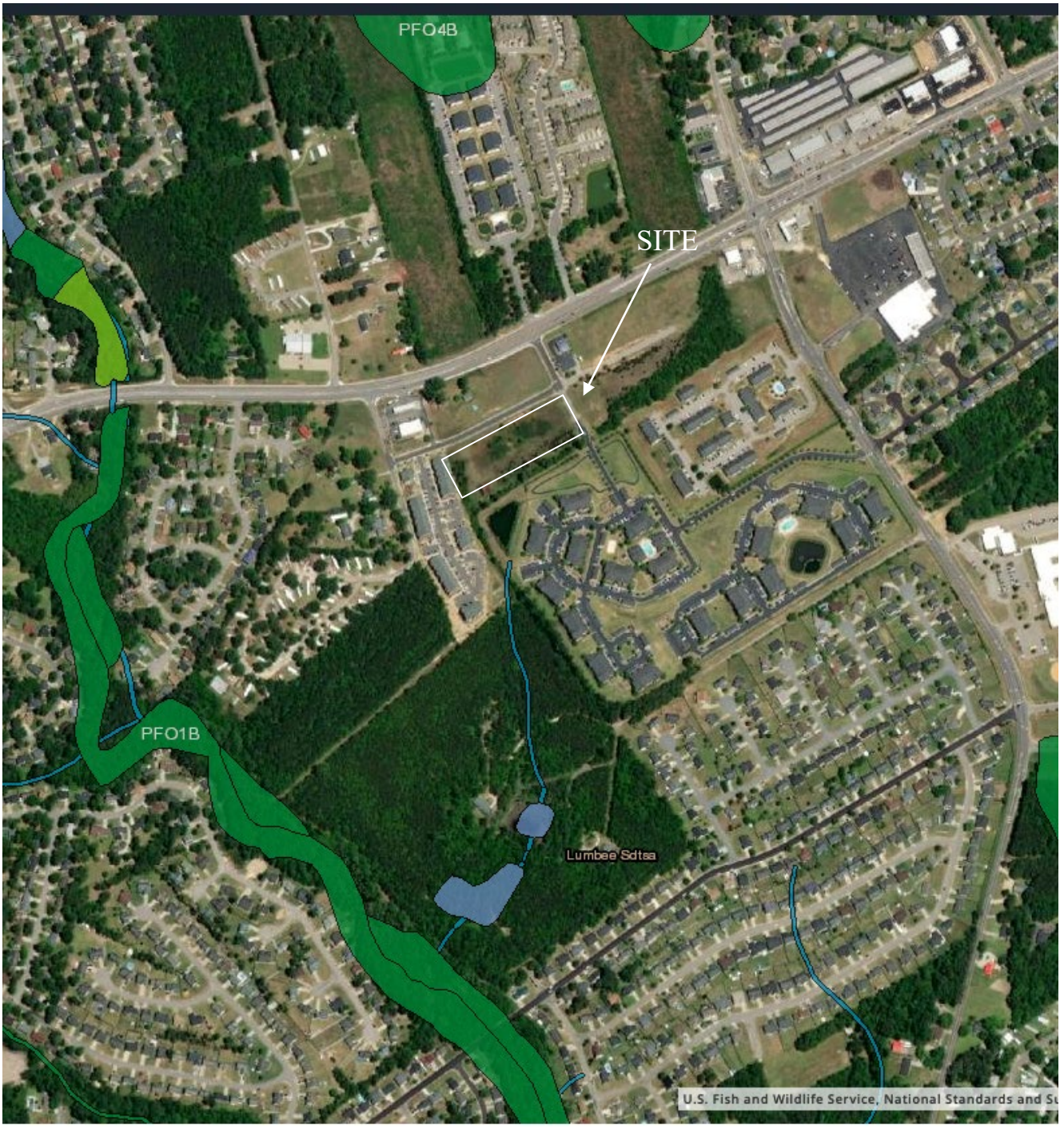
Esri, HERE, Garmin, NGA, USGS, NPS

U.S. Environmental Protection Agency

ATTACHMENT 15:

Wetlands Protection

USFWS NWI Mapper



Not to Scale

FIGURE 7: WETLANDS

Source: US Fish and Wildlife

N

Proposed Cliffmore Park Apartments
Identity Lane
Fayetteville, North Carolina

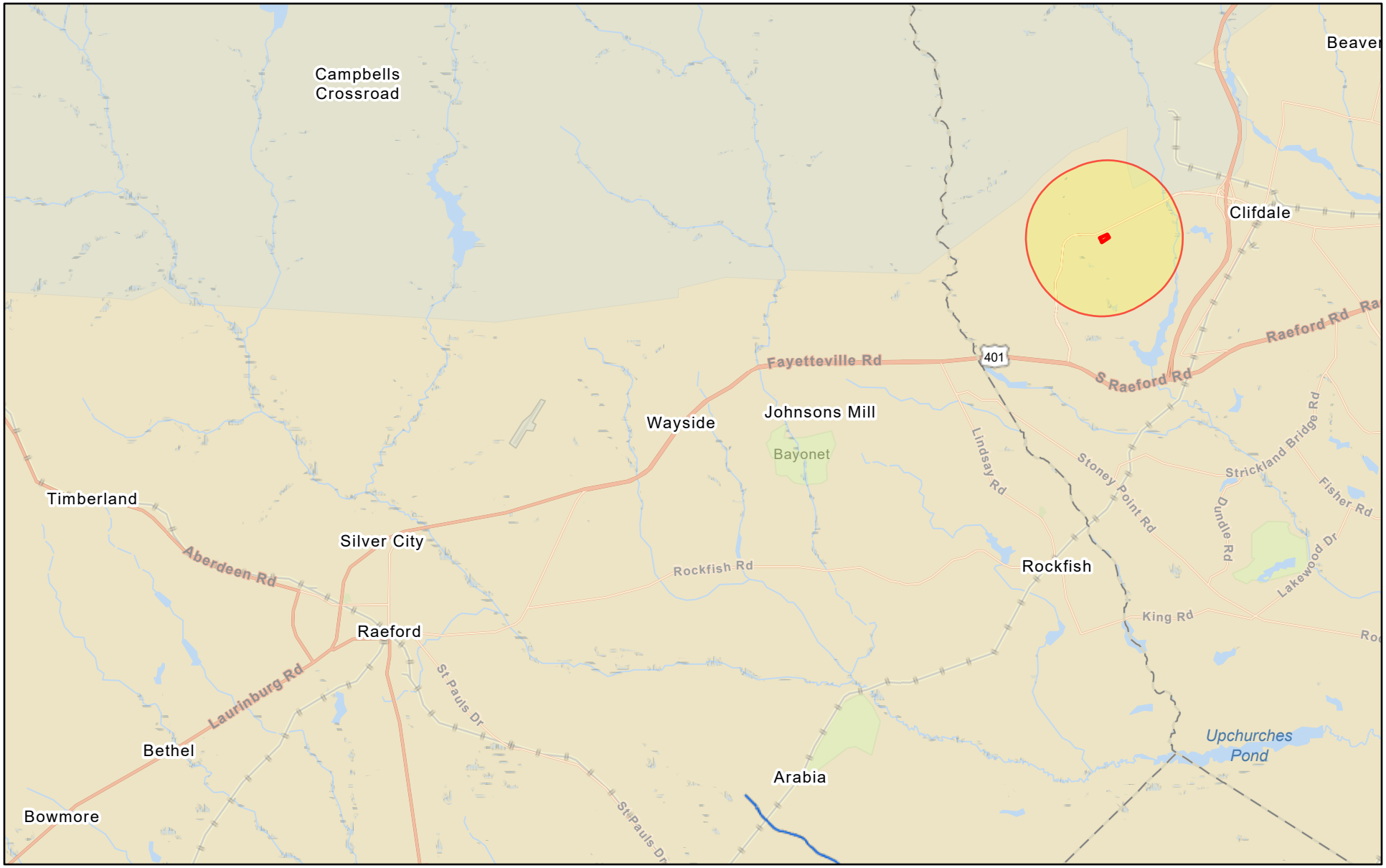
Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
February 2022

ATTACHMENT 16:

Wild and Scenic Rivers

Cliffmore Park - DOI NPS NRI & WSR System (1-mile Buffer)



November 3, 2022

1:144,448

0 1 2 4 mi

0 1.5 3 6 km

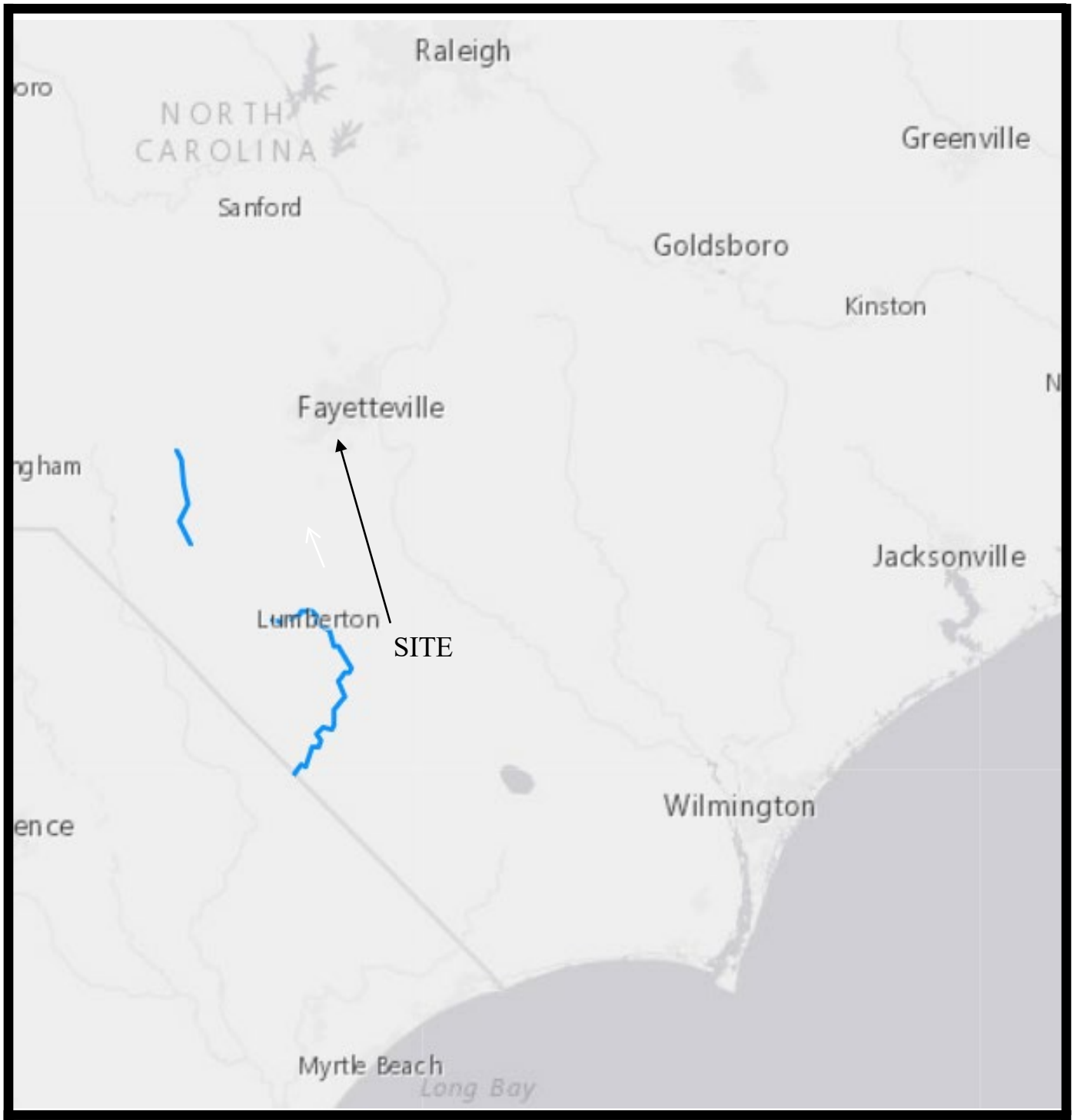
HYDRO_NationwideRiversInventory_ln

Project Buffer

Cliffmore Park - NRI & WSR Map (1-mile Buffer)

Wild and Scenic Rivers

National Park Service, peter_bonsall@nps.gov, State of North Carolina DOT, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS,



Not to Scale

FIGURE 5: WILD AND SCENIC RIVERS

Source: NPS Maps ArcGIS

N

Proposed Cliffmore Park Apartments
Identity Lane
Fayetteville, North Carolina

Atlantic Shores ASE Environmental Services, Ltd.

ASE Project No. 1523
February 2022

ATTACHMENT 17:

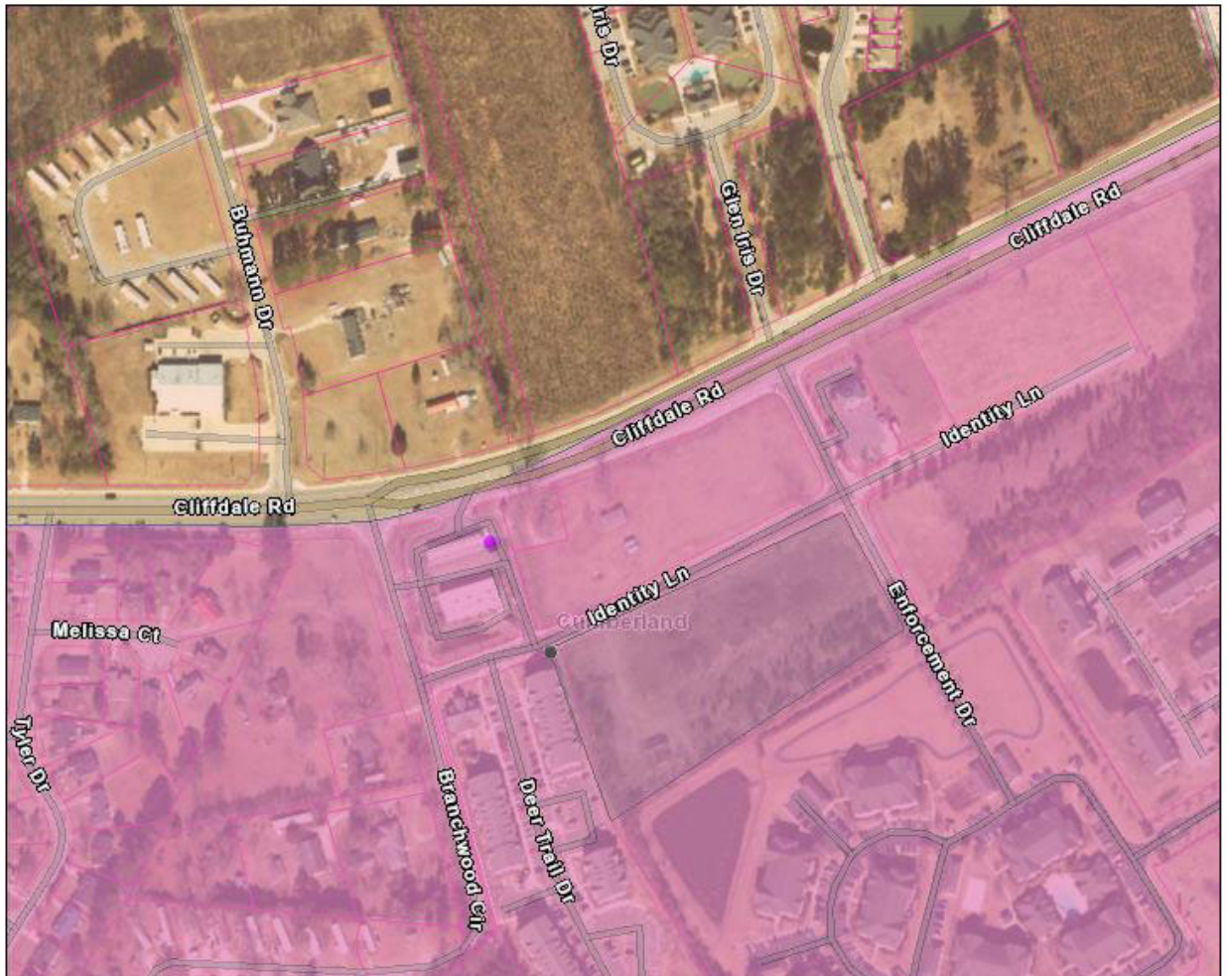
Environmental Justice

NCDEQ Facility Screening Report - Cliffmore Park

Area of Interest (AOI) Information

Area : 97,633,178.5 ft²

Nov 3 2022 17:51:32 Eastern Daylight Time



Underground Storage Tank Active Facilities

Tribal Boundaries

NC DEQ's Potentially Underserved Block Groups 2019

County and State

census2017acs - by Block Group

County Boundary

Parcels

1:4,514

0 0.03 0.06 0.12 mi

0 0.05 0.1 0.2 km

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Summary

Name	Count	Area(ft²)	Length(mi)
Air Quality Permit Sites	0	N/A	N/A
NPDES Wastewater Treatment Facility Permits	0	N/A	N/A
Animal Feed Operation Permits (View)	0	N/A	N/A
Solid Waste Septage Sites	0	N/A	N/A
Coal Ash Structural Fills (CCB) (Closed)	0	N/A	N/A
Contaminated Dry-Cleaning Sites	0	N/A	N/A
Land Clearing and Inert Debris (LCID) Notifications	0	N/A	N/A
Pre-Regulatory Landfill Sites	2	N/A	N/A
Brownfields Program Sites	0	N/A	N/A
Hazardous Waste Sites	0	N/A	N/A
Underground Storage Tank Incidents	2	N/A	N/A
Above Ground Storage Tank Incidents	0	N/A	N/A
Underground Storage Tank Active Facilities	3	N/A	N/A
Petroleum Contaminated Soil Remediation Permits	0	N/A	N/A
NPDES Stormwater Permits	0	N/A	N/A
Permitted Solid Waste Landfills (Open and Closed)	0	N/A	N/A
Federal Remediation Branch	0	N/A	N/A
NC Mining Permits	0	N/A	N/A

Pre-Regulatory Landfill Sites

#	SITECOUNTY	SITENAME	SITEADDR	SITECITY	EPAID
1	Cumberland	Cumberland County Landfill - Bones Creek	Winward Cove Rd.	Fayetteville	NONCD0000733
2	Cumberland	Cumberland County/Cliffdale LF	7583 Lowell Harris Road	Fayetteville	NCD980502900

#	Doc_Link	LATITUDE	LONGITUDE	Geolocatio	GEOLOC_COD
1	https://edocs.deq.nc.gov/WasteManagement/Search.aspx?dbid=0&searchcommand={[WM]:[Program_ID]=%22*NONCD0000733*%22}	35.060550	-79.038518		12
2	https://edocs.deq.nc.gov/WasteManagement/Search.aspx?dbid=0&searchcommand={[WM]:[Program_ID]=%22*NCD980502900*%22}	35.044046	-79.056611		31

#	source	Update_Dat	Count
1	*No Data*	6/2/2022	1
2	ESRI AGOL BASE MAP	6/2/2022	1

Underground Storage Tank Incidents

#	IncidentNumber	USTNum	IncidentName	FacilID	Address
1	19702	FA-1045	PANTRY 456	00-0-0000012310	8191 CLIFFDALE ROAD
2	22150	FA-1176	THE PANTRY 3031 (DBA QUICK STOP)	00-0-0000028888	8215 CLIFFDALE ROAD

#	CityTown	County	ZipCode	Mgr	ROCode
1	FAYETTEVILLE	CUMBE	28301	JWB	FAY
2	FAYETTEVILLE	CUMBE	283145851	JWB	FAY

#	DateOccurred	DateReported	Comm	Reg	ConfRisk
1	August 14, 1998	August 14, 1998	C	R	Low Risk
2	April 29, 1998	August 11, 1998	C	R	Low Risk

#	LandUse	CloseOut	LURFiled	LUR_Resc	LUR_State
1	RES	August 31, 2001	*No Data*	*No Data*	*No Data*
2	RES	December 23, 2016	August 29, 2016	*No Data*	*No Data*

#	CurrStatus	CDNum	RRADate	RRARisk	RRARankCURR
1	A	242	*No Data*	*No Data*	0
2	A	0	March 13, 2008	H	160

#	RRAAbate	LatDec	LongDec	Count
1	*No Data*	35.058800	-79.048600	1
2	D	35.058700	-79.049300	1

Underground Storage Tank Active Facilities

#	FACILID	FACILNAME	FACILADDRESS	FACILCITY	FACILZIP
1	00-0-0000012310	CIRCLE K 2720456	8191 CLIFFDALE RD	FAYETTEVILLE	28314
2	00-0-0000037127	REFUEL 151	8385 CLIFFDALE ROAD	FAYETTEVILLE	28314
3	00-0-0000040008	WALMART NEIGHBORHOOD MARKET 3411	8650 CLIFFDALE ROAD	FAYETTEVILLE	28314

#	FACILOWNERTYPE	NUMREGTANKS	NUMNONREGTANKS	NUMNONREGNONCOMTANKS	FACILLATDEC	FACILLONGDEC	Count
1	Private/Corporate	4	0	0	35.058780	-79.048460	1
2	Private/Corporate	3	0	0	35.056700	-79.054410	1
3	Private/Corporate	3	0	0	35.054856	-79.063163	1

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liable for any consequential, incidental, special or exemplary damages even if apprised of the likelihood of such damages occurring. The NCDEQ does not warrant the documents against deficiencies of any kind. The use of any of these documents for work which is under contract with the NCDEQ, does not relieve the contractor from any obligations assumed by the contract or from complete and proper fulfillment of the terms of the contract, nor does it entitle the contractor to compensation for damages or loss which could be attributed to such use.

EJScreen Report (Version 2.1)

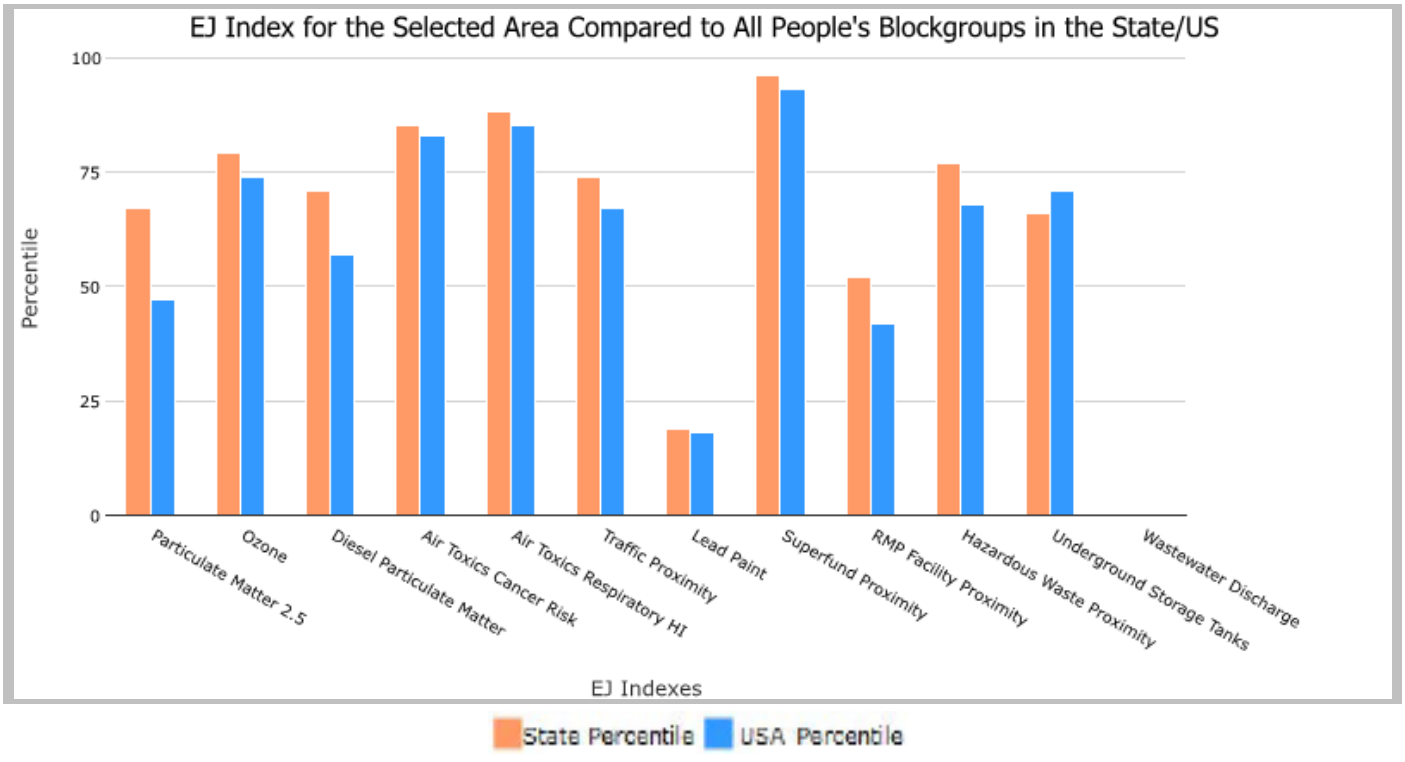
1 mile Ring Centered at 35.056124,-79.054028, NORTH CAROLINA, EPA Region 4

Approximate Population: 10,944

Input Area (sq. miles): 3.14

Cliffmore Park

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
EJ Index for Particulate Matter 2.5	67	47
EJ Index for Ozone	79	74
EJ Index for Diesel Particulate Matter*	71	57
EJ Index for Air Toxics Cancer Risk*	85	83
EJ Index for Air Toxics Respiratory HI*	88	85
EJ Index for Traffic Proximity	74	67
EJ Index for Lead Paint	19	18
EJ Index for Superfund Proximity	96	93
EJ Index for RMP Facility Proximity	52	42
EJ Index for Hazardous Waste Proximity	77	68
EJ Index for Underground Storage Tanks	66	71
EJ Index for Wastewater Discharge	N/A	N/A



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

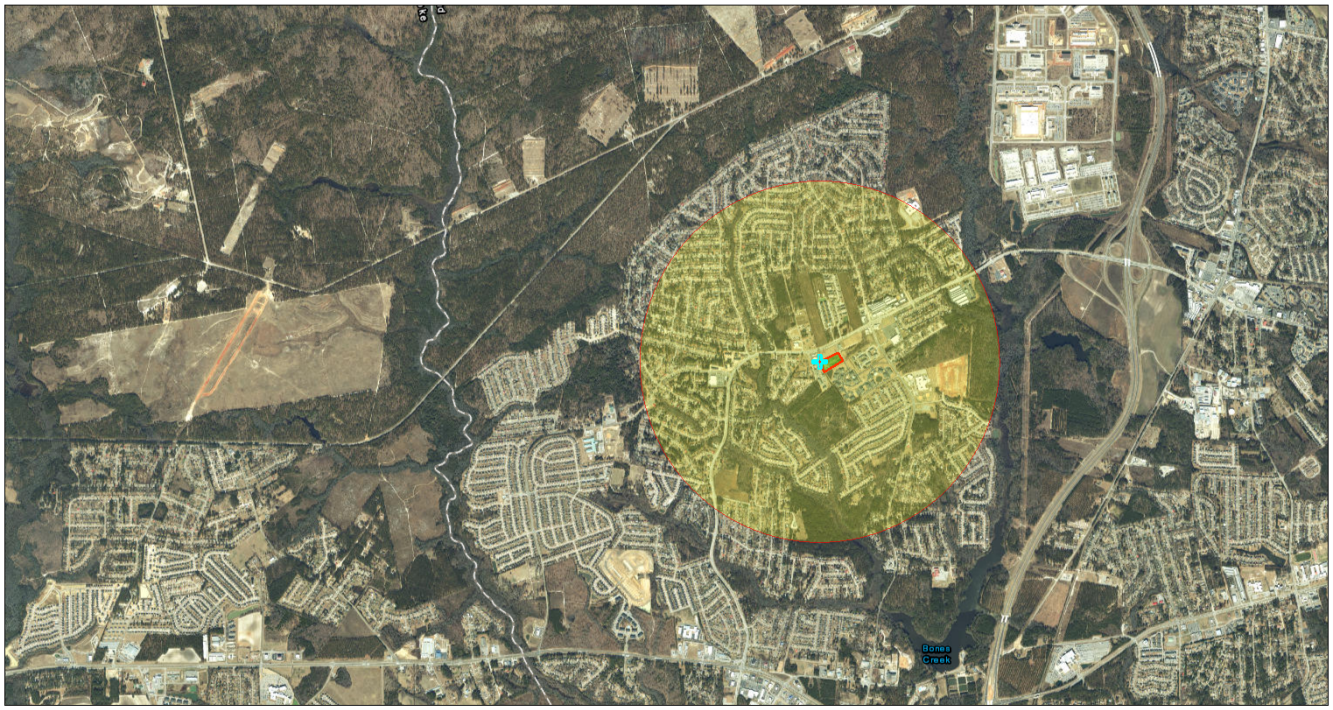
EJScreen Report (Version 2.1)

1 mile Ring Centered at 35.056124,-79.054028, NORTH CAROLINA, EPA Region 4

Approximate Population: 10,944

Input Area (sq. miles): 3.14

Cliffmore Park



Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EJScreen Report (Version 2.1)

1 mile Ring Centered at 35.056124,-79.054028, NORTH CAROLINA, EPA Region 4

Approximate Population: 10,944

Input Area (sq. miles): 3.14

Cliffmore Park

Selected Variables	Value	State Avg.	%ile in State	USA Avg.	%ile in USA
Pollution and Sources					
Particulate Matter 2.5 (µg/m^3)	7.35	7.67	34	8.67	18
Ozone (ppb)	41.4	41.5	45	42.5	41
Diesel Particulate Matter* (µg/m^3)	0.143	0.178	42	0.294	<50th
Air Toxics Cancer Risk* (lifetime risk per million)	30	28	95	28	80-90th
Air Toxics Respiratory HI*	0.4	0.36	94	0.36	80-90th
Traffic Proximity (daily traffic count/distance to road)	150	400	53	760	41
Lead Paint (% Pre-1960 Housing)	0.0075	0.15	16	0.27	15
Superfund Proximity (site count/km distance)	0.33	0.08	96	0.13	92
RMP Facility Proximity (facility count/km distance)	0.096	0.41	23	0.77	16
Hazardous Waste Proximity (facility count/km distance)	0.37	0.83	52	2.2	40
Underground Storage Tanks (count/km^2)	0.85	3.9	42	3.9	45
Wastewater Discharge (toxicity-weighted concentration/m distance)	N/A	0.28	N/A	12	N/A
Socioeconomic Indicators					
Demographic Index	58%	35%	83	35%	81
People of Color	76%	37%	87	40%	81
Low Income	41%	33%	63	30%	69
Unemployment Rate	6%	5%	65	5%	65
Limited English Speaking Households	5%	2%	85	5%	74
Less Than High School Education	5%	11%	31	12%	36
Under Age 5	10%	6%	84	6%	84
Over Age 64	9%	16%	20	16%	22

*Diesel particular matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

For additional information, see: www.epa.gov/environmentaljustice

EJScreen is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJScreen documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJScreen outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

EJSCREEN ACS Summary Report

Location: User-specified point center at 35.056124, -79.054028
Ring (buffer): 1-miles radius
Description: Cliffmore Park

Summary of ACS Estimates	2016 - 2020
Population	10,944
Population Density (per sq. mile)	3,284
People of Color Population	8,333
% People of Color Population	76%
Households	4,011
Housing Units	4,619
Housing Units Built Before 1950	0
Per Capita Income	25,286
Land Area (sq. miles) (Source: SF1)	3.33
% Land Area	98%
Water Area (sq. miles) (Source: SF1)	0.06
% Water Area	2%

	2016 - 2020 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	10,944	100%	1,259
Population Reporting One Race	10,216	93%	2,312
White	3,693	34%	501
Black	5,979	55%	1,189
American Indian	73	1%	83
Asian	265	2%	275
Pacific Islander	76	1%	85
Some Other Race	130	1%	179
Population Reporting Two or More Races	728	7%	274
Total Hispanic Population	1,699	16%	410
Total Non-Hispanic Population	9,245		
White Alone	2,610	24%	389
Black Alone	5,866	54%	1,192
American Indian Alone	41	0%	27
Non-Hispanic Asian Alone	262	2%	271
Pacific Islander Alone	73	1%	85
Other Race Alone	4	0%	116
Two or More Races Alone	388	4%	121
Population by Sex			
Male	5,488	50%	748
Female	5,456	50%	552
Population by Age			
Age 0-4	1,066	10%	276
Age 0-17	2,919	27%	386
Age 18+	8,025	73%	443
Age 65+	975	9%	173

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2016 - 2020 .

EJSCREEN ACS Summary Report

Location: User-specified point center at 35.056124, -79.054028
Ring (buffer): 1-miles radius
Description: Cliffmore Park

	2016 - 2020 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	6,996	100%	612
Less than 9th Grade	126	2%	85
9th - 12th Grade, No Diploma	246	4%	181
High School Graduate	1,843	26%	342
Some College, No Degree	2,131	30%	221
Associate Degree	718	10%	192
Bachelor's Degree or more	1,931	28%	246
Population Age 5+ Years by Ability to Speak English			
Total	9,877	100%	928
Speak only English	8,419	85%	637
Non-English at Home[1+2+3+4]	1,458	15%	300
[1]Speak English "very well"	911	9%	254
[2]Speak English "well"	343	3%	127
[3]Speak English "not well"	151	2%	79
[4]Speak English "not at all"	53	1%	49
[3+4]Speak English "less than well"	204	2%	80
[2+3+4]Speak English "less than very well"	547	6%	138
Linguistically Isolated Households*			
Total	183	100%	103
Speak Spanish	82	45%	79
Speak Other Indo-European Languages	0	0%	13
Speak Asian-Pacific Island Languages	101	55%	97
Speak Other Languages	0	0%	13
Households by Household Income			
Household Income Base	4,011	100%	262
< $15,000	344	9%	107
$15,000 - $25,000	387	10%	157
$25,000 - $50,000	1,182	29%	229
$50,000 - $75,000	711	18%	133
$75,000 +	1,388	35%	173
Occupied Housing Units by Tenure			
Total	4,011	100%	262
Owner Occupied	2,232	56%	179
Renter Occupied	1,779	44%	233
Employed Population Age 16+ Years			
Total	8,237	100%	636
In Labor Force	5,563	68%	494
Civilian Unemployed in Labor Force	291	4%	114
Not In Labor Force	2,674	32%	356

Data Note: Datail may not sum to totals due to rounding. Hispanic population can be of anyrace.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS)
*Households in which no one 14 and over speaks English "very well" or speaks English only.

EJSCREEN ACS Summary Report

Location: User-specified point center at 35.056124, -79.054028
Ring (buffer): 1-miles radius
Description: Cliffmore Park

	2016 - 2020 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	10,858	100%	988
English	9,214	85%	1,067
Spanish	937	9%	421
French, Haitian, or Cajun	43	0%	22
German or other West Germanic	117	1%	87
Russian, Polish, or Other Slavic	16	0%	30
Other Indo-European	28	0%	36
Korean	132	1%	126
Chinese (including Mandarin, Cantonese)	0	0%	19
Vietnamese	196	2%	270
Tagalog (including Filipino)	0	0%	19
Other Asian and Pacific Island	142	1%	134
Arabic	34	0%	72
Other and Unspecified	0	0%	19
Total Non-English	1,645	15%	1,454

Data Note: Detail may not sum to totals due to rounding. Hispanic popultion can be of any race.
N/A meansnot available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2016 - 2020.
*Population by Language Spoken at Home is available at the census tract summary level and up.

EJSCREEN Census 2010 Summary Report

Location: User-specified point center at 35.056124, -79.054028
Ring (buffer): 1-miles radius
Description: Cliffmore Park

Summary	Census 2010
Population	9,921
Population Density (per sq. mile)	3,142
People of Color Population	6,754
% People of Color Population	68%
Households	3,496
Housing Units	3,816
Land Area (sq. miles)	3.16
% Land Area	99%
Water Area (sq. miles)	0.05
% Water Area	1%

Population by Race	Number	Percent
Total	9,921	-------
Population Reporting One Race	9,293	94%
White	3,712	37%
Black	4,734	48%
American Indian	80	1%
Asian	253	3%
Pacific Islander	53	1%
Some Other Race	461	5%
Population Reporting Two or More Races	628	6%
Total Hispanic Population	1,399	14%
Total Non-Hispanic Population	8,522	86%
White Alone	3,167	32%
Black Alone	4,564	46%
American Indian Alone	60	1%
Non-Hispanic Asian Alone	242	2%
Pacific Islander Alone	47	0%
Other Race Alone	22	0%
Two or More Races Alone	420	4%

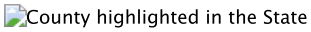
Population by Sex	Number	Percent
Male	4,678	47%
Female	5,243	53%

Population by Age	Number	Percent
Age 0-4	1,061	11%
Age 0-17	3,201	32%
Age 18+	6,720	68%
Age 65+	382	4%

Households by Tenure	Number	Percent
Total	3,496	
Owner Occupied	2,290	66%
Renter Occupied	1,205	34%

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
Source: U.S. Census Bureau, Census 2010 Summary File 1.

Cumberland County, North Carolina†



POPULATION: 326,466

INCOME

Average Household Income

Cumberland County: $46,599

North Carolina: $57,388

Residents who live below the poverty line

18.0%

Cumberland County

13.6%

North Carolina

QUICK FACTS:

Out of 10 people living in this county

SEX

5 are male & 5 are female

AGE

About 3 are between the ages of 0 and 19 years

About 3 are between the ages of 20 and 34 years

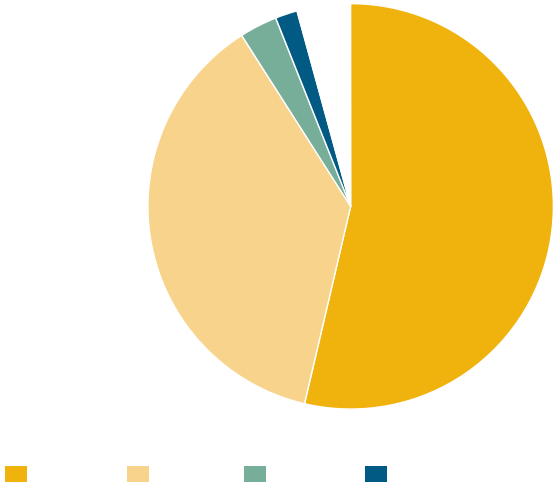
About 2 are between the ages of 35 and 49 years

About 3 are 50 years and older

ETHNICITY

1 are Hispanic and 9 are non-Hispanic

RACE



(https://twitter.com/share?

url=https%3A%2F%2Fephtracking.cdc.gov%2FInfoByLocation%2F&text=Check%20out%20environmental%20health%20in%20your%20county&hashtags=PublicHealth,Tracking)

k%20facts%20about%20the%20people%20in%20my%20county.%20Visit%20https://ephtracking.cdc.gov/InfoByLocation%2F%20to%20find%20out%20facts%20for%20your%20county.)

Discover the data (../../DataExplorer?query=C7380B65-728D-4621-A122-47283CF8B444&G5=9999) | Learn more about this topic (../InfoByLocation/showPcMain.action)

† 2020 data from the National Environmental Public Health Tracking Network (../showHome.action)

Asthma†

Percent of **adults** who currently have asthma

North Carolina	National
8.3%	7.0%

Asthma is a chronic disease that affects the airways that carry oxygen in and out of the lungs. Asthma can cause

- shortness of breath,
- wheezing,
- coughing, and
- tightness in the chest.

Asthma attacks have been linked to many factors, including exposure to environmental hazards like

- allergens,
- tobacco smoke, and
- indoor and outdoor air pollution.

Asthma can be controlled by taking medication and avoiding triggers that can cause an attack.

(https://twitter.com/share?

url=https%3A%2F%2Fephtracking.cdc.gov%2FInfoByLocation%2F&text=Check%20out%20environmental%20health%20in%20your%20county&hashtags=PublicHealth,Tracking)

k%20facts%20about%20the%20people%20in%20my%20county.%20Visit%20https://ephtracking.cdc.gov/InfoByLocation%2F%20to%20find%20out%20facts%20for%20your%20county.)

Discover the data (/../DataExplorer/?query=1F12A3B5-E744-4857-9110-401524CC8D8E&fips=37&G5=9999) | Learn more about this topic (../showAsthma.action)

† 2019 data from the National Environmental Public Health Tracking Network (../showHome.action)

Air Quality: Ground-Level Ozone†

Cumberland County residents were exposed to unhealthy levels of ozone for **0 Days** in 2018.

Ozone occurs naturally in the sky and helps protect us from the sun's harmful rays. But ground-level ozone can be bad for your health and the environment. Ground-level ozone is one of the biggest parts of smog.

When ozone levels are above the national standard, everyone should try to limit their contact with it by reducing the amount of time spent outside.

Cumberland County residents were exposed to unhealthy levels of ozone for **0 Days** in 2018.

Check the EPA's Air Quality Index (AQI) at AirNow.gov (http://www.AirNow.gov) to see the current air quality conditions for your location. You can use the AQI to plan your daily activities to reduce exposure to ozone.

(https://twitter.com/share?

url=https%3A%2F%2Fephtracking.cdc.gov%2FInfoByLocation%2F&text=Check%20out%20environmental%20health%20in%20your%20county&hashtags=PublicHealth,Tracking)

k%20facts%20about%20the%20people%20in%20my%20county.%20Visit%20https://ephtracking.cdc.gov/InfoByLocation%2F%20to%20find%20out%20facts%20for%20your%20county.)

Discover the data (/../DataExplorer/?query=1C537D70-420B-4B25-ABBE-F1B6FAD2C30B&fips=37051&G5=9999) | Learn more about this topic (../showAirHealth.action)

† 2018 data from the National Environmental Public Health Tracking Network (../showHome.action)

Air Quality: Particulate Matter†

ANNUAL AMBIENT CONCENTRATION OF $PM_{2.5}$

7.3 $\mu g/m^3$*

Cumberland County, North Carolina

12.0 $\mu g/m^3$*

Annual National Standard

*Micrograms Per Cubic Meter ($\mu g/m^3$)

Air pollution is a leading environmental threat to human health.
Particles in the air like dust, dirt, soot, and smoke are one kind of air pollution called particulate matter. Fine particulate matter, or $PM_{2.5}$, is so small that it cannot be seen in the air. Breathing in $PM_{2.5}$ may

- lead to breathing problems,
- make asthma symptoms or some heart conditions worse, and
- lead to low birth weight.

The national standard for annual $PM_{2.5}$ levels is **12.0$\mu g/m^3$**. When $PM_{2.5}$ levels are above 12, this means that air quality is more likely to affect your health.

In 2018, the annual level of $PM_{2.5}$ in **Cumberland County** was **7.3$\mu g/m^3$**. *

* Micrograms per cubic meter (../InfoByLocation/images/content/PM2-5_5.jpg) ($\mu g/m^3$)

(https://twitter.com/share?

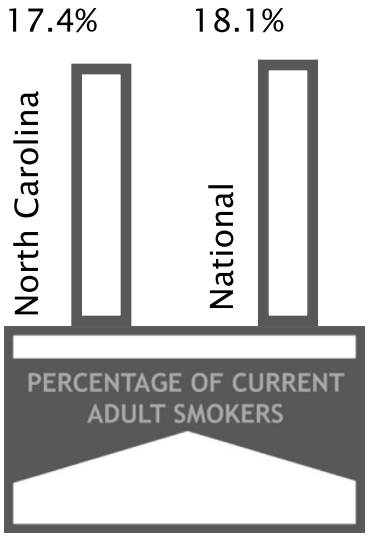
url=https%3A%2F%2Fephtracking.cdc.gov%2FInfoByLocation%2F&text=Check%20out%20environmental%20health%20in%20your%20county&hashtags=PublicHealth,Tracking)

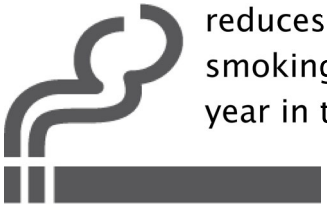
k%20facts%20about%20the%20people%20in%20my%20county.%20Visit%20https://ephtracking.cdc.gov/InfoByLocation%2F%20to%20find%20out%20facts%20for%20your%20county.)

Discover the data (/../DataExplorer/?query=4E04F504-A4A2-405C-85AB-9BC6B3F7325D&fips=37051&G5=9999) | Learn more about this topic (../showAirLanding.action)

† 2018 data from the National Environmental Public Health Tracking Network (../showHome.action)

Smoking†





Tobacco use is the single most preventable cause of death and disease in the United States. Smoking harms nearly every organ of the body. It causes many diseases and reduces the health of smokers in general. The negative health effects from cigarette smoking account for an estimated 500,000 deaths, or nearly 1 of every 5 deaths, each year in the United States.

(https://twitter.com/share?

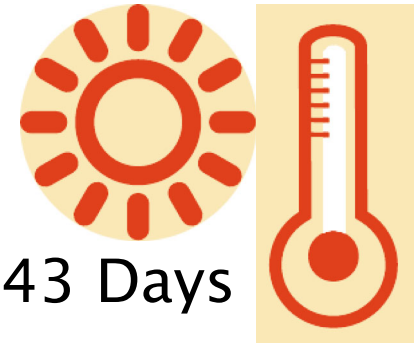
url=https%3A%2F%2Fephtracking.cdc.gov%2FInfoByLocation%2F&text=Check%20out%20environmental%20health%20in%20your%20county&hashtags=PublicHealth,Tracking)

k%20facts%20about%20the%20people%20in%20my%20county.%20Visit%20https://ephtracking.cdc.gov/InfoByLocation%2F%20to%20find%20out%20facts%20for%20your%20county.)

Discover the data (/../DataExplorer/?query=2B83BA8E-9849-47BF-92C2-2CA0D51CC90C&fips=37&G5=9999) | Learn more about this topic (../showHBSmokingPrevalence.action)

† 2018 data from the National Environmental Public Health Tracking Network (../showHome.action)

Extreme Heat†



43 Days

with temperatures above 90°F

Extreme summer heat is increasing in the United States, and climate projections indicate that extreme heat events will be more frequent and intense in coming decades. Extremely hot weather can cause illness or even death. Knowing how hot it gets in your area can help you prepare for extremely hot temperatures and prevent heat related illness (http://emergency.cdc.gov/disasters/extremeheat/heattips.asp).

Cumberland County had **43 Days** with maximum temperatures above 90°F during May-September 2021.

Heat-related death or illnesses are preventable if you follow a few simple steps.

- Stay cool.
- Stay hydrated.
- Stay informed.

(https://twitter.com/share?

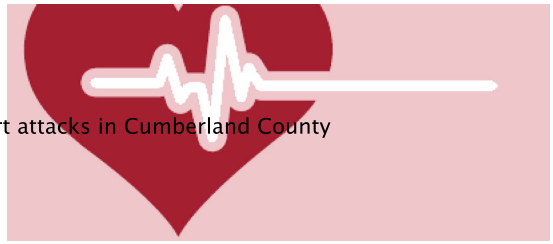
url=https%3A%2F%2Fephtracking.cdc.gov%2FInfoByLocation%2F&text=Check%20out%20environmental%20health%20in%20your%20county&hashtags=PublicHealth,Tracking)

k%20facts%20about%20the%20people%20in%20my%20county.%20Visit%20https://ephtracking.cdc.gov/InfoByLocation%2F%20to%20find%20out%20facts%20for%20your%20county.)

Discover the data (/../DataExplorer/?query=51ED8370-BE00-4813-A4F8-AE641EF61672&fips=37051&G5=9999) | Learn more about this topic (../showClimateChangeExtremeHeat.action)

† 2021 data from the National Environmental Public Health Tracking Network (../showHome.action)

Heart Attacks†



The environment is one of several factors (../showHeartExpRisk.action) that can lead to an increased risk for heart disease. High levels of air pollution and extreme hot and cold temperatures have been linked to increases in heart disease and deaths from heart attacks. A heart attack happens when a part of the heart muscle dies or gets damaged because of reduced blood supply.

In , there were

- **deaths** from heart attacks in Cumberland County.
- **deaths** from heart attacks in North Carolina.

(https://twitter.com/share?

url=https%3A%2F%2Fephtracking.cdc.gov%2FInfoByLocation%2F&text=Check%20out%20environmental%20health%20in%20your%20county&hashtags=PublicHealth,Tracking)

k%20facts%20about%20the%20people%20in%20my%20county.%20Visit%20https://ephtracking.cdc.gov/InfoByLocation%2F%20to%20find%20out%20facts%20for%20your%20county.)

Discover the data (REPLACED BY JAVASCRIPT) | Learn more about this topic (../showHeartAttack.action)

† data from the National Environmental Public Health Tracking Network (../showHome.action)

Access To Parks†

Live within half a mile of a park in Cumberland County

Having access to places for physical activity, like parks, encourages people to get active and do so more often. The closer you live to a park, the more likely you are to walk or bike there. Walking and biking to parks can decrease air pollution and car crashes, which in turn, can reduce chronic disease rates and traffic-related injuries.

In ,

of people living in **Cumberland County** lived within half a mile of a park.

of people living in **North Carolina** lived within half a mile of a park.

(https://twitter.com/share?

url=https%3A%2F%2Fephtracking.cdc.gov%2FInfoByLocation%2F&text=Check%20out%20#environmental%20health%20in%20your%20county&hashtags=PublicHealth,Tracking)

k%20facts%20about%20the%20people%20in%20my%20county.%20Visit%20https://ephtracking.cdc.gov/InfoByLocation%2F%20to%20find%20out%20facts%20for%20your%20county.)

Discover the data (REPLACED BY JAVASCRIPT) | Learn more about this topic (../showPcMain.action)

† data from the National Environmental Public Health Tracking Network (../showHome.action)

Proximity To Highways†

of Cumberland County population that live within 150m of a highway

Traffic-related air pollution is a major cause of unhealthy air quality, especially in urban areas. Many health problems have been linked to exposure to traffic-related air pollution. The closer your home or school is to a major highway, the more likely you and your family are to be exposed to traffic-related air pollution.

In , of the population of Cumberland County lived within 150 meters* of a major highway.

In , of Cumberland County public schools (preK-4th grade) were sited within 150 meters* of a major highway.

* 150 meters is about 2 blocks.

(https://twitter.com/share?

url=https%3A%2F%2Fephtracking.cdc.gov%2FInfoByLocation%2F&text=Check%20out%20environmental%20health%20in%20your%20county&hashtags=PublicHealth,Tracking)

k%20facts%20about%20the%20people%20in%20my%20county.%20Visit%20https://ephtracking.cdc.gov/InfoByLocation%2F%20to%20find%20out%20facts%20for%20your%20county.)

Discover the data (REPLACED BY JAVASCRIPT) | Learn more about this topic (../showProximityToHighways.action)

† data from the National Environmental Public Health Tracking Network (../showHome.action)

Visit the Tracking Network for more information about your health and the environment.

www.cdc.gov/ephtracking (http://www.cdc.gov/ephtracking/)

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Join our List-serv
(mailto:EPHT@LISTSERV.CDC.GOV?
subject=Please%20add%20me%20to%20CDC's%20Environmental%2
serv.&body=Please%20fill%20in%20the%20information%20below:%

ATTACHMENT 18:

Zoning

FAYETTEVILLE NC
DEVELOPMENT SERVICES

March 17, 2021

Keith Walker
East Carolina Community Development, Inc.
PO Box 2400
Beaufort, NC 28516

To whom it may concern,

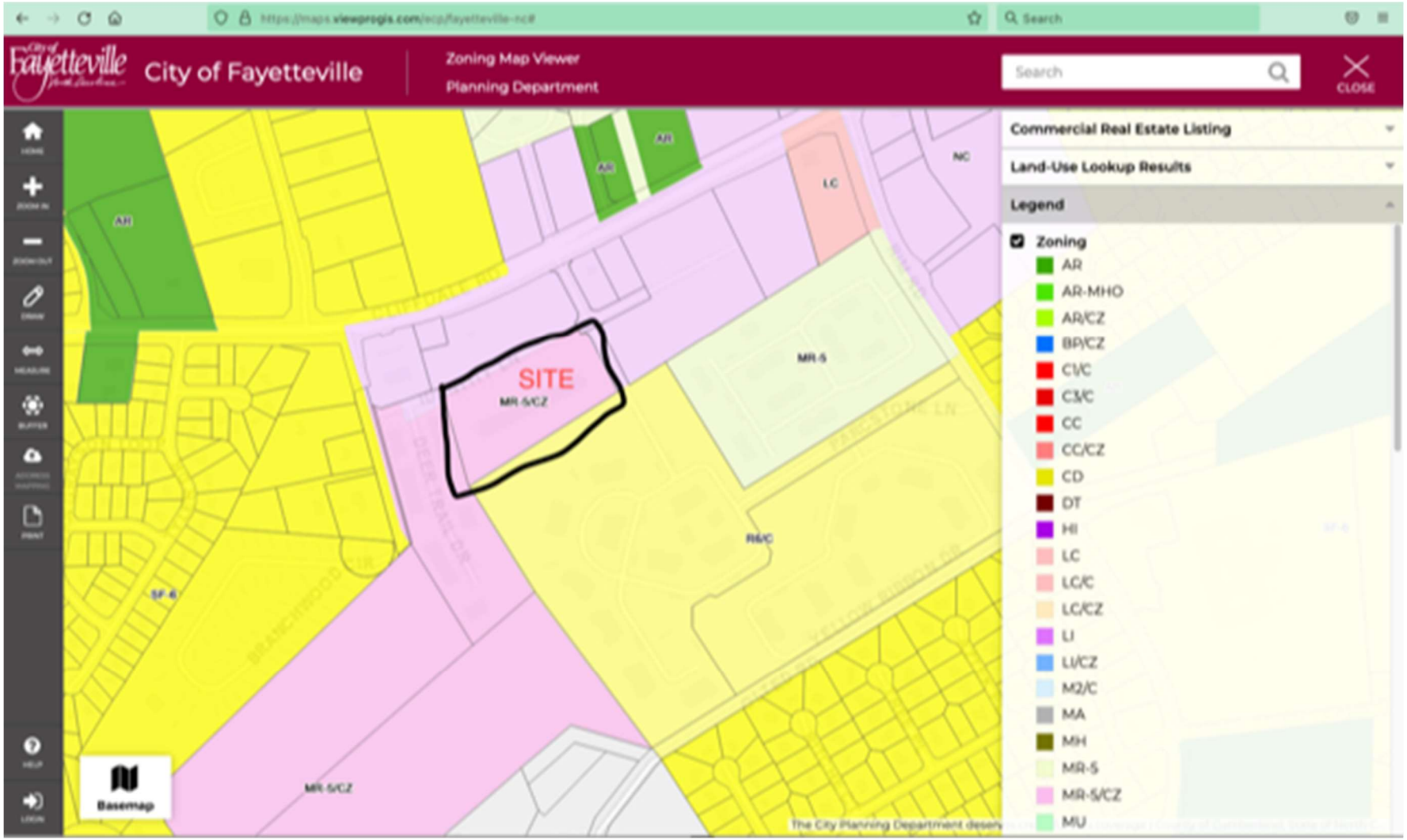
This notice is concerning REID 9487453559000 located within the City of Fayetteville. This property is currently zoned NC – Neighborhood Commercial and MR-5/CZ – Mixed Residential/Conditional Zoning. Section 30-4.A.2 of the City of Fayetteville Unified Development Ordinance allows for multi-family dwellings in the MR-5 zoning district. The southern portion of the property (approximately 4.1 acres) was rezoned to MR-5/CZ to allow a 72 unit apartment building to be built on the southern portion of the property. If you have any questions concerning this matter feel free to contact our office at 910-433-1767.

Sincerely,

H. Eckhardt

Heather Eckhardt
Development Services
Zoning Administrator
910-433-1767

Cliffmore Park – City of Fayetteville Zoning Map



ATTACHMENT 19:

Soil Suitability/ Slope/ Erosion/ Drainage/ Stormwater Runoff

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
BRIAN WRENN
Director

NORTH CAROLINA
Environmental Quality

November 1, 2022

LETTER OF APPROVAL

East Carolina Community Development Inc.
ATTN: Keith Walker, CEO/President
108 Professional Park Dr.
Beaufort, NC 28516

RE: Project Name: Cliffmore Park Apartments
Acres Approved: 3.90
Project ID: CUMBE-2023-054
County: Cumberland, City: Fayetteville, Address: Identity Lane
River Basin: Cape Fear
Stream Classification: Other
Submitted By: 4D Site Solutions, Inc.
Date Received by LQS: October 6, 2022
Plan Type: New

Dear Mr. Walker:

This office has reviewed the subject erosion and sedimentation control plan and hereby issues this Letter of Approval. This plan approval shall expire three (3) years following the date of approval, if no land-disturbing activity has been undertaken, as is required by Title 15A NCAC 4B .0129. Should the plan not perform adequately, a revised plan will be required (G.S. 113A-54.1)(b).

As of April 1, 2019, all new construction activities are required to complete and submit an electronic Notice of Intent (eNOI) form requesting a Certificate of Coverage (COC) under the NCG010000 Construction General Permit. After the form is reviewed and found to be complete, you will receive a link with payment instructions for the $100 annual permit fee. After the fee is processed, you will receive the COC via email. As the Financially Responsible Party shown on the FRO form submitted for this project, you MUST obtain the COC prior to commencement of any land disturbing activity. The eNOI form may be accessed at deq.nc.gov/NCG01. Please direct questions about the NOI form to Danny Smith at danny.smith@ncdenr.gov or Paul Clark at paul.clark@ncdenr.gov. After you submit a complete and correct NOI Form, a COC will be emailed to you within **three business days**. A $100 fee will be charged annually until a Notice of Termination is issued. This fee is to be sent to the DEMLR Stormwater Central Office staff in Raleigh. If the owner/operator of this project changes in the future, the new responsible party must obtain a new COC.

Title 15A NCAC 4B .0118(a) and the NCG01 permit require that the following documentation be kept on file at the job site:

1. The approved E&SC plan as well as any approved deviation.
2. The NCG01 permit and the COC, once it is received.

3. Records of inspections made during the previous 12 months.

Also, this letter gives the notice required by G.S. 113A-61.1(a) of our right of periodic inspection to ensure compliance with the approved plan.

Title 15A NCAC 4B .0118(a) requires that a copy of the approved erosion control plan be on file at the job site. Also, this letter gives the notice required by G.S. 113A-61.1(a) of our right of periodic inspection to ensure compliance with the approved plan.

North Carolina's Sedimentation Pollution Control Act is performance-oriented, requiring protection of existing natural resources and adjoining properties. If, following the commencement of this project, it is determined that the erosion and sedimentation control plan is inadequate to meet the requirements of the Sedimentation Pollution Control Act of 1973 (North Carolina General Statute 113A-51 through 66), this office may require revisions to the plan and implementation of the revisions to ensure compliance with the Act.

Acceptance and approval of this plan is conditioned upon your compliance with Federal and State water quality laws, regulations, and rules. In addition, local city or county ordinances or rules may also apply to this land-disturbing activity. This approval does not supersede any other permit or approval.

Please note that this approval is based in part on the accuracy of the information provided in the Financial Responsibility Form, which you provided. You are requested to file an amended form if there is any change in the information included on the form. This permit allows for a land-disturbance, as called for on the application plan, not to exceed the approved acres. Exceeding the acreage will be a violation of this permit and would require a revised plan and additional application fee. In addition, it would be helpful if you notify this office of the proposed starting date for this project.

Your cooperation is appreciated.

Sincerely,

Evangelyn Lowery-Jacobs
Environmental Engineer
DEMLR

Enclosures: Certificate of Approval
NPDES NCG01 Fact Sheet

ec: Scott Brown, 4D Site Solutions, Inc.
Jason Everage, City of Fayetteville Inspections Office

cc: DEMLR - Fayetteville Regional Office

CERTIFICATE OF PLAN APPROVAL

The posting of this certificate certifies that an erosion and sedimentation control plan has been approved for this project by the North Carolina Department of Environmental Quality in accordance with North Carolina General Statute 113A – 57 (4) and 113A – 54 (d) (4) and North Carolina Administrative Code, Title 15A, Chapter 4B.0107 (c). This certificate must be posted at the primary entrance of the job site before construction begins and until establishment of permanent groundcover as required by North Carolina Administrative Code, Title 15A, Chapter 4B.0127 (b).

Cliffmore Park Apartments – Cumberland County

Project Name and Location

November 1, 2022

Date of Plan Approval

Regional Engineer

Certificate of Coverage Number

Geotechnical Engineering Report

Cliffmore Park
Fayetteville, Cumberland County, North Carolina
January 17, 2022
Terracon Project No. 70215273

Prepared for:
East Carolina Community Development, Inc.
Beaufort, North Carolina

Prepared by:
Terracon Consultants, Inc.
Raleigh, North Carolina

January 17, 2022

East Carolina Community Development, Inc.
PO Box 2400
Beaufort, North Carolina 28516

Attn: Mr. Keith Walker
P: (252) 504-3996
E: kwalker@eccdi.com

Re: Geotechnical Engineering Report
Cliffmore Park
Identity Lane
Fayetteville, Cumberland County, North Carolina
Terracon Project No. 70215273

Dear Mr. Walker:

Terracon Consultants, Inc. (Terracon) has completed Geotechnical Engineering services for the above referenced project. This study was performed in general accordance with Terracon Proposal Number P70215273, dated November 3, 2021. This report presents the findings of the subsurface exploration and provides geotechnical recommendations concerning earthwork and the design and construction of foundations, floor slabs and pavements for the proposed project.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning this report or if we may be of further service, please contact us.

Sincerely,
Terracon Consultants, Inc.

Jamie Gan, E.I.T.
Geotechnical Field Engineer

Andrew A. Nash, P.E.
Geotechnical Department Manager
Registered NC 031022

REPORT TOPICS

INTRODUCTION 1
SITE CONDITIONS 1
PROJECT DESCRIPTION 2
GEOTECHNICAL CHARACTERIZATION 3
GEOTECHNICAL OVERVIEW 4
EARTHWORK 5
SHALLOW FOUNDATIONS 11
SEISMIC CONSIDERATIONS 13
FLOOR SLABS 14
PAVEMENTS 15
GENERAL COMMENTS 18

Note: This report was originally delivered in a web-based format. **Orange Bold** text in the report indicates a referenced section heading. The PDF version also includes hyperlinks which direct the reader to that section and clicking on the ***GeoReport*** logo will bring you back to this page. For more interactive features, please view your project online at client.terracon.com.

ATTACHMENTS

EXPLORATION AND TESTING PROCEDURES
PHOTOGRAPHY LOG
SITE LOCATION AND EXPLORATION PLANS
EXPLORATION RESULTS
SUPPORTING INFORMATION

Note: Refer to each individual Attachment for a listing of contents.

REPORT SUMMARY

Topic [1]	Overview Statement [2]
Project Description	The site is to be improved with a new apartment building with associated parking and driveways. The southern corner of the site will be improved with a pond and gazebo. The anticipated depth of the pond is unknown at this time.
Geotechnical Characterization	Subsurface conditions consist of existing fill within the southern portion of the site containing sandy lean clay or silty sand with trace organics (roots, odor) overlying loose to medium dense silty/clayey sand and intermediate layers of medium stiff to very stiff sandy lean clay. The existing fill is most likely from a former retaining pond with an approximately 32,000 square-feet footprint existing sometime between 2006 and 2008 that was backfilled sometime between 2011 and 2012. Groundwater was not encountered in any of the test boring locations during and after completion of drilling.
Earthwork	Support of footings, floor slabs, and pavements, on or above existing fill soils, is discussed in this report. Proper surface drainage during and after construction should be maintained as shallow soils are susceptible to moisture and may become unstable when wet.
Shallow Foundations	Shallow foundations bearing on on-site soils (excluding undocumented, existing fill) are suitable to support the proposed structure. Allowable bearing pressure = 2,000 psf Expected settlements: < 1-inch total, < 1/2-inch differential Overexcavation of existing fill may be necessary during foundation subgrade preparation. See **Earthwork** section.
Deep Foundations	Deep foundations are not necessary for this site.
Pavements	See **Pavements** section for preliminary recommend pavement sections.
General Comments	This section contains important information about the limitations of this geotechnical engineering report.

1. If the reader is reviewing this report as a pdf, the topics above can be used to access the appropriate section of the report by simply clicking on the topic itself.
2. This summary is for convenience only. It should be used in conjunction with the entire report for design purposes.

Geotechnical Engineering Report

Cliffmore Park

Identity Lane

Fayetteville, Cumberland County, North Carolina

Terracon Project No. 70215273

January 17, 2022

INTRODUCTION

This report presents the results of our subsurface exploration and geotechnical engineering services performed for the proposed ModWash to be located at Identity Lane in Fayetteville, Cumberland County, North Carolina. The purpose of these services is to provide information and geotechnical engineering recommendations relative to:

- Subsurface soil conditions
- Groundwater conditions
- Site preparation and earthwork
- Excavation considerations
- Stormwater pond considerations
- Foundation design and construction
- Floor slab design and construction
- Seismic site classification per IBC
- Pavement design and construction

The geotechnical engineering Scope of Services for this project included the advancement of eleven test borings to depths ranging from approximately 5 to 50 feet below existing site grades.

Maps showing the site and boring locations are shown in the **Site Location** and **Exploration Plan** sections, respectively. The results of the laboratory testing performed on soil samples obtained from the site during the field exploration are included on the boring logs and as separate graphs in the **Exploration Results** section.

SITE CONDITIONS

The following description of site conditions is derived from our site visit in association with the field exploration and our review of publicly available geologic and topographic maps.

Item	Description
Parcel Information (Cumberland County PIN: 9487-45-1364)	The proposed development is to be constructed within a +/- 4.1-acre parcel, located at Identity Lane in Fayetteville, Cumberland County, North Carolina. The approximate center of the site is located at 35.0563°N, 79.0528°W. See **Site Location**

Item	Description
Existing Improvements	The site is currently improved with a small house on the southwestern corner of the site that was added sometime between 2018 and 2020. The house does not appear to be lived in and it is unknown if underground utilities are present at this time. Based on historical aerial images, the southern end of the site previously had an approximately 32,000 square-feet detention pond sometime between 2006 and 2008. The pond was backfilled sometime between 2011 and 2012. The depth of the old pond is unknown at this time.
Current Ground Cover	Based on aerial photography and a recent site visit, the site consists of overgrown grass, shrubs and briar patches that span along the length of the middle of the site. A cluster of trees also span along the length of the southern length of the site.
Existing Topography	The site is relatively flat with a change of elevation from the midpoint of the northern perimeter (approx. el. 244 feet) decreasing concentrically outwards towards the southern perimeter of the site (approx. el. 238 feet).
Geology	The site is located in the Coastal Plain physiographic province. In this setting, the near surface soils are coastal terrace deposits of sand, silt and clay deposited during periods of fluctuating shoreline. Beneath the terrace deposits exists residual soils derived from the weathering of ancient igneous and metamorphic parent rock. According to the 1985 Geologic Map of North Carolina, the site is mapped within the Middendorf Formation.

We also collected photographs of the existing small house located on the southwestern corner of the site at the time of our field exploration program. Representative photos are provided in our **Photography Log**.

PROJECT DESCRIPTION

Our initial understanding of the project was provided in our proposal and was discussed during project planning. A period of collaboration has transpired since the project was initiated, and our final understanding of the project conditions is as follows:

Item	Description
Information Provided	Project information was provided via email correspondence and the following documents: ■ Cliffmore Park Apartments, Site Plan 1, dated April 23, 2021 prepared by 4D Site Solutions. "*Site plan final app Cliffmore Park 04-23-21*.pdf"
Project Description	The site is to be improved with a new apartment building with associated parking and driveways. The southern corner of the site will be improved with a pond and gazebo. The anticipated depth of the pond is unknown at this time.

Item	Description
Proposed Structure	The project includes a three-story, 72-unit apartment building with a footprint of about 28,000 square feet. The building will be slab-on-grade (non-basement).
Building Construction	The building is assumed to be steel construction with a slab-on-grade supported by a shallow foundation system.
Finished Floor Elevation	Not provided. We assume it will be within 2 feet above the existing site grades to improve drainage.
Maximum Loads (Assumed by Terracon)	■ Columns: 200 kips ■ Walls: 8 kips per linear foot (klf) ■ Slabs: 100 pounds per square foot (psf)
Grading/Slopes	No grading information is available at this time. As the site appears generally flat, we have assumed that grading will include 3 foot or less cuts and fills. Final slope angles of as steep as 3H:1V (Horizontal: Vertical) are assumed.
Below-Grade Structures	None anticipated.
Free-Standing Retaining Walls	None anticipated.
Below-Grade Areas	None anticipated.
Detention/Retention	A detention pond is indicated at the eastern corner of the site. We assume a depth of less than 5 feet.
Pavements	The site is anticipated to have 72 parking spaces. The plans indicate a flexible (asphalt) pavement, The site is anticipated to have 6.5 feet wide walkways surrounding the building and a pad and approach for a dumpster enclosure. The plans indicate a rigid (concrete) pavement. Anticipated traffic is as follows: ■ Autos/light trucks: 200 vehicles per day ■ Light delivery and trash collection vehicles: 5 vehicles per week ■ Tractor-trailer trucks: <1 vehicle per week The pavement design period is 20 years.
Estimated Start of Construction	Unknown.

GEOTECHNICAL CHARACTERIZATION

We have developed a general characterization of the subsurface conditions based upon our review of the subsurface exploration, laboratory data, geologic setting and our understanding of the project. This characterization, termed GeoModel, forms the basis of our geotechnical calculations and evaluation of site preparation and foundation options. Conditions encountered at

each exploration point are indicated on the individual logs. Stratification boundaries on the boring logs represent the approximate location of changes in native soil types; in situ, the transition between materials may be gradual. Laboratory tests for moisture content, Atterberg limits, and grain size were conducted on selected soil samples. The individual logs along with the GeoModel can be found in the **Exploration Results** section of this report.

Based on the results of project test borings, subsurface conditions within 50 feet of the ground surface can be generalized in the following model layers. For a more detailed view of the model layer depths at each boring location, refer to the GeoModel.

Model Layer	Layer Name	General Description
1	Existing Fill	Very soft to soft, sandy lean clay or very loose to medium dense, silty sand with trace organics (roots and odor)
2	Natural, Sand	Loose to medium dense, silty/clayey sand (all locations)
3	Natural, Clay	Medium stiff to very stiff, sandy lean clay

Test borings were observed during and immediately after drilling for the presence and level of groundwater. Groundwater was not observed in project test borings; however, transient perched groundwater conditions can occur at any depth within a clayey soil profile. Due to low permeability of the soils encountered in the borings, a relatively long period may be necessary for a groundwater to develop and stabilize in a borehole. Long term observations in piezometers sealed from the influence of surface water are often required to define groundwater levels in materials of this type. Water level observations of test borings are recorded on boring logs in **Exploration Results.**

Groundwater level fluctuations occur due to seasonal variations in the amount of rainfall, runoff and other factors not evident at the time the borings were performed. Therefore, groundwater levels during construction or at other times in the life of the structure may be higher or lower than the levels indicated on the boring logs. The possibility of groundwater level fluctuations should be considered when developing the design and construction plans for the project.

GEOTECHNICAL OVERVIEW

Subsurface conditions consist of existing fill within the southern portion of the site containing sandy lean clay or silty sand with trace organics (roots, odor) overlying loose to medium dense silty/clayey sand and intermediate layers of medium stiff to very stiff sandy lean clay.

Existing fill soils were found to contain very soft to soft sandy lean clay and very loose to medium dense silty sand containing trace organics were at test borings B-1, B-6, B-12, B-13, and B-14. Test borings encountered existing fill at depths of 1 to 8 feet below existing ground surface. A former detention pond with an approximately 32,000 square-feet footprint existing sometime

between 2006 and 2008 and was backfilled sometime between 2011 and 2012. The areas consisting of existing fill will be within the southeastern portion of the site, it appears the proposed building footprint will not be impacted.

With undocumented fill, there is an inherent risk of structure settlement or localized subsidence from compressible fill or unsuitable material within or buried by the fill that may not be discovered. This risk of unforeseen conditions cannot be eliminated without completely removing the existing fill in the building pad, parking and driveway areas. These risks can be reduced by performing adequate testing and evaluation during construction. Additional site preparation recommendations including subgrade improvement and fill placement are provided in the **Earthwork** Section.

The loose to medium dense clayey sand and stiff to very stiff sandy lean clay could become unstable with typical earthwork and construction traffic, especially after precipitation events. The effective drainage should be completed early in the construction sequence and maintained after construction to avoid potential issues. If possible, the grading should be performed during the warmer and drier times of the year. The need for undercutting and replacement of unstable subgrade greatly increases if site grading is performed during winter months. Additional site preparation recommendations, including subgrade improvement and fill placement, are provided in the **Earthwork** section.

Based on the findings of this investigation, we recommend an allowable bearing pressure of 2,000 pounds per square feet for conventional spread or wall footings bearing on approved native soil or engineered fill. Where foundation subgrade is overexcavated, overexcavation can be backfilled with compacted structural fill or aggregate base course (NCDOT ABC) to planned subgrade. The **Shallow Foundations** section addresses support of the building bearing on native soils or engineered fill. The **Floor Slabs** section addresses slab-on-grade support of the building.

Based on the results of our field testing and the 2018 International Building Code (IBC), the seismic classification for the site is D.

Pavement section thicknesses for rigid concrete or flexible asphalt pavements are presented in the **Pavements** section of this report.

The **General Comments** section provides an understanding of the report limitations.

EARTHWORK

Earthwork is anticipated to include clearing and grubbing, excavations, and fill placement. The following sections provide recommendations for use in the preparation of specifications for the work. Recommendations include critical quality criteria, as necessary, to render the site in the state considered in our geotechnical engineering evaluation for foundations, floor slabs, and pavements.

Site Preparation

Existing structures should be completely demolished and wasted offsite or relocated offsite. Utilities that are to be abandoned, should be properly decommissioned, removed, or filled with grout within proposed construction areas. Utilities that are to remain should be accurately located horizontally and vertically to minimize conflict with new construction.

Prior to placing fill, existing vegetation and root mat should be removed. Complete stripping of the topsoil should be performed in the proposed building and parking/driveway areas. Following stripping of topsoil, in-place compaction should be performed using a medium to heavy weight vibratory sheepsfoot roller in areas to receive fill or at the subgrade elevation in cut areas. The roller should make at least six passes, with the second set of three passes perpendicular to the first set of three passes. In-place compaction should be performed during a period of dry weather to avoid degrading an otherwise suitable subgrade. Improvement of existing fill will be required for the very loose to loose near surface existing fill soils as outlined in the **Site Remediation** section below.

After vibratory rolling, the subgrade should be proofrolled with an adequately loaded vehicle such as a fully-loaded tandem-axle dump truck or similar rubber-tired construction equipment with a minimum gross weight of 20,000 lb. The proofrolling should be performed under the direction of the Geotechnical Engineer. Areas excessively deflecting under the proofroll should be delineated and subsequently addressed by the Geotechnical Engineer.

Near surface soils will generally provide a relatively stable subgrade for construction equipment when dry; however, these soils are moisture-sensitive and can be difficult to work when wet. These difficulties can include softening of exposed subgrade soils, excessive rutting or deflection under construction traffic, and the inability to adequately dry and compact wet soil. Excessively wet or dry material should either be removed or moisture conditioned and recompacted. Moisture-related earthwork difficulties can be reduced by performing the earthwork during the typically drier months of the year (May through September) and after a period of dry weather. Moisture-related earthwork difficulties also can be reduced by keeping exposed subgrades sloped to promote surface water runoff.

If the exposed soil surface exhibits excessive deflection, pumping, or rutting under the proof-rolling operation, we recommend over-excavation of soft/unstable soil and placing a 4- to 6-inch thick layer of aggregate base stone (NCDOT ABC) material over a prepared subgrade or geotextile fabric to protect the subgrade from excessive moisture infiltration and damage from construction traffic. Use of soil amendments such as cement or lime can be used to reduce problems related to wet, unstable surficial soils. Additional recommendations for site stabilization will depend on the location of the instability and should be provided by the Geotechnical Engineer based on observations at the time of construction.

Existing Fill

As noted in **Geotechnical Characterization**, borings B-1, B-6, B-12, B-13 and B-14 encountered existing fill to depths ranging from about 1 to 8 feet. The fill appears to have been placed in a controlled manner on the western portion of the site, but we have no records to indicate the degree of control. Support of footings, floor slabs, and pavements, on or above existing fill soils, is discussed in this report. However, even with the recommended construction procedures, there is inherent risk for the owner that compressible fill or unsuitable material, within or buried by the fill will, not be discovered. During initial stages of site development, we recommend test pit exploration of existing fill to evaluate its suitability to remain in-place; otherwise, we recommend complete removal of all existing fill beneath the building footprint. This risk of unforeseen conditions cannot be eliminated without completely removing the existing fill, but can be reduced by performing additional site testing and evaluation.

If the owner elects to construct the footings and floor slabs on the existing fill, the following protocol should be followed. Once the planned grading has been completed, we recommend undercutting the existing fill within the building footprint to suitable natural soil and replacing these materials with structural fill. The lateral and vertical extents of the undercut should be determined during construction by the Geotechnical Engineer. Once materials have been removed, the entire area should be evaluated either by proofrolling with heavy, rubber tire construction equipment and possibly test pits and/or hand augers, to aid in delineating areas of soft or otherwise unsuitable soil. Once unsuitable materials have been remediated, and the subgrade has passed the proofroll test, the existing and undocumented fill that was removed can be evaluated for reuse as structural fill.

If the owner elects to construct pavements on the existing fill, the following protocol should be followed. Once the planned subgrade elevation has been reached, the entire pavement area should be proofrolled. Areas of soft or otherwise unsuitable material should be undercut and replaced with either new structural fill or suitable, existing on-site materials.

Site Remediation

The following recommendations are for the proposed building pad area where exiting fill soils are found to be suitable fill material but are loose or soft currently in-place. Following stripping of topsoil, these areas should be undercut to 3 feet below existing grade within the building pad area and 5 feet beyond the lateral limits of the building pad area. Once materials have been removed, the entire area should be vibratory compacted in place and proofrolled as outlined in the **Site Preparation** section. Once loose surface soil materials have been remediated, and the subgrade has passed the proofroll test, the excavated soils can be evaluated for use as structural fill and can be placed in controlled lifts as outlined in the **Fill Compaction Requirements** section.

Fill Material Types

Fill required to achieve design grade should be classified as structural fill and general fill. Structural fill is material used below, or within 10 feet of structures, pavements or constructed slopes. General fill is material used to achieve grade outside of these areas. Earthen materials used for structural and general fill should meet the following material property requirements:

Soil Type [1]	USCS Classification	Acceptable Location for Placement
Import: Low Plasticity Cohesive	CL-ML, ML	Generally suitable when placed at appropriate moisture content - all locations and elevations
Import: High Plasticity Cohesive [2]	CH, MH	Plasticity index less than 30 - building area (below 3 feet) and other areas (below 1 feet)
Sand / Gravel with less than 10% fines [3]	GW/GP, SW/SP	NCDOT ABC (aggregate base course) - beneath pavement sections and floor slabs
On-Site Soils	CL, SM/SC	Generally suitable when placed at appropriate moisture content - all locations and elevations

1. Structural and general fill should consist of approved materials free of organic matter and debris. Frozen material should not be used, and fill should not be placed on a frozen subgrade. A sample of each material type should be submitted to the Geotechnical Engineer for evaluation prior to use on this site.
2. CH or MH soils should not be used within 3 feet of finished grade in building area and 1 foot below finished grade in other structural fill areas.
3. Soil with less than 10% fines (silt and clay) should not be used as general fill to raise site grades to prevent perched water conditions where water infiltrating the surface zone can be trapped over the underlying less-permeable soil zone.

Fill Compaction Requirements

Structural and general fill should meet the following compaction requirements.

Item	Structural Fill [3]	General Fill
Maximum Lift Thickness	8 inches or less in loose thickness when heavy, self-propelled compaction equipment is used 4 to 6 inches in loose thickness when hand-guided equipment (i.e. jumping jack or plate compactor) is used	Same as Structural fill
Minimum Compaction Requirements [1, 2]	Minimum 95% of the material's maximum standard Proctor dry density (ASTM D 698). The upper 12 inches of subgrade in pavement areas should be compacted to at least 98% of the materials maximum standard Proctor dry density (ASTM D 698).	92% of max.

Item	Structural Fill [3]	General Fill
Water Content Range [1]	Low plasticity cohesive: -2% to +3% of optimum High plasticity cohesive: 0 to +4% of optimum Granular: -3% to +3% of optimum	As required to achieve min. compaction requirements

1. Maximum density and optimum water content as determined by the standard Proctor test (ASTM D 698).
2. High plasticity cohesive fill should not be compacted to more than 100% of standard Proctor maximum dry density.
3. Engineered fill should be tested for moisture content and compaction during placement. If in-place density tests indicate the specified moisture or compaction limits have not been met, the area represented by the tests should be reworked and retested as required until the specified moisture and compaction requirements are achieved.

Utility Trench Backfill

For low permeability subgrades, utility trenches are a common source of water infiltration and migration. Utility trenches penetrating beneath the building should be effectively sealed to restrict water intrusion and flow through the trenches, which could migrate below the building. The trench should provide an effective trench plug that extends at least 5 feet from the face of the building exterior. The plug material should consist of cementitious flowable fill or low permeability clay. The trench plug material should be placed to surround the utility line. If used, the clay trench plug material should be placed and compacted to comply with the water content and compaction recommendations for structural fill stated previously in this report.

Grading and Drainage

All grades must provide effective drainage away from the building during and after construction and should be maintained throughout the life of the structure. Water retained next to the building can result in soil movements greater than those discussed in this report. Greater movements can result in unacceptable differential floor slab and/or foundation movements, cracked slabs and walls, and roof leaks. The roof should have gutters/drains with downspouts that discharge onto splash blocks at a distance of at least 10 feet from the building.

Exposed ground should be sloped and maintained at a minimum 5% away from the building for at least 10 feet beyond the perimeter of the building. Locally, flatter grades may be necessary to transition ADA access requirements for flatwork. After building construction and landscaping have been completed, final grades should be verified to document effective drainage has been achieved. Grades around the structure should also be periodically inspected and adjusted, as necessary, as part of the structure's maintenance program. Where paving or flatwork abuts the structure, a maintenance program should be established to effectively seal and maintain joints and prevent surface water infiltration.

Earthwork Construction Considerations

Shallow excavations for the proposed structure are anticipated to be accomplished with conventional construction equipment. Upon completion of filling and grading, care should be taken to maintain the subgrade water content prior to construction of floor slabs. Construction traffic over the completed subgrades should be avoided. The site should also be graded to prevent ponding of surface water on the prepared subgrades or in excavations. Water collecting over or adjacent to construction areas should be removed. If the subgrade freezes, desiccates, saturates, or is disturbed, the affected material should be removed, or the materials should be scarified, moisture conditioned, and recompacted prior to floor slab construction.

As a minimum, excavations should be performed in accordance with OSHA 29 CFR, Part 1926, Subpart P, “Excavations” and its appendices, and in accordance with any applicable local, and/or state regulations.

Construction site safety is the sole responsibility of the contractor who controls the means, methods, and sequencing of construction operations. Under no circumstances shall the information provided herein be interpreted to mean Terracon is assuming responsibility for construction site safety, or the contractor's activities; such responsibility shall neither be implied nor inferred.

Construction Observation and Testing

The earthwork efforts should be monitored under the direction of the Geotechnical Engineer. Monitoring should include documentation of adequate removal of vegetation and topsoil, proofrolling, and mitigation of areas delineated by the proofroll to require mitigation.

Each lift of compacted fill should be tested, evaluated, and reworked, as necessary, until approved by the Geotechnical Engineer prior to placement of additional lifts. Each lift of fill should be tested for density and water content at a frequency of at least one test for every 2,500 square feet of compacted fill in the building areas and 5,000 square feet in pavement areas. One density and water content test should be performed for every 50 linear feet of compacted utility trench backfill.

In areas of foundation excavations, the bearing subgrade should be evaluated under the direction of the Geotechnical Engineer. If unanticipated conditions are encountered, the Geotechnical Engineer should prescribe mitigation options.

In addition to the documentation of the essential parameters necessary for construction, the continuation of the Geotechnical Engineer into the construction phase of the project provides the continuity to maintain the Geotechnical Engineer’s evaluation of subsurface conditions, including assessing variations and associated design changes.

SHALLOW FOUNDATIONS

If the site has been prepared in accordance with the requirements noted in **Earthwork**, the following design parameters are applicable for shallow foundations.

Design Parameters – Compressive Loads

Item	Description
Maximum Net Allowable Bearing pressure [1, 2]	2,000 psf
Required Bearing Stratum [3]	Undisturbed native soils or approved structural fill
Minimum Foundation Dimensions	Columns: 30 inches Continuous: 18 inches
Ultimate Passive Resistance [4] **(equivalent fluid pressures)**	380 pcf
Ultimate Coefficient of Sliding Friction [5]	0.35
Minimum Embedment below Finished Grade [6]	12 inches
Estimated Total Settlement from Structural Loads [2]	Less than about 1 inch
Estimated Differential Settlement [2, 7]	Approximately 1/2 of total settlement

1. The maximum net allowable bearing pressure is the pressure in excess of the minimum surrounding overburden pressure at the footing base elevation. An appropriate factor of safety has been applied. Values assume that exterior grades are no steeper than 20% within 10 feet of structure.
2. Values provided are for maximum loads noted in **Project Description**.
3. Unsuitable or soft soils should be over-excavated and replaced per the recommendations presented in the **Earthwork**.
4. Use of passive earth pressures require the sides of the excavation for the spread footing foundation to be nearly vertical and the concrete placed neat against these vertical faces or that the footing forms be removed and compacted structural fill be placed against the vertical footing face.
5. Can be used to compute sliding resistance where foundations are placed on suitable soil/materials. Should be neglected for foundations subject to net uplift conditions.
6. Embedment necessary to minimize the effects of frost and/or seasonal water content variations. For sloping ground, maintain depth below the lowest adjacent exterior grade within 5 horizontal feet of the structure.
7. Differential settlements are as measured over a span of 50 feet.

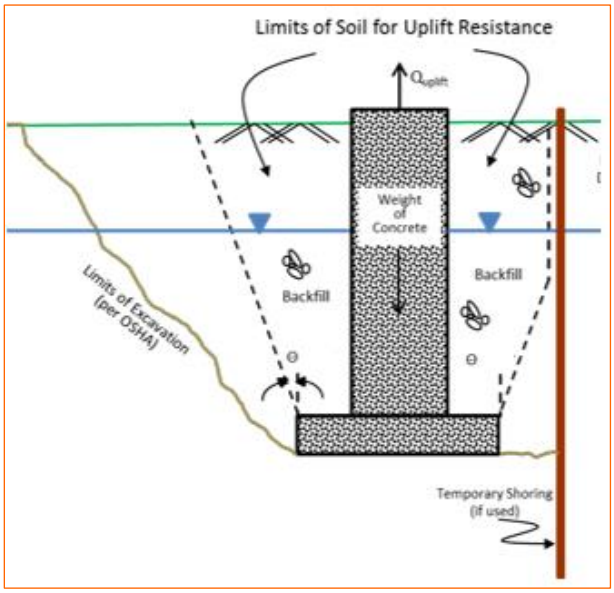
The foundation bearing materials should be evaluated at the time of the foundation excavation. This is an essential part of the construction process. A representative of the geotechnical engineer should use a combination of hand auger borings and dynamic cone penetrometer (DCP) testing to determine the suitability of the bearing materials for the design bearing pressure. DCP testing should be performed to a depth of 3 to 5 feet below the bottom of foundation excavation. Excessively

soft, loose, or wet bearing soils should be over excavated to a depth recommended by the geotechnical engineer. The excavated soils should be replaced with structural fill or crushed stone (NCDOT ABC). However, footings could bear directly on the soils after over excavation if approved by the Geotechnical Engineer.

Existing fill was found below the proposed building footprint as currently shown. In areas were existing fill remains under the proposed building the frequency of hand auger and DCP testing should be increased and should be extended to natural soils.

Design Parameters - Uplift Loads

Uplift resistance of spread footings can be developed from the effective weight of the footing and the overlying soils. As illustrated on the subsequent figure, the effective weight of the soil prism defined by diagonal planes extending up from the top of the perimeter of the foundation to the ground surface at an angle, θ, of 20 degrees from the vertical can be included in uplift resistance. The maximum allowable uplift capacity should be taken as a sum of the effective weight of soil plus the dead weight of the foundation, divided by an appropriate factor of safety. A maximum total unit weight of 100 pcf should be used for the backfill. This unit weight should be reduced to 40 pcf for portions of the backfill or natural soils below the groundwater elevation.

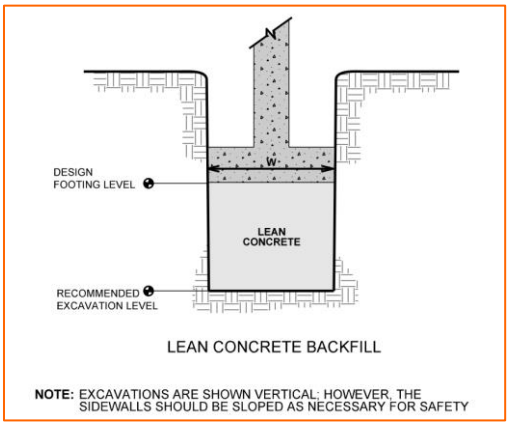


Foundation Construction Considerations

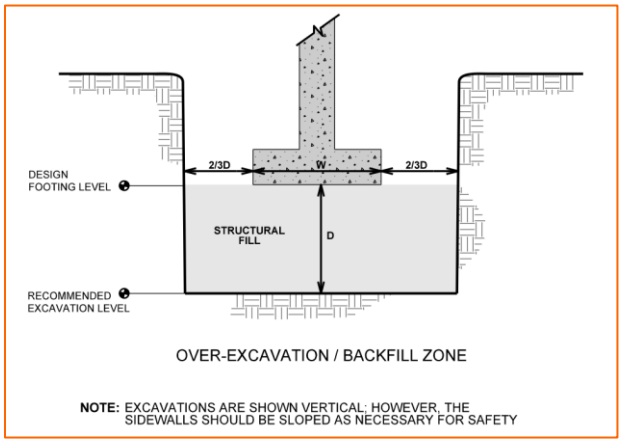
As noted in **Earthwork**, the footing excavations should be evaluated under the direction of the Geotechnical Engineer. The base of all foundation excavations should be free of water and loose soil, prior to placing concrete. Concrete should be placed soon after excavating to reduce bearing

soil disturbance. Care should be taken to prevent wetting or drying of the bearing materials during construction. Excessively wet or dry material or any loose/disturbed material in the bottom of the footing excavations should be removed/reconditioned before foundation concrete is placed.

If unsuitable bearing soils are encountered at the base of the planned footing excavation, the excavation should be extended deeper to suitable soils, and the footings could bear directly on these soils at the lower level or on lean concrete backfill placed in the excavations. This is illustrated on the sketch below.



Over-excavation for structural fill placement below footings should be conducted as shown below. The over-excavation should be backfilled up to the footing base elevation, with structural fill placed, as recommended in the **Earthwork** section.



SEISMIC CONSIDERATIONS

The seismic design requirements for buildings and other structures are based on Seismic Design Category. Site Classification is required to determine the Seismic Design Category for a structure. The Site Classification is based on the upper 100 feet of the site profile defined by a weighted

average value of either shear wave velocity, standard penetration resistance, or undrained shear strength in accordance with Section 20.4 of ASCE 7 and the International Building Code (IBC). Based on the soil properties encountered at the site and as described on the exploration logs and results, it is our professional opinion that the **Seismic Site Classification is D**. Subsurface explorations at this site were extended to a maximum depth of 50 feet. The site properties below the boring depth to 100 feet were estimated based on our experience and knowledge of geologic conditions of the general area. Additional deeper borings or geophysical testing may be performed to confirm the conditions below the current boring depth.

FLOOR SLABS

Design parameters for floor slabs assume the requirements for **Earthwork** have been followed. Specific attention should be given to positive drainage away from the structure and positive drainage of the aggregate base beneath the floor slab.

Floor Slab Design Parameters

Item	Description
Floor Slab Support [1]	Approved/prepared site soils or new structural fill
Estimated Modulus of Subgrade Reaction [2]	100 pounds per square inch per inch (psi/in) for point loads
Stone Base Course	4 inches of crushed aggregate base course (NCDOT ABC)

1. Floor slabs should be structurally independent of building footings or walls to reduce the possibility of floor slab cracking caused by differential movements between the slab and foundation.
2. Modulus of subgrade reaction is an estimated value based upon our experience with the subgrade condition, the requirements noted in **Earthwork**, and the floor slab support as noted in this table. It is provided for point loads. For large area loads the modulus of subgrade reaction would be lower.

The slab subgrade can be supported on approved/properly prepared native soils or new structural fill. Floor subgrades should be maintained in a relatively moist yet stable condition until floor slabs are constructed. If the subgrade should become excessively desiccated or wet prior to construction of floor slabs, the affected material should be removed and replaced with suitable material. Upon completion of grading operations in the building area, care should be taken to maintain the recommended subgrade moisture content and density prior to construction of the floor slabs. Saw-cut control joints can be placed in the slab to help control the location and extent of cracking. For additional recommendations, refer to the ACI Design Manual.

The use of a vapor retarder should be considered beneath concrete slabs on grade covered with wood, tile, carpet, or other moisture sensitive or impervious coverings, or when the slab will support equipment sensitive to moisture. When conditions warrant the use of a vapor retarder, the slab designer should refer to ACI 302 and/or ACI 360 for procedures and cautions regarding

the use and placement of a vapor retarder. The architect or structural engineer should design floor slabs in anticipation of damp subgrade conditions in the western portion of the building.

Where floor slabs are tied to perimeter walls or turn-down slabs to meet structural or other construction objectives, our experience indicates differential movement between the walls and slabs will likely be observed in adjacent slab expansion joints or floor slab cracks beyond the length of the structural dowels. The Structural Engineer should account for potential differential settlement through use of sufficient control joints, appropriate reinforcing or other means.

Settlement of floor slabs supported on existing fill materials cannot be accurately predicted, but could be larger than normal and result in some cracking. The floor slab can be stiffened by adding steel reinforcement, grade beams and/or post-tensioned elements.

Floor Slab Construction Considerations

Finished subgrade, within and for at least 10 feet beyond the floor slab, should be protected from traffic, rutting, or other disturbance and maintained in a relatively moist condition until floor slabs are constructed. If the subgrade should become damaged or desiccated prior to construction of floor slabs, the affected material should be removed and structural fill should be added to replace the resulting excavation. Final conditioning of the finished subgrade should be performed immediately prior to placement of the floor slab support course.

The Geotechnical Engineer should approve the condition of the floor slab subgrades immediately prior to placement of the floor slab support course, reinforcing steel, and concrete. Attention should be paid to high traffic areas that were rutted and disturbed earlier, and to areas where backfilled trenches are located.

PAVEMENTS

General Pavement Comments

Pavement designs are provided for the traffic conditions and pavement life conditions as noted in **Project Description** and in the following sections of this report. A critical aspect of pavement performance is site preparation. Pavement designs noted in this section must be applied to the site which has been prepared as recommended in the **Earthwork** section.

Pavement Design Parameters

Based on our experience with local subgrade preparation, a subgrade CBR of 5 was used for the flexible pavement designs, and a modulus of subgrade reaction of 150 pci was used for the rigid pavement designs. A modulus of rupture of 600 psi was used for pavement concrete. When prepared as outlined in the **Earthwork** section**,** the subsurface materials appear to be suitable for support of pavement sections.

Pavement thickness design is dependent upon:

- the anticipated traffic conditions during the life of the pavement;
- subgrade and paving material characteristics; and
- climatic conditions of the region.

The majority of the near surface soils at the site are sandy lean clay to sandy silt soils. These soils are generally poor for pavement support since they are subject to softening and loss of strength with exposure to moisture. The use of geosynthetic material may be needed in some areas for subgrade separation or stabilization. Typical pavement sections for anticipated subgrade soil conditions are listed in the following table:

Pavement Type	Material	Light-Duty (inches)	Heavy-Duty (inches)
Flexible	Asphalt Concrete (NCDOT Type S9.50B)	3.0	1.0
	Asphalt Concrete (NCDOT Type I-19.0C)	-	3.0
	Crushed Stone (NCDOT ABC)	6.0	8.0
Rigid	Portland Cement Concrete (4000 psi)	5.0	7.0
	Crushed Aggregate Base Course (NC DOT ABC)	4.0	4.0

Light-duty pavements should be designated for car parking drives and lightly traveled service roads. Heavy-duty pavements should be designated for entrances and exits, access roads, truck driveways, areas in front of loading docks and dumpsters, and truck parking areas. For areas subject to concentrated and repetitive loading conditions, i.e. dumpster pads, we recommend using a Portland cement concrete pavement with a thickness of at least 7 inches underlain by at least 4 inches of aggregate base course.

Recommendations for pavement construction presented depend upon compliance with recommended material specifications. To assess compliance, observation and testing should be performed under the direction of the geotechnical engineer. Asphalt concrete aggregates and base course materials should conform to the North Carolina Department of Transportation (NCDOT) Mix Design Criteria found in Table 610-3 (updated December 6, 2017) of the *Standard Specifications*

for Roads and Structures. Concrete pavement should be air-entrained and have a minimum compressive strength of 4,000 psi after 28 days of laboratory curing per ASTM C-31.

Pavement Drainage

Pavements should be sloped to provide rapid drainage of surface water. Water allowed to pond on or adjacent to the pavements could saturate the subgrade and contribute to premature pavement deterioration. In addition, the pavement subgrade should be graded to provide positive drainage within the granular base section. Appropriate sub-drainage or connection to a suitable daylight outlet should be provided to remove water from the granular subbase, as needed.

Pavement Maintenance

The pavement sections represent minimum recommended thicknesses and, as such, periodic maintenance should be anticipated. Therefore, preventive maintenance should be planned and provided for through an on-going pavement management program. Maintenance activities are intended to slow the rate of pavement deterioration and to preserve the pavement investment. Maintenance consists of both localized maintenance (e.g., crack and joint sealing and patching) and global maintenance (e.g., surface sealing). Preventive maintenance is usually the priority when implementing a pavement maintenance program. Additional engineering observation is recommended to determine the type and extent of a cost-effective program. Even with periodic maintenance, some movements and related cracking may still occur, and repairs may be required.

Pavement performance is affected by its surroundings. In addition to providing preventive maintenance, the civil engineer should consider the following recommendations in the design and layout of pavements:

- Final grade adjacent to paved areas should slope down from the edges at a minimum 2%.
- Subgrade and pavement surfaces should have a minimum 2% slope to promote proper surface drainage.
- Install below pavement drainage systems surrounding areas anticipated for frequent wetting.
- Install joint sealant and seal cracks immediately.
- Seal all landscaped areas in or adjacent to pavements to reduce moisture migration to subgrade soils.
- Place compacted, low permeability backfill against the exterior side of curb and gutter.
- Place curb, gutter and/or sidewalk directly on clay subgrade soils rather than on unbound granular base course materials.

Areas for parking of heavy vehicles, concentrated turn areas, and start/stop maneuvers could require thicker pavement sections. Edge restraints (i.e. concrete curbs or aggregate shoulders) should be planned along curves and areas of maneuvering vehicles. A maintenance program including surface sealing, joint cleaning and sealing, and timely repair of cracks and deteriorated

areas will increase the pavement's service life. As an option, thicker sections could be constructed to decrease future maintenance.

GENERAL COMMENTS

Our analysis and opinions are based upon our understanding of the project, the geotechnical conditions in the area, and the data obtained from our site exploration. Natural variations will occur between exploration point locations or due to the modifying effects of construction or weather. The nature and extent of such variations may not become evident until during or after construction. Terracon should be retained as the Geotechnical Engineer, where noted in this report, to provide observation and testing services during pertinent construction phases. If variations appear, we can provide further evaluation and supplemental recommendations. If variations are noted in the absence of our observation and testing services on-site, we should be immediately notified so that we can provide evaluation and supplemental recommendations.

Our Scope of Services does not include either specifically or by implication any environmental or biological (e.g., mold, fungi, bacteria) assessment of the site or identification or prevention of pollutants, hazardous materials or conditions. If the owner is concerned about the potential for such contamination or pollution, other studies should be undertaken.

Our services and any correspondence or collaboration through this system are intended for the sole benefit and exclusive use of our client for specific application to the project discussed and are accomplished in accordance with generally accepted geotechnical engineering practices with no third-party beneficiaries intended. Any third-party access to services or correspondence is solely for information purposes to support the services provided by Terracon to our client. Reliance upon the services and any work product is limited to our client, and is not intended for third parties. Any use or reliance of the provided information by third parties is done solely at their own risk. No warranties, either express or implied, are intended or made.

Site characteristics as provided are for design purposes and not to estimate excavation cost. Any use of our report in that regard is done at the sole risk of the excavating cost estimator as there may be variations on the site that are not apparent in the data that could significantly impact excavation cost. Any parties charged with estimating excavation costs should seek their own site characterization for specific purposes to obtain the specific level of detail necessary for costing. Site safety, and cost estimating including, excavation support, and dewatering requirements/design are the responsibility of others. If changes in the nature, design, or location of the project are planned, our conclusions and recommendations shall not be considered valid unless we review the changes and either verify or modify our conclusions in writing.

ATTACHMENTS

SITE LOCATION AND EXPLORATION PLANS

Contents:

Site Location Plan
Exploration Plan
Photography Log (2 pages)

Note: All attachments are one page unless noted above.

SITE LOCATION

Cliffmore Park ■ Fayetteville, Cumberland County, North Carolina
January 17, 2022 ■ Terracon Project No. 70215273

Terracon GeoReport

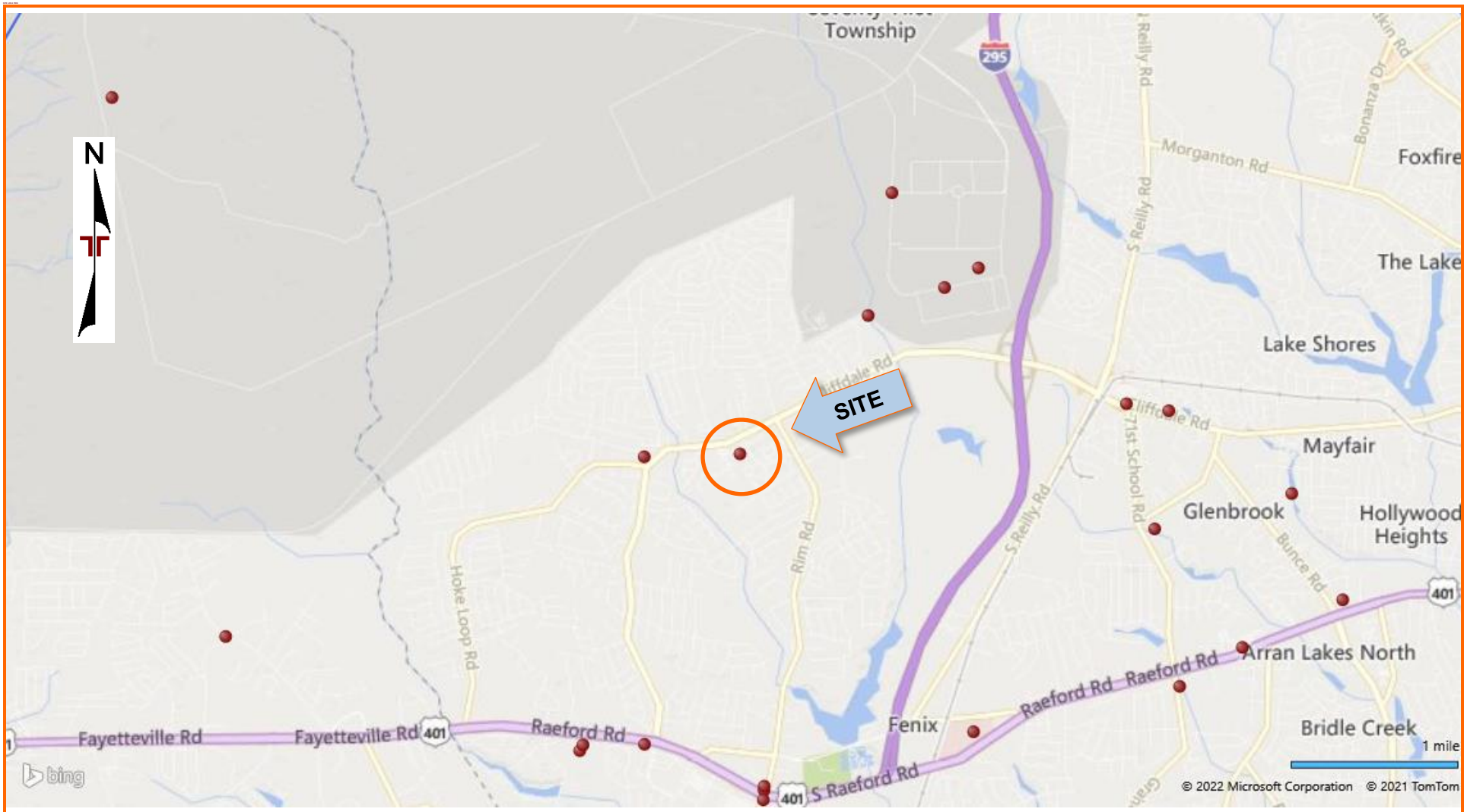


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

EXPLORATION PLAN

Cliffmore Park ■ Fayetteville, Cumberland County, North Carolina
January 17, 2022 ■ Terracon Project No. 70215273

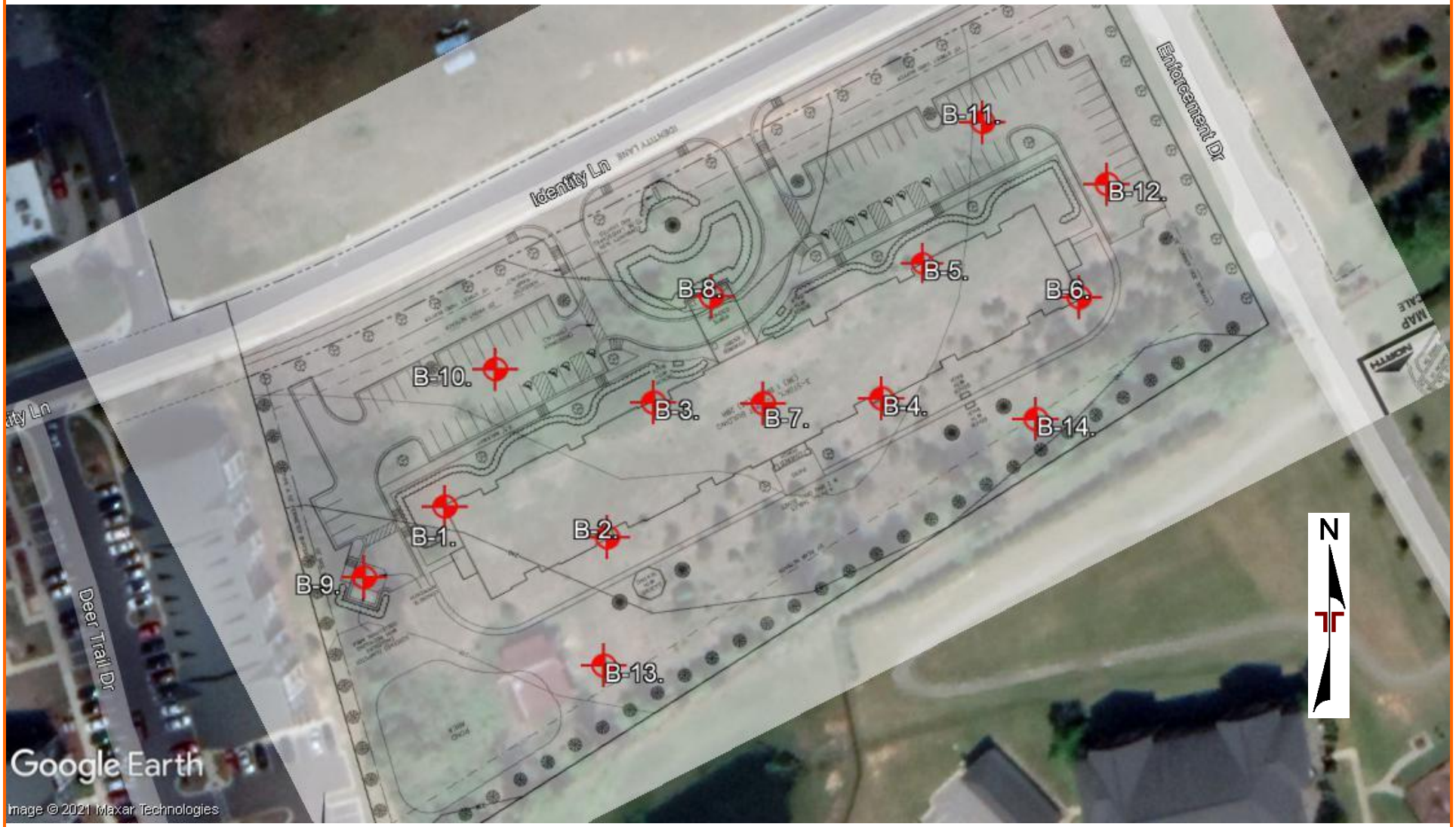


DIAGRAM IS FOR GENERAL LOCATION ONLY, AND IS NOT INTENDED FOR CONSTRUCTION PURPOSES

MAP PROVIDED BY MICROSOFT BING MAPS

PHOTOGRAPHY LOG

Existing building located at the southwest corner of the site, retrieved from Google Maps on January 13, 2022

Foundation of the existing building, dated December 3, 2021

East face of the existing building, dated December 3, 2021

West face of the existing building, dated December 3, 2021

EXPLORATION RESULTS

Contents:

GeoModel
Boring Logs (B-1 through B-14)
Atterberg Limits

Note: All attachments are one page unless noted above.

EXPLORATION AND TESTING PROCEDURES

Field Exploration

Number of Borings	Boring Depth (feet)	Planned Location
1	50	Proposed Building
6	20	
5	5	Proposed parking/driveway areas
2	15	Old pond area

Boring Layout and Elevations: Unless otherwise noted, Terracon personnel provided the boring layout. Coordinates were obtained with a handheld GPS unit (estimated horizontal accuracy of about ±10 feet) and approximate elevations were obtained by interpolation from a site specific, surveyed topographic map. If elevations and a more precise boring layout are desired, we recommend borings be surveyed following completion of fieldwork.

Subsurface Exploration Procedures: We advanced the borings with a truck-mounted, track-mounted, ATV-mounted rotary drill rig using continuous flight augers (solid stem and/or hollow stem, as necessary, depending on soil conditions). Four samples were obtained in the upper 10 feet of each boring and at intervals of 5 feet thereafter. In the thin-walled tube sampling procedure, a thin-walled, seamless steel tube with a sharp cutting edge was pushed hydraulically into the soil to obtain a relatively undisturbed sample. In the split-barrel sampling procedure, a standard 2-inch outer diameter split-barrel sampling spoon was driven into the ground by a 140-pound automatic hammer falling a distance of 30 inches. The number of blows required to advance the sampling spoon the last 12 inches of a normal 18-inch penetration is recorded as the Standard Penetration Test (SPT) resistance value. The SPT resistance values, also referred to as N-values, are indicated on the boring logs at the test depths. We observed and recorded groundwater levels during drilling and sampling. For safety purposes, all borings were backfilled with auger cuttings after their completion. Pavements were patched with cold-mix asphalt and/or pre-mixed concrete, as appropriate.

The sampling depths, penetration distances, and other sampling information was recorded on the field boring logs. The samples were placed in appropriate containers and taken to our soil laboratory for testing and classification by a Geotechnical Engineer. Our exploration team prepared field boring logs as part of the drilling operations. These field logs included visual classifications of the materials encountered during drilling and our interpretation of the subsurface conditions between samples. Final boring logs were prepared from the field logs. The final boring logs represent the Geotechnical Engineer's interpretation of the field logs and include modifications based on observations and tests of the samples in our laboratory.

Laboratory Testing

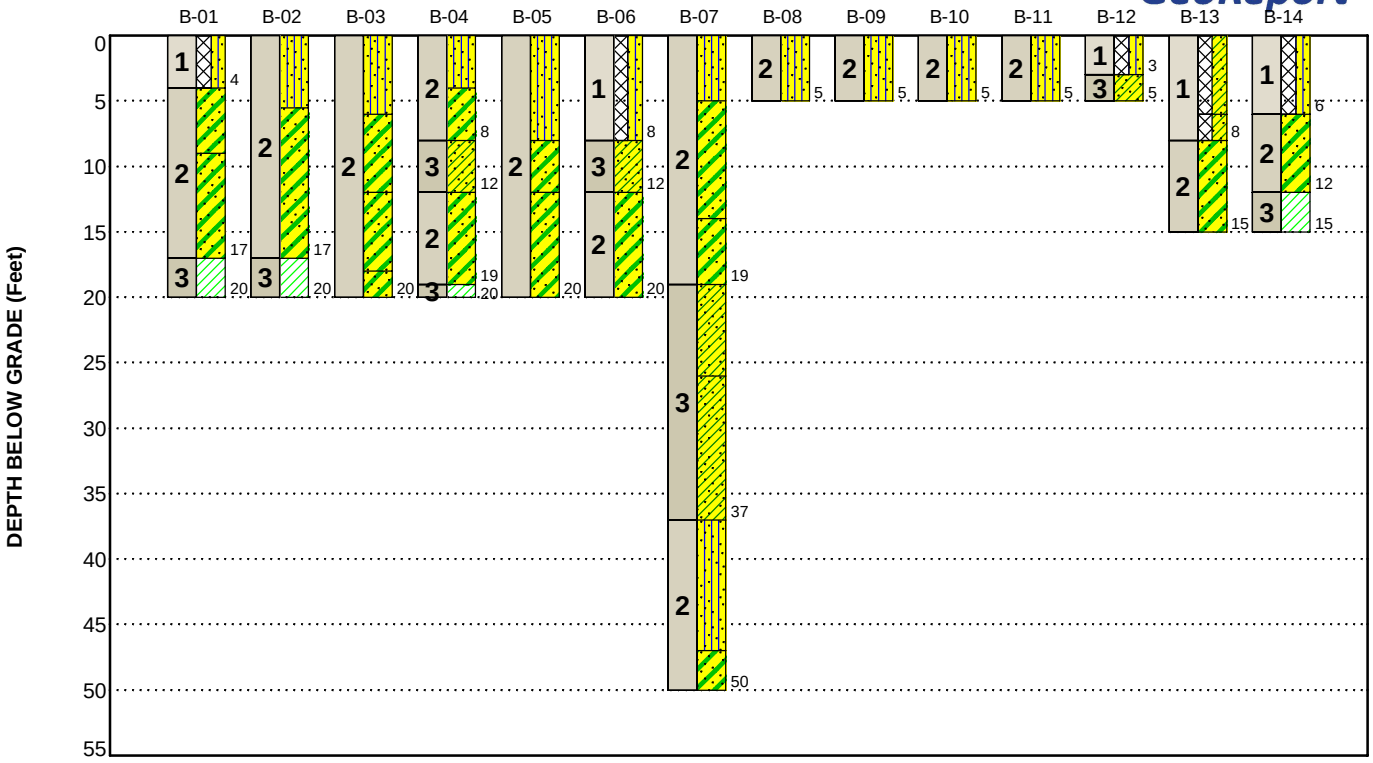
The project engineer reviewed the field data and assigned laboratory tests to understand the engineering properties of the various soil strata, as necessary, for this project. Procedural standards noted below are for reference to methodology in general. In some cases, variations to methods were applied because of local practice or professional judgment. Standards noted below include reference to other, related standards. Such references are not necessarily applicable to describe the specific test performed.

- ASTM D2216 Standard Test Methods for Laboratory Determination of Water (Moisture) Content of Soil and Rock by Mass
- ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
- ASTM D1140 Standard Test Methods for Determining the Amount of Material Finer than No. 200 Sieve in Soils by Washing

The laboratory testing program often included examination of soil samples by an engineer. Based on the material's texture and plasticity, we described and classified the soil samples in accordance with the Unified Soil Classification System.

GEOMODEL

Cliffmore Park ■ Fayetteville, NC
Terracon Project No. 70215273



This is not a cross section. This is intended to display the Geotechnical Model only. See individual logs for more detailed conditions.

Model Layer	Layer Name	General Description
1	Existing Fill	Very soft to soft, sandy lean clay or very loose to medium dense, silty sand with trace organics (roots and odor)
2	Natural, Sand	Loose to medium dense, silty/clayey sand (all locations)
3	Natural, Clay	Medium stiff to very stiff, sandy lean clay

LEGEND

- Silty Sand
- Sandy Lean Clay
- Clayey Sand
- Lean Clay

NOTES:
Layering shown on this figure has been developed by the geotechnical engineer for purposes of modeling the subsurface conditions as required for the subsequent geotechnical engineering for this project.
Numbers adjacent to soil column indicate depth below ground surface.

BORING LOG NO. B-01

PROJECT: Cliffmore Park

CLIENT: East Carolina Community Development Inc
Beaufort, NC

SITE: Identity Lane
Fayetteville, NC

LOCATION See Exploration Plan

Latitude: 35.0559° Longitude: -79.0535°

Approximate Surface Elev.: 240.2 (Ft.) +/-

MODEL LAYER	DEPTH	ELEVATION (Ft.)	
1	0.0	240.2 +/-	**FILL - SILTY SAND (SM)**, fine to coarse grained, reddish brown, very loose to loose, trace organics (roots, odor)
	4.0	236+/-	
			CLAYEY SAND (SC), fine to coarse grained, tan and orangish brown, loose to medium dense
	9.0	231+/-	
2			**CLAYEY SAND (SC)**, fine to coarse grained, tan and orangish brown, medium dense, lensed, with gray lean clay
	17.0	223+/-	
3			**LEAN CLAY (CL)**, gray and tan, stiff to very stiff
	20.0	220+/-	
			Boring Terminated at 20 Feet

DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
			2-1-2 N=3			
5			2-2-3 N=5			
			4-5-6 N=11			
			4-6-9 N=15			
10						
15			9-15-13 N=28			
20			2-3-12 N=15			

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
2 1/4" HSA

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No free water observed

Cave-in depth at 10.8 feet.

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 12-28-2021 | Boring Completed: 12-28-2021

Drill Rig: Geoprobe 3230 DT | Driller: WTD

Project No.: 70215273

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 70215273 CLIFFMORE PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/17/22

BORING LOG NO. B-02

PROJECT: Cliffmore Park

CLIENT: East Carolina Community Development Inc
Beaufort, NC

SITE: Identity Lane
Fayetteville, NC

LOCATION See Exploration Plan

Latitude: 35.0559° Longitude: -79.0532°

Approximate Surface Elev.: 240.8 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
			SILTY SAND (SM), fine to coarse grained, reddish brown, loose to medium dense				3-3-5 N=8			
							3-5-6 N=11			
		5.5		5						
2			**CLAYEY SAND (SC)**, fine to coarse grained, brown and gray, medium dense				3-6-9 N=15			
							4-7-10 N=17			
				10						
							6-9-10 N=19			
				15						
3		17.0	224+/- **LEAN CLAY (CL)**, gray and tan, medium stiff				4-3-3 N=6			
		20.0	221+/-	20						
			Boring Terminated at 20 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
2 1/4" HSA

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No free water observed

Cave-in depth at 9.1 feet.

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 12-28-2021 | Boring Completed: 12-28-2021

Drill Rig: Geoprobe 3230 DT | Driller: WTD

Project No.: 70215273

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 70215273 CLIFFMORE PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/17/22

BORING LOG NO. B-03

PROJECT: Cliffmore Park

CLIENT: East Carolina Community Development Inc
Beaufort, NC

SITE: Identity Lane
Fayetteville, NC

LOCATION See Exploration Plan

Latitude: 35.0561° Longitude: -79.0531°

Approximate Surface Elev.: 242.8 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
2		0.0	242.8 +/-							
			SILTY SAND (SM), fine to coarse grained, reddish brown, medium dense				3-5-8 N=13			
				5			4-7-9 N=16			
		6.0	237+/-							
			CLAYEY SAND (SC), fine to coarse grained, tan and orangish brown, medium dense				4-9-10 N=19			
							4-8-10 N=18			
				10						
		12.0	231+/-							
			CLAYEY SAND (SC), fine to coarse grained, brown and gray, medium dense				6-13-14 N=27			
				15						
		18.0	225+/-							
			CLAYEY SAND (SC), fine to coarse grained, gray and tan, medium dense				10-7-6 N=13			
		20.0	223+/-	20						
			Boring Terminated at 20 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
2 1/4" HSA

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No free water observed

Cave-in depth at 9.8 feet.

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 12-28-2021 | Boring Completed: 12-28-2021

Drill Rig: Geoprobe 3230 DT | Driller: WTD

Project No.: 70215273

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 70215273 CLIFFMORE PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/17/22

BORING LOG NO. B-04

PROJECT: Cliffmore Park

CLIENT: East Carolina Community Development Inc
Beaufort, NC

SITE: Identity Lane
Fayetteville, NC

LOCATION See Exploration Plan

Latitude: 35.0561° Longitude: -79.0526°

Approximate Surface Elev.: 242.5 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
						X	3-3-4 N=7			
2		4.0	238.5+/-							
						X	4-5-8 N=13	19.3	44-35-9	49
				5						
						X	5-7-9 N=16			
3		8.0	234.5+/-							
						X	4-5-8 N=13			
				10						
		12.0	230.5+/-							
2		19.0	223.5+/-	15		X	5-7-10 N=17			
3		20.0	222.5+/-			X	3-6-3 N=9			
				20						

SILTY SAND (SM), fine to coarse grained, reddish brown, loose

CLAYEY SAND (SC), fine to coarse grained, tan and reddish brown, medium dense

SANDY LEAN CLAY (CL), tan and gray, stiff

CLAYEY SAND (SC), fine to coarse grained, tan and orangish brown, medium dense

LEAN CLAY (CL), gray and tan, stiff

Boring Terminated at 20 Feet

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
2 1/4" HSA

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No free water observed

Cave-in depth at 10.8 feet.

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 12-29-2021 | Boring Completed: 12-29-2021

Drill Rig: Geoprobe 3230 DT | Driller: WTD

Project No.: 70215273

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 70215273 CLIFFMORE PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/17/22

BORING LOG NO. B-05

PROJECT: Cliffmore Park

CLIENT: East Carolina Community Development Inc
Beaufort, NC

SITE: Identity Lane
Fayetteville, NC

LOCATION See Exploration Plan

Latitude: 35.0563° Longitude: -79.0525°

Approximate Surface Elev.: 242.5 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	DESCRIPTION	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
			SILTY SAND (SM), fine to coarse grained, reddish brown, loose to medium dense				X	3-4-7 N=11			
					5		X	3-5-4 N=9			
							X	4-8-10 N=18			
		8.0		234.5+/-							
2			**CLAYEY SAND (SC)**, fine to coarse grained, brown and gray, medium dense		10		X	5-6-7 N=13	18.4	42-21-21	48
		12.0		230.5+/-							
			CLAYEY SAND (SC), fine to coarse grained, gray and tan, medium dense		15		X	3-7-7 N=14			
		20.0		222.5+/-	20		X	8-10-6 N=16			
			Boring Terminated at 20 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
2 1/4" HSA

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No free water observed

Cave-in depth at 10 feet.

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 12-29-2021	Boring Completed: 12-29-2021
Drill Rig: Geoprobe 3230 DT	Driller: WTD
Project No.: 70215273	

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 70215273 CLIFFMORE PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/17/22

BORING LOG NO. B-06

PROJECT: Cliffmore Park

CLIENT: East Carolina Community Development Inc
Beaufort, NC

SITE: Identity Lane
Fayetteville, NC

LOCATION See Exploration Plan

Latitude: 35.0563° Longitude: -79.0522°

Approximate Surface Elev.: 240.8 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.0	240.8 +/-							
			FILL - SILTY SAND (SM), fine to coarse grained, brown and reddish brown, loose to medium dense, trace organics (roots, odor)			X	4-5-5 N=10			
						X	2-2-2 N=4			
				5		X	1-3-3 N=6			
3		8.0	233+/-			X	2-3-6 N=9			
			SANDY LEAN CLAY (CL), tan and gray, stiff	10	▨					
2		12.0	229+/-							
			CLAYEY SAND (SC), fine to coarse grained, tan and orangish brown, loose to medium dense	15		X	3-11-10 N=21			
		20.0	221+/-			X	2-1-3 N=4			
			Boring Terminated at 20 Feet	20						

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
2 1/4" HSA

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No free water observed

▨ *Cave-in depth at 11 feet.*

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 12-29-2021 | Boring Completed: 12-29-2021

Drill Rig: Geoprobe 3230 DT | Driller: WTD

Project No.: 70215273

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 70215273 CLIFFMORE PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/17/22

BORING LOG NO. B-07

PROJECT: Cliffmore Park

CLIENT: East Carolina Community Development Inc
Beaufort, NC

SITE: Identity Lane
Fayetteville, NC

LOCATION See Exploration Plan

Latitude: 35.0561° Longitude: -79.0529°

Approximate Surface Elev.: 242.8 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
2			**SILTY SAND (SM)**, fine to coarse grained, reddish brown, medium dense				3-5-6 N=11			
							3-6-9 N=15			
		5.0	238+/-	5						
			CLAYEY SAND (SC), fine to coarse grained, brown and gray, medium dense				2-8-9 N=17			
							4-7-11 N=18			
				10						
		14.0	229+/-							
			CLAYEY SAND (SC), fine to coarse grained, tan and orangish brown, medium dense				5-7-3 N=10			
				15						
		19.0	224+/-							
3			**SANDY LEAN CLAY (CL)**, tan and gray, stiff				2-4-10 N=14			
				20						
							2-5-7 N=12			
				25						
		26.0	217+/-							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
2 1/4" HSA

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No free water observed

Cave-in depth at 30.9 feet.

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 12-29-2021 | Boring Completed: 12-29-2021

Drill Rig: Geoprobe 3230 DT | Driller: WTD

Project No.: 70215273

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 70215273 CLIFFMORE PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/17/22

BORING LOG NO. B-07

PROJECT: Cliffmore Park

CLIENT: East Carolina Community Development Inc
Beaufort, NC

SITE: Identity Lane
Fayetteville, NC

LOCATION See Exploration Plan

Latitude: 35.0561° Longitude: -79.0529°

Approximate Surface Elev.: 242.8 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
3			**SANDY LEAN CLAY (CL)**, purple and brown, stiff to very stiff				1-4-6 N=10			
				30						
							6-7-10 N=17			
				35						
							9-14-16 N=30			
2				40						
							6-7-8 N=15			
				45						
		37.0	206+/-							
			SILTY SAND (SM), fine to coarse grained, tan and white, medium dense to dense							
		47.0	196+/-							
			CLAYEY SAND (SC), fine to coarse grained, gray and tan, very loose				WOH-1-1			
		50.0	193+/-	50						
			Boring Terminated at 50 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
2 1/4" HSA

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No free water observed

Cave-in depth at 30.9 feet.

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 12-29-2021 | Boring Completed: 12-29-2021

Drill Rig: Geoprobe 3230 DT | Driller: WTD

Project No.: 70215273

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 70215273 CLIFFMORE PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/17/22

BORING LOG NO. B-08

PROJECT: Cliffmore Park

CLIENT: East Carolina Community Development Inc
Beaufort, NC

SITE: Identity Lane
Fayetteville, NC

LOCATION See Exploration Plan

Latitude: 35.0563° Longitude: -79.053°

Approximate Surface Elev.: 244 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
2										
		SILTY SAND (SM), fine to coarse grained, reddish brown, loose to medium dense					3-3-4 N=7			
							4-5-5 N=10			
		5.0	239+/-	5						
		Boring Terminated at 5 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
2 1/4" HSA

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No free water observed

Cave-in depth at 2 feet.

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 12-29-2021 | Boring Completed: 12-29-2021

Drill Rig: Geoprobe 3230 DT | Driller: WTD

Project No.: 70215273

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 70215273 CLIFFMORE PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/17/22

BORING LOG NO. B-09

PROJECT: Cliffmore Park

CLIENT: East Carolina Community Development Inc
Beaufort, NC

SITE: Identity Lane
Fayetteville, NC

LOCATION See Exploration Plan

Latitude: 35.0558° Longitude: -79.0537°

Approximate Surface Elev.: 238.8 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
2		**SILTY SAND (SM)**, fine to coarse grained, reddish brown, loose to medium dense					2-3-5 N=8			
							2-5-7 N=12			
		5.0	234+/-	5						
		Boring Terminated at 5 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
2 1/4" HSA

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No free water observed

Cave-in depth at 3 feet.

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 12-28-2021 | Boring Completed: 12-28-2021

Drill Rig: Geoprobe 3230 DT | Driller: WTD

Project No.: 70215273

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 70215273 CLIFFMORE PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/17/22

BORING LOG NO. B-10

PROJECT: Cliffmore Park

CLIENT: East Carolina Community Development Inc
Beaufort, NC

SITE: Identity Lane
Fayetteville, NC

MODEL LAYER	GRAPHIC LOG	LOCATION See Exploration Plan Latitude: 35.0562° Longitude: -79.0534° Approximate Surface Elev.: 242.5 (Ft.) +/- DEPTH / ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
2		**SILTY SAND (SM)**, fine to coarse grained, reddish brown, loose to medium dense				2-3-5 N=8			
						3-5-6 N=11			
		5.0 237.5+/-	5						
		Boring Terminated at 5 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
2 1/4" HSA

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No free water observed

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 12-29-2021 | Boring Completed: 12-29-2021

Drill Rig: Geoprobe 3230 DT | Driller: WTD

Project No.: 70215273

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 70215273 CLIFFMORE PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/17/22

BORING LOG NO. B-11

PROJECT: Cliffmore Park

CLIENT: East Carolina Community Development Inc
Beaufort, NC

SITE: Identity Lane
Fayetteville, NC

LOCATION See Exploration Plan

Latitude: 35.0566° Longitude: -79.0524°

Approximate Surface Elev.: 242 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
2			**SILTY SAND (SM)**, fine to coarse grained, reddish brown, loose to medium dense							
							1-4-4 N=8			
							3-7-10 N=17			
		5.0	237+/-	5						
			Boring Terminated at 5 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
2 1/4" HSA

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No free water observed

Cave-in depth at 2.1 feet.

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 12-29-2021 | Boring Completed: 12-29-2021

Drill Rig: Geoprobe 3230 DT | Driller: WTD

Project No.: 70215273

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 70215273 CLIFFMORE PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/17/22

BORING LOG NO. B-12

PROJECT: Cliffmore Park

CLIENT: East Carolina Community Development Inc
Beaufort, NC

SITE: Identity Lane
Fayetteville, NC

LOCATION See Exploration Plan

Latitude: 35.0565° Longitude: -79.0521°

Approximate Surface Elev.: 241 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1			**FILL - SILTY SAND (SM)**, fine to coarse grained, gray and black, loose							
							5-4-5 N=9			
		3.0	238+/-							
3			**SANDY LEAN CLAY (CL)**, brown, medium stiff to stiff							
							2-4-4 N=8			
		5.0	236+/-	5						
			Boring Terminated at 5 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
2 1/4" HSA

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No free water observed

Cave-in depth at 2 feet.

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 12-29-2021 | Boring Completed: 12-29-2021

Drill Rig: Geoprobe 3230 DT | Driller: WTD

Project No.: 70215273

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 70215273 CLIFFMORE PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/17/22

BORING LOG NO. B-13

PROJECT: Cliffmore Park

CLIENT: East Carolina Community Development Inc
Beaufort, NC

SITE: Identity Lane
Fayetteville, NC

LOCATION See Exploration Plan

Latitude: 35.0556° Longitude: -79.0532°

Approximate Surface Elev.: 238.5 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	DESCRIPTION	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1		0.0	**FILL - SANDY LEAN CLAY (CL)**, brown and reddish brown, very soft to soft, with brown silty sand containing trace organics (roots and odor)					3-2-2 N=4			
								1/12"-1			
		6.0	**FILL - SANDY LEAN CLAY (CL)**, dark gray, soft, with black silty sand containing trace organics (roots and odor) and anomalous black partially weathered rock	232.5+/-	5			WOH-1-2			
		8.0		230.5+/-		▨					
2			**CLAYEY SAND (SC)**, fine to coarse grained, brown and gray, medium dense		10			4-4-8 N=12			
		15.0		223.5+/-	15			3-8-8 N=16			
			Boring Terminated at 15 Feet								

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
2 1/4" HSA

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No free water observed

▨ *Cave-in depth at 8 feet.*

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 12-28-2021 | Boring Completed: 12-28-2021

Drill Rig: Geoprobe 3230 DT | Driller: WTD

Project No.: 70215273

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 70215273 CLIFFMORE PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/17/22

BORING LOG NO. B-14

PROJECT: Cliffmore Park

CLIENT: East Carolina Community Development Inc
Beaufort, NC

SITE: Identity Lane
Fayetteville, NC

LOCATION See Exploration Plan

Latitude: 35.0561° Longitude: -79.0523°

Approximate Surface Elev.: 240.5 (Ft.) +/-

MODEL LAYER	GRAPHIC LOG	DEPTH	ELEVATION (Ft.)	DEPTH (Ft.)	WATER LEVEL OBSERVATIONS	SAMPLE TYPE	FIELD TEST RESULTS	WATER CONTENT (%)	ATTERBERG LIMITS LL-PL-PI	PERCENT FINES
1			**FILL - SILTY SAND (SM)**, fine to coarse grained, reddish brown, loose to medium dense, trace organics (roots and odor)				4-3-5 N=8			
				5			3-6-8 N=14			
		6.0	234.5+/-							
2			**CLAYEY SAND (SC)**, fine to coarse grained, reddish brown, medium dense		▨		4-8-10 N=18			
				10			5-7-9 N=16			
		12.0	228.5+/-							
3			**LEAN CLAY (CL)**, gray and tan, stiff				3-5-8 N=13			
		15.0	225.5+/-	15						
			Boring Terminated at 15 Feet							

Stratification lines are approximate. In-situ, the transition may be gradual.

Hammer Type: Automatic

Advancement Method:
2 1/4" HSA

Abandonment Method:
Boring backfilled with auger cuttings upon completion.

See Exploration and Testing Procedures for a description of field and laboratory procedures used and additional data (If any).

See Supporting Information for explanation of symbols and abbreviations.

Notes:

WATER LEVEL OBSERVATIONS

No free water observed

▨ *Cave-in depth at 8 feet.*

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

Boring Started: 12-29-2021 | Boring Completed: 12-29-2021

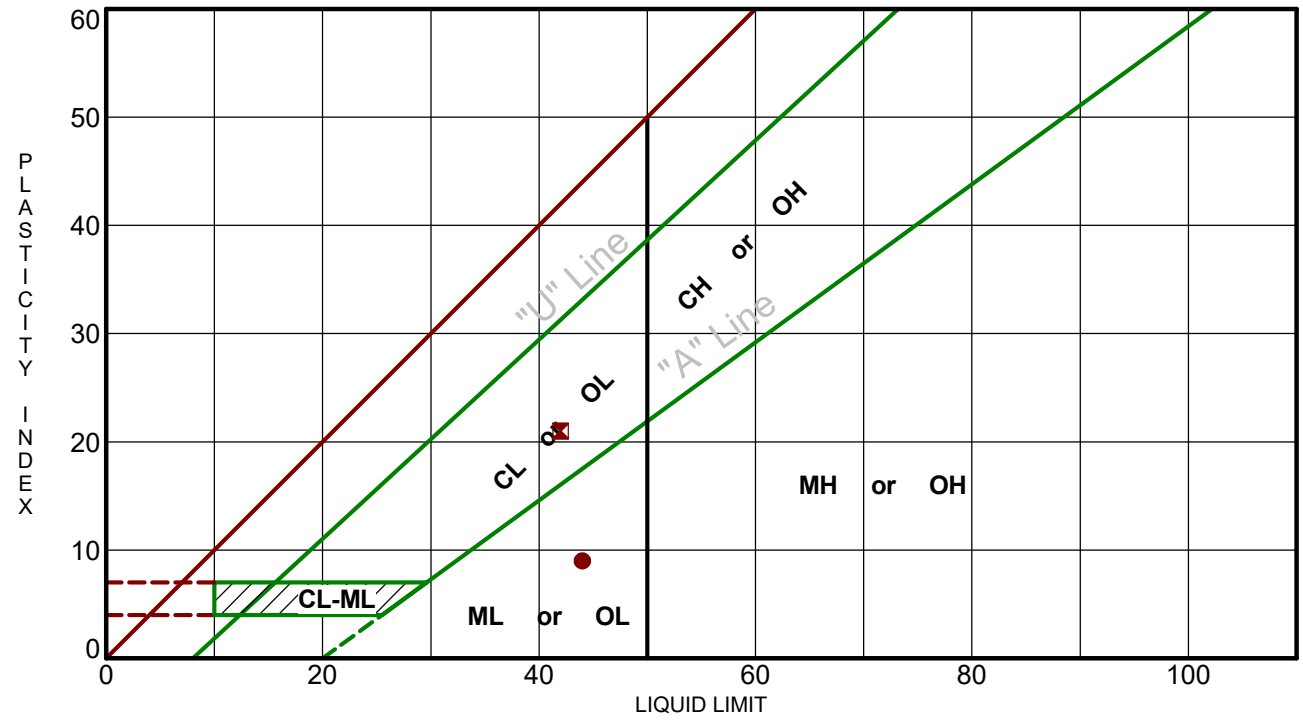
Drill Rig: Geoprobe 3230 DT | Driller: WTD

Project No.: 70215273

THIS BORING LOG IS NOT VALID IF SEPARATED FROM ORIGINAL REPORT. GEO SMART LOG-NO WELL 70215273 CLIFFMORE PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/17/22

ATTERBERG LIMITS RESULTS

ASTM D4318



Boring ID	Depth	LL	PL	PI	Fines	USCS	Description
● B-4	3.5 - 5	44	35	9	48.6	SM	SILTY SAND
⊠ B-5	8.5 - 10	42	21	21	47.7	SC	CLAYEY SAND

PROJECT: Cliffmore Park

SITE: Identity Lane
Fayetteville, NC

Terracon
2401 Brentwood Rd Ste 107
Raleigh, NC

PROJECT NUMBER: 70215273

CLIENT: East Carolina Community Development Inc
Beaufort, NC

EXHIBIT:

LABORATORY TESTS ARE NOT VALID IF SEPARATED FROM ORIGINAL REPORT. ATTERBERG LIMITS 70215273 CLIFFMORE PARK.GPJ TERRACON_DATATEMPLATE.GDT 1/11/22

SUPPORTING INFORMATION

Contents:

General Notes
Unified Soil Classification System

Note: All attachments are one page unless noted above.

GENERAL NOTES

DESCRIPTION OF SYMBOLS AND ABBREVIATIONS

SAMPLING

Split Spoon

WATER LEVEL

Water Initially Encountered

Water Level After a Specified Period of Time

Water Level After a Specified Period of Time

Water levels indicated on the soil boring logs are the levels measured in the borehole at the times indicated. Groundwater level variations will occur over time. In low permeability soils, accurate determination of groundwater levels is not possible with short term water level observations.

FIELD TESTS

N	**Standard Penetration Test Resistance (Blows/Ft.)**
(HP)	**Hand Penetrometer**
(T)	**Torvane**
(DCP)	**Dynamic Cone Penetrometer**
(PID)	**Photo-Ionization Detector**
(OVA)	**Organic Vapor Analyzer**

DESCRIPTIVE SOIL CLASSIFICATION

Soil classification is based on the Unified Soil Classification System. Coarse Grained Soils have more than 50% of their dry weight retained on a #200 sieve; their principal descriptors are: boulders, cobbles, gravel or sand. Fine Grained Soils have less than 50% of their dry weight retained on a #200 sieve; they are principally described as clays if they are plastic, and silts if they are slightly plastic or non-plastic. Major constituents may be added as modifiers and minor constituents may be added according to the relative proportions based on grain size. In addition to gradation, coarse-grained soils are defined on the basis of their in-place relative density and fine-grained soils on the basis of their consistency.

LOCATION AND ELEVATION NOTES

Unless otherwise noted, Latitude and Longitude are approximately determined using a hand-held GPS device. The accuracy of such devices is variable. Surface elevation data annotated with +/- indicates that no actual topographical survey was conducted to confirm the surface elevation. Instead, the surface elevation was approximately determined from topographic maps of the area.

STRENGTH TERMS

RELATIVE DENSITY OF COARSE-GRAINED SOILS (More than 50% retained on No. 200 sieve.) Density determined by Standard Penetration Resistance		**CONSISTENCY OF FINE-GRAINED SOILS** (50% or more passing the No. 200 sieve.) Consistency determined by laboratory shear strength testing, field visual-manual procedures or standard penetration resistance		
Descriptive Term (Density)	**Standard Penetration or N-Value Blows/Ft.**	**Descriptive Term (Consistency)**	**Unconfined Compressive Strength Qu, (psf)**	**Standard Penetration or N-Value Blows/Ft.**
Very Loose	0 - 3	Very Soft	less than 500	0 - 1
Loose	4 - 9	Soft	500 to 1,000	2 - 4
Medium Dense	10 - 29	Medium Stiff	1,000 to 2,000	4 - 8
Dense	30 - 50	Stiff	2,000 to 4,000	8 - 15
Very Dense	> 50	Very Stiff	4,000 to 8,000	15 - 30
		Hard	> 8,000	> 30

RELATIVE PROPORTIONS OF SAND AND GRAVEL

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 15
With	15 - 29
Modifier	> 30

GRAIN SIZE TERMINOLOGY

Major Component of Sample	Particle Size
Boulders	Over 12 in. (300 mm)
Cobbles	12 in. to 3 in. (300mm to 75mm)
Gravel	3 in. to #4 sieve (75mm to 4.75 mm)
Sand	#4 to #200 sieve (4.75mm to 0.075mm
Silt or Clay	Passing #200 sieve (0.075mm)

RELATIVE PROPORTIONS OF FINES

Descriptive Term(s) of other constituents	Percent of Dry Weight
Trace	< 5
With	5 - 12
Modifier	> 12

PLASTICITY DESCRIPTION

Term	Plasticity Index
Non-plastic	0
Low	1 - 10
Medium	11 - 30
High	> 30

Terracon

UNIFIED SOIL CLASSIFICATION SYSTEM

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests [A]					Soil Classification	
					Group Symbol	Group Name [B]
Coarse-Grained Soils: More than 50% retained on No. 200 sieve	**Gravels:** More than 50% of coarse fraction retained on No. 4 sieve	**Clean Gravels:** Less than 5% fines [C]	$Cu \geq 4$ and $1 \leq Cc \leq 3$ [E]		GW	Well-graded gravel [F]
			$Cu < 4$ and/or [$Cc<1$ or $Cc>3.0$] [E]		GP	Poorly graded gravel [F]
		Gravels with Fines: More than 12% fines [C]	Fines classify as ML or MH		GM	Silty gravel [F, G, H]
			Fines classify as CL or CH		GC	Clayey gravel [F, G, H]
	Sands: 50% or more of coarse fraction passes No. 4 sieve	**Clean Sands:** Less than 5% fines [D]	$Cu \geq 6$ and $1 \leq Cc \leq 3$ [E]		SW	Well-graded sand [I]
			$Cu < 6$ and/or [$Cc<1$ or $Cc>3.0$] [E]		SP	Poorly graded sand [I]
		Sands with Fines: More than 12% fines [D]	Fines classify as ML or MH		SM	Silty sand [G, H, I]
			Fines classify as CL or CH		SC	Clayey sand [G, H, I]
Fine-Grained Soils: 50% or more passes the No. 200 sieve	**Silts and Clays:** Liquid limit less than 50	**Inorganic:**	PI > 7 and plots on or above "A"		CL	Lean clay [K, L, M]
			PI < 4 or plots below "A" line [J]		ML	Silt [K, L, M]
		Organic:	Liquid limit - oven dried	< 0.75	OL	Organic clay [K, L, M, N]
			Liquid limit - not dried			Organic silt [K, L, M, O]
	Silts and Clays: Liquid limit 50 or more	**Inorganic:**	PI plots on or above "A" line		CH	Fat clay [K, L, M]
			PI plots below "A" line		MH	Elastic Silt [K, L, M]
		Organic:	Liquid limit - oven dried	< 0.75	OH	Organic clay [K, L, M, P]
			Liquid limit - not dried			Organic silt [K, L, M, Q]
Highly organic soils:	Primarily organic matter, dark in color, and organic odor				PT	Peat

[A] Based on the material passing the 3-inch (75-mm) sieve.

[B] If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

[C] Gravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt, GW-GC well-graded gravel with clay, GP-GM poorly graded gravel with silt, GP-GC poorly graded gravel with clay.

[D] Sands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt, SW-SC well-graded sand with clay, SP-SM poorly graded sand with silt, SP-SC poorly graded sand with clay.

[E] $Cu = D_{60}/D_{10}$ $\quad Cc = \dfrac{(D_{30})^2}{D_{10} \times D_{60}}$

[F] If soil contains ≥ 15% sand, add "with sand" to group name.

[G] If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[H] If fines are organic, add "with organic fines" to group name.

[I] If soil contains ≥ 15% gravel, add "with gravel" to group name.

[J] If Atterberg limits plot in shaded area, soil is a CL-ML, silty clay.

[K] If soil contains 15 to 29% plus No. 200, add "with sand" or "with gravel," whichever is predominant.

[L] If soil contains ≥ 30% plus No. 200 predominantly sand, add "sandy" to group name.

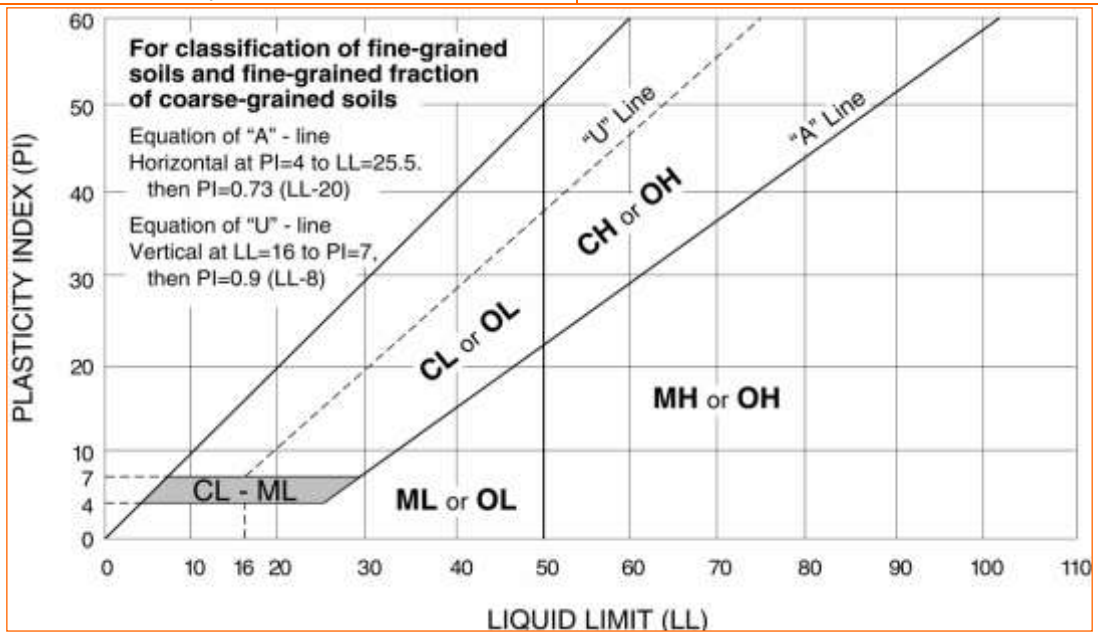
[M] If soil contains ≥ 30% plus No. 200, predominantly gravel, add "gravelly" to group name.

[N] PI ≥ 4 and plots on or above "A" line.

[O] PI < 4 or plots below "A" line.

[P] PI plots on or above "A" line.

[Q] PI plots below "A" line.



United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Cumberland County, North Carolina

December 28, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,400 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 20 40 80 120

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Cumberland County, North Carolina
Survey Area Data: Version 22, Sep 3, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 13, 2014—Feb 4, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
WaB	Wagram loamy sand, 0 to 6 percent slopes	4.0	100.0%
Totals for Area of Interest		**4.0**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Cumberland County, North Carolina

WaB—Wagram loamy sand, 0 to 6 percent slopes

Map Unit Setting

National map unit symbol: w72m
Elevation: 80 to 330 feet
Mean annual precipitation: 38 to 55 inches
Mean annual air temperature: 59 to 70 degrees F
Frost-free period: 210 to 265 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Wagram and similar soils: 90 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wagram

Setting

Landform: Ridges on marine terraces, broad interstream divides on marine terraces
Landform position (two-dimensional): Summit, shoulder
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy marine deposits

Typical profile

Ap - 0 to 8 inches: loamy sand
E - 8 to 24 inches: loamy sand
Bt - 24 to 75 inches: sandy clay loam
BC - 75 to 83 inches: sandy loam

Properties and qualities

Slope: 0 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 60 to 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Bibb, undrained

Percent of map unit: 3 percent

Landform: Flood plains
Landform position (two-dimensional): Toeslope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: Yes

Johnston, undrained

Percent of map unit: 2 percent
Landform: Flood plains
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: Yes

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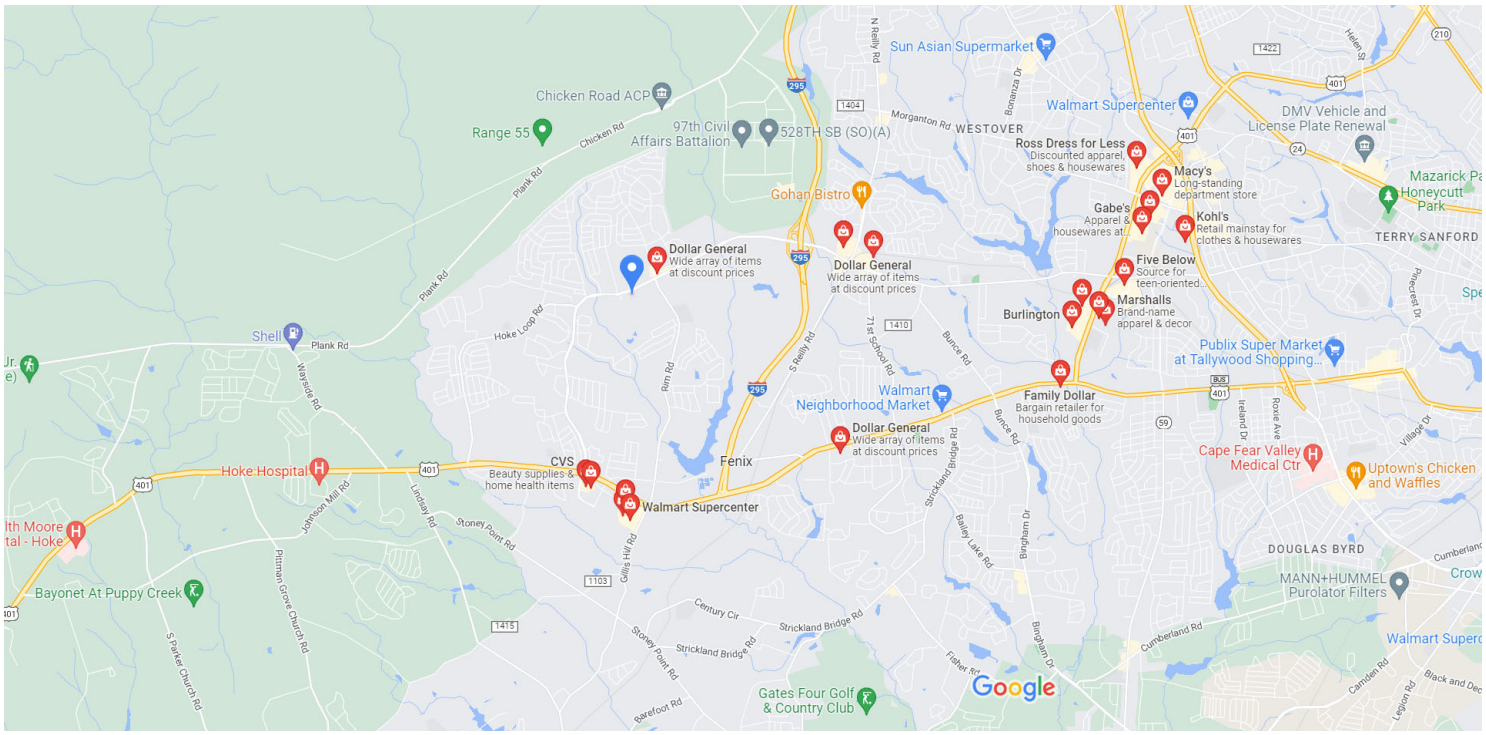
ATTACHMENT 20:

Commercial Facilities

Google Maps stores



Map data ©2022 1 mi

Rating Hours All filters

Target

4.1 (1,211) · $$
Department store · 2056 Skibo Rd
Standby for home goods, clothing & more
Opens soon · 8AM · (910) 860-4400

In-store shopping · Curbside pickup · Delivery

Walmart Supercenter

4.0 (4,380) · $
Department store · 7701 S Raeford Rd
Open · Closes 11PM · (910) 864-6575

In-store shopping · Curbside pickup · Delivery

Dollar Tree

4.1 (261) · $
Dollar store · 2065 Skibo Rd Unit 6
Wide range of products at bargain prices
Opens soon · 8AM · (910) 500-4617

In-store shopping

Dollar General

3.9 (414) · $
Dollar store · 8150 Cliffdale Rd
Wide array of items at discount prices
Opens soon · 8AM · (910) 491-9990

In-store shopping · In-store pickup

Gabe's

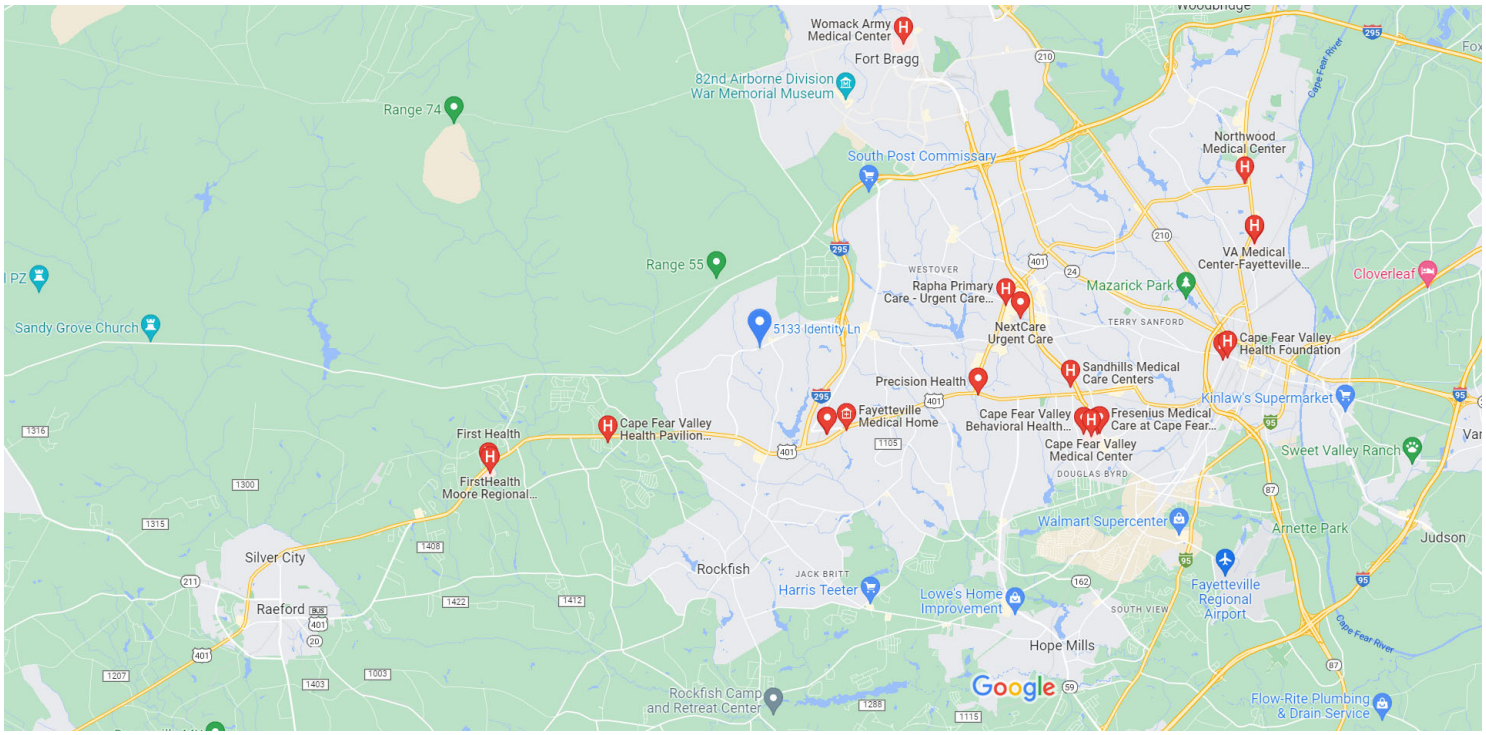
4.2 (1,183)
Discount store · 1931 Skibo Rd
Apparel & housewares at discount prices
Closed · Opens 9AM · (910) 487-0920

In-store shopping · In-store pickup

ATTACHMENT 21:

Health Care and Social Services

Google Maps health care hospitals



Map data ©2022 2 mi

Rating Hours All filters

Precision Health
4.0 (5)
Urgent care center · 5511 Raeford Rd Suite 150
Closed · Opens 8AM Tue · (910) 630-5000
Directions

"I wish I went to Precision Health first."

Fayetteville VA Health Care Center
3.1 (118)
Medical clinic · 7300 S Raeford Rd
Closed · Opens 7:30AM Tue · (910) 488-2120
Website Directions

Cape Fear Valley Medical Center
2.3 (933)
Medical Center · 1638 Owen Dr
Open 24 hours · (910) 615-4000
Website Directions

"Only **hospital system** in Fayetteville."

Sandhills Medical Care Centers
No reviews
Medical Center · 4155 Ferncreek Dr
(910) 475-7606
Website Directions

Cape Fear Valley Health Pavilion Hoke-Hoke Imaging
2.5 (144)
General hospital · 300 Medical Pavilion Dr #210
Open 24 hours · (910) 904-8025
Website Directions

"Others in my family received care there and were also pleased."

Heather Skeens
Director

Section Chiefs:

Kristin Bonoyer
Adult Services

Sharon McLeod
Children's Services

Vacant
Economic Services

CUMBERLAND COUNTY
NORTH CAROLINA

Department of Social Services

Assistant Directors:

Patrick Kuchyt
Legal Services

Vacant
Adult Services

Delores Long
Children's Services

Vivian Tookes
Economic Services

John Nalbone
Business Operations

SOCIAL SERVICES CERTIFICATION

Project Name: Cliffmore Park Apartments
Proposed No. of Units: 72 Apartments
Address: 5133 Identity Lane, Fayetteville, North Carolina, 28314

Closest street intersection or landmark: Enforcement Drive

Adequate and appropriate Social Services are [ ] are not [X] available for this project
Furthermore, available Social Services will [X] will not [ ] be adversely affected by this project.

Social organizations that may serve the project are:

Additional Comments/Conditions/Concerns

12-15-21
Date

(Officials Signature)

Heather Skeens
(Officials Name – Print or Type)

Director
(Official's Title)

Cumberland DSS
(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

ATTACHMENT 22:

Water Supply

TightLines Designs
creating great places to live

December 30, 2021

Keith Walker
East Carolina Community Development, Inc.
PO Box 2400
Beaufort, NC 28516
252-504-3996

Subject: **Cliffmore Park**
Fayetteville, North Carolina

Dear Mr. Walker,

All pipes, fittings, fixtures and/or solder in this project are to be lead-free. If there are any questions, please let us know.

Sincerely,

David S. Maurer, AIA, LEED-AP
President

DARSWEIL L. ROGERS, COMMISSIONER
WADE R. FOWLER, JR., COMMISSIONER
EVELYN O. SHAW, COMMISSIONER
D. RALPH HUFF, III, COMMISSIONER
ELAINA BALL, CEO/GENERAL MANAGER

PWC
Fayetteville's
HOMETOWN UTILITY

FAYETTEVILLE PUBLIC WORKS COMMISSION
955 OLD WILMINGTON RD
P.O. BOX 1089
FAYETTEVILLE, NORTH CAROLINA 28302-1089
TELEPHONE (910) 483-1401
WWW.FAYPWC.COM

March 30, 2021

Keith Walker
East Carolina Community Development, Inc.
PO Box 2400
Beaufort, NC 28516

Subject: Availability Statement Request for Cliffmore Park Apartments

Dear Mr. Walker:

This Statement of Availability is issued in response to your information submitted on the above referenced project. Statements made in this letter are contingent upon the information provided and subject to any final zoning and/or planning review.

Proposed Development: Cliffmore Park Apartments; Reference PIN 9487-45-3559 -

Water: The Public Works Commission water system is available to serve this proposed development. Since anticipated domestic and fire flow demand estimates were not provided at the time of this request, it shall be the responsibility of the developer to determine if the water system has sufficient capacity to serve this development.

Wastewater: The Public Works Commission sanitary sewer system is available to serve this proposed development. The Rockfish Water Reclamation Facility currently has sufficient treatment capacity to accommodate the estimated design flow of 17,280 gallons per day for this project. Please note that this capacity will not be reserved for this proposed development until the plans and required documentation have been reviewed, approved, and permitted by the Public Works Commission.

This Availability Statement will remain in effect for one year, during which time construction shall be started. Construction shall be completed in three years or reapplication for availability will be required. This Availability Statement applies only to the development identified in the Availability Statement request. Its validity is in part contingent upon the continuing accuracy of the information supplied by the developer or engineer. Changes to the proposed development may require re-evaluation of availability and should be brought to Water Resources Engineering's attention as soon as possible. Please contact Samuel Powers, (910) 223-4370 if you have any questions regarding the water/wastewater services.

Very truly yours,

PUBLIC WORKS COMMISSION

Kathy C. Miller

Kathy C. Miller
Marketing Manager

c: Misty Manning
Sam Powers
Tiffany Brisson
Mark McCloskey

ATTACHMENT 23:

Public Safety – Police, Fire and Emergency Medical

EMERGENCY MEDICAL SERVICE CERTIFICATION

Project Name: Cliffmore Park Apartments
Proposed No. of Units: 72 Units
Address: 5133 Identity Lane, Fayetteville, North Carolina, 28413

Closest street intersection or landmark: Enforcement Drive

Emergency Medical Service is available and adequate [✓] for the project as the average response time of 2 minutes falls within the average community response time of 5:12 minutes; or adequate Emergency Medical Service is not available [ ] for the project. Furthermore, available Emergency Medical Service will [ ] will not [✓] be adversely affected by the project.

Additional Comments/Conditions/Concerns: Identity Lane is mostly utilized by those that live on Deer Trail Dr. and in the Parcstone Apartment Complex off Enforcement Dr. The project may interfere with apparatus access to those apartment complexes if the intersection of Deer Trail/Identity or Enforcement/Identity are blocked during construction.

12/1/2021
Date

(Officials Signature)

John Bowen
(Officials Name – Print or Type)

Battalion Chief
(Official's Title)

Fayetteville Fire Department
(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

EMERGENCY MEDICAL SERVICE CERTIFICATION

Project Name: Cliffmore Park Apartments

Proposed No. of Units: 72 Units

Address: 5133 Identity Lane, Fayetteville, North Carolina, 28413

Closest street intersection or landmark: Enforcement Drive

Emergency Medical Service is available and adequate [X] for the project as the average response time of 8 minutes falls within the average community response time of 10 minutes; or adequate Emergency Medical Service is not available [ ] for the project. Furthermore, available Emergency Medical Service will [X] will not [X] be adversely affected by the project.

Additional Comments/Conditions/Concerns Multi-floor dwelling needs a minimum of (1) one service/commercial elevator to accommodate patient transfer to ground level.

11/29/2021
Date

(Officials Signature)

David Grovdahl
(Officials Name – Print or Type)

EMS Chief
(Official's Title)

Cumberland County EMS
(Department Name)

Note: Copying official letterhead onto this certification is encouraged.

ONSLOW COUNTY SHERIFF'S OFFICE

"HONOR and INTEGRITY"

Hans Miller, Sheriff
hans_miller@onslowcountync.gov

717 Court Street
Jacksonville, NC 28540
Phone: 910-455-3113
Admin FAX 910-455-0048
Radio Room FAX 910-938-2175
sheriff@onslowcountync.gov

LAW ENFORCEMENT CERTIFICATION

Project Name: Crestfield Point Apartments

Proposed No. of Units: 72 Units
Address: Blue Creek School Road, Jacksonville, Onslow County, North Carolina

Closest street intersection or landmark: Burgaw Highway

Police Service is available and adequate X for the project as the average response time of ____ minutes falls within the average community response time of minutes; or adequate Police Service is not available for the project. Furthermore, available Police Service will ___will not ___ be adversely affected by the project.

Additional Comments/Conditions/Concerns We recommend that the Jacksonville Police Department answer the questions above, since this parcel of land falls within the jurisdiction of the City of Jacksonville, effective April 21, 2020. We at the Onslow County Sheriff's Office have no objection to the construction project.

Date Nov 29, 2021 (Officials Signature) _____

(Officials Name – Print or Type) Hans J. Miller

(Official's Title) Sheriff, Onslow County

(Department Name) Onslow County Sheriff's Office

Note: Copying official letterhead onto this certification is encouraged.

City of Jacksonville

Office of the City Clerk

May 5, 2020

Sheriff Hans Miller
Onslow County Sheriff Department
717 Court St
Jacksonville, NC 28540

Dear Sheriff Miller:

Pursuant to the provisions of Section 160A-31 of the General Statutes of North Carolina, I am sending you information regarding an annexation adopted by the Jacksonville City Council.

Individual tract on Blue Creek School Road is a 10.50 acre tract. This annexation ordinance was adopted and became effective on April 21, 2020. I have enclosed a copy of Ordinance 2020-24 and a map that describes the annexed site.

If you have any questions, please feel free to contact me at (910) 938-5224 or TDD (910) 455-8852.

Sincerely,

Carmen K. Miracle
City Clerk

Enclosures
(Ordinance 2020-24 and map)

ATTACHMENT 24:

Climate Change

HazardReport_Tract

37051003314

Census Tract 33.14

Hazard Report

Extreme Heat

Census Tract in
Cumberland County, North Carolina

National Risk Index Rating
Relatively Moderate

Total Population
7,618

Building Codes Hazard Resistance
Not Resistant

Disadvantaged Community
No

Explore additional data

U.S. Climate Resilience Toolkit

Source: Census Bureau, CEQ, Esri, FEMA, MRLC, NOAA, UCSD

Historical Risk

according to the FEMA National Risk Index

Extreme Heat Annualized Frequency
1.32

Expected Annual Loss Rating
Relatively Moderate

Expected Annual Loss Total ($)
US$9,001.31

Future Climate Indicator

Indicator	Early Century (2030)		
	Low Emissions	High Emissions	Lo
	Min - Max	Min - Max	
Annual days with:			
Maximum temperature > 105°F	**0 days** 0 - 0	**1 days** 1 - 1	
Maximum temperature > 100°F	**6 days** 6 - 6	**6 days** 6 - 6	
Maximum temperature > 95°F	**29 days** 29 - 29	**32 days** 32 - 32	
Maximum temperature > 90°F	**76 days** 76 - 76	**79 days** 79 - 79	
Average Daily temperature:			
Average daily minimum temperature °F	**52 °F** 52 - 52	**53 °F** 53 - 53	
Average daily maximum temperature °F	**52 °F** 76 - 76	**76 °F** 76 - 76	
Annual temperature:			
Annual single highest maximum temperature °F	**103 °F** 103 - 103	**103 °F** 103 - 103	
Annual highest maximum temperature averaged over a 5-day period °F	**100 °F** 100 - 100	**100 °F** 100 - 100	
Cooling degree days (CDD)	**2,250 days** 2,250 - 2,250	**2,298 days** 2,298 - 2,298	

HazardReport_Tract

37051003314

Census Tract 33.14

Hazard Report

Drought

Census Tract in
Cumberland County, North Carolina

National Risk Index Rating
Very Low

Total Population
7,618

Building Codes Hazard Resistance
Not Resistant

Disadvantaged Community

Historical Risk

according to the FEMA National Risk Index

Drought Annualized Frequency
17.11

Expected Annual Loss Rating
Very Low

Expected Annual Loss Total ($)
US$801.02

Future Climate Indicator

Indicator	Early Century (2030)		
	Low Emissions	High Emissions	Lo
	Min - Max	Min - Max	
Annual days with:			
Maximum temperature > 100 °F	**6 days** 6 - 6	**6 days** 6 - 6	
Maximum temperature > 90 °F	**76 days** 76 - 76	**79 days** 79 - 79	

No

Explore additional data

U.S. Climate Resilience Toolkit

Source: Census Bureau, CEQ, Esri, FEMA, MRLC, NOAA, UCSD

Average Daily temperature:		
Average daily maximum temperature °F	**52 °F** 76 - 76	**76 °F** 76 - 76
Annual temperature:		
Annual single highest maximum temperature °F	**103 °F** 103 - 103	**103 °F** 103 - 103
Annual highest maximum temperature averaged over a 5-day period °F	**100 °F** 100 - 100	**100 °F** 100 - 100
Annual average total precipitation	**49"** 49 - 49	**49"** 49 - 49
Annual average number of dry days	**211 days** 211 - 211	**212 days** 212 - 212
Annual number of days with measurable precipitation (wet days)	**154 days** 154 - 154	**153 days** 153 - 153
Maximum number of consecutive dry days	**13 days** 13 - 13	**13 days** 13 - 13
Maximum number of consecutive wet days	**15 days** 15 - 15	**15 days** 15 - 15

HazardReport_Tract

37051003314

Census Tract 33.14

Hazard Report

Wildfire

Census Tract in

Cumberland County, North Carolina

National Risk Index Rating

Relatively Low

Total Population

7,618

Building Codes Hazard Resistance

Not Resistant

Disadvantaged Community

No

Explore additional data

U.S. Climate Resilience Toolkit

Source: Census Bureau, CEQ, Esri, FEMA, MRLC, NOAA, UCSD

Future Climate Indicator

Indicator	Early Century (2030) Low Emissions Min - Max	Early Century (2030) High Emissions Min - Max	Lo
Annual days with:			
Maximum temperature > 100°F	**6 days** 6 - 6	**6 days** 6 - 6	
Maximum temperature > 90°F	**76 days** 76 - 76	**79 days** 79 - 79	
Daily temperature:			
Average daily minimum temperature °F	**52 °F** 52 - 52	**53 °F** 53 - 53	
Average daily maximum temperature °F	**52 °F** 76 - 76	**76 °F** 76 - 76	
Annual temperature:			
Annual single highest maximum temperature °F	**103 °F** 103 - 103	**103 °F** 103 - 103	
Annual highest maximum temperature averaged over a 5-day period °F	**100 °F** 100 - 100	**100 °F** 100 - 100	
Annual number of dry days	**211 days** 211 - 211	**212 days** 212 - 212	
Annual number of days with measurable precipitation (wet days)	**154 days** 154 - 154	**153 days** 153 - 153	
Maximum number of consecutive dry days	**13 days** 13 - 13	**13 days** 13 - 13	
Maximum number of consecutive wet days	**15 days** 15 - 15	**15 days** 15 - 15	

HazardReport_Tract

37051003314

Census Tract 33.14

Hazard Report

Flooding

Census Tract in
Cumberland County, North Carolina

National Risk Index Rating
Relatively Moderate

Total Population
7,618

Building Codes Hazard Resistance
Not Resistant

Disadvantaged Community
No

Explore additional data

U.S. Climate Resilience Toolkit
Source: Census Bureau, CEQ, Esri, FEMA, MRLC, NOAA, UCSD

Historical Risk

according to the FEMA National Risk Index

Flooding Annualized Frequency
2.17

Expected Annual Loss Rating
Relatively Moderate

Expected Annual Loss Total ($)
US$38,890.92

Future Climate Indicator

Indicator	Early Century (2030)		
	Low Emissions	High Emissions	Lo
	Min - Max	Min - Max	
Annual days with:			
Total precipitation > 1"	7 days 7 - 7	7 days 7 - 7	
Total precipitation > 2"	1 days 1 - 1	1 days 1 - 1	
Total precipitation > 3"	0 days 0 - 0	0 days 0 - 0	
Annual precipitation:			
Average annual total precipitation	49" 49 - 49	49" 49 - 49	
Annual days with measurable precipitation	154 days 154 - 154	153 days 153 - 153	
Maximum period of consecutive wet days	15 days 15 - 15	15 days 15 - 15	
Days with maximum temperature below 32 °F	1 days 1 - 1	1 days 1 - 1	
Annual days that exceed 99th percentile precipitation	7 days 7 - 7	7 days 7 - 7	

HazardReport_Tract
37051003314
Census Tract 33.14

Hazard Report

Coastal Inundation

Census Tract in
Cumberland County, North Carolina

National Risk Index Rating
Very Low

Total Population
7,618

Building Codes Hazard Resistance
Not Resistant

Disadvantaged Community
No

Explore additional data

Historical Risk

according to the FEMA National Risk Index

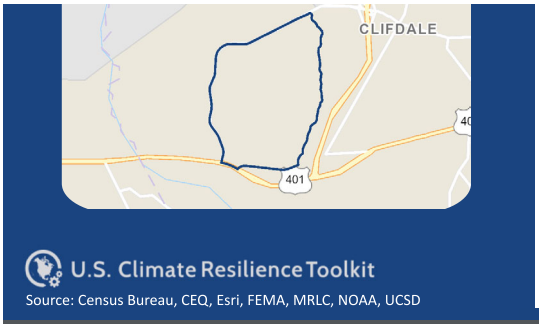
Coastal Inundation Annualized Frequency
0.00

Expected Annual Loss Rating
Very Low

Expected Annual Loss Total ($)
US$3.09

Future Climate Indicator

Indicator	Early Century (2030)		
	Low Emissions	High Emissions	Lo
	Min - Max	Min - Max	
Sea Level Rise:			
Percent of selected area impacted by global sea level rise	N/A	N/A	


CLIFDALE
401
U.S. Climate Resilience Toolkit
Source: Census Bureau, CEQ, Esri, FEMA, MRLC, NOAA, UCSD

ATTACHMENT 25:

State Environmental Clearinghouse Comments

STATE OF NORTH CAROLINA
DEPARTMENT OF ADMINISTRATION

Roy Cooper
GOVERNOR

Pamela B. Cashwell
Secretary

April 19, 2022

Claudia Young
NC Housing Finance Agency
Post Office 28066
Raleigh, NC 27611-

Re: SCH File # 22-E-0000-0186 Proposed project is for the construction of Cliffmore Park. The proposed project will consist of a 72 unit apartment community for low to moderate income seniors. The single building design consists of three floors with two elevators and a unit mix of 36- one bedroom units and 36- two bedroom units

Dear Claudia Young:

The above referenced environmental impact information has been submitted to the State Clearinghouse under the provisions of the National Environmental Policy Act. According to G.S. 113A-10, when a state agency is required to prepare an environmental document under the provisions of federal law, the environmental document meets the provisions of the State Environmental Policy Act. Attached to this letter for your consideration are comments made by the agencies in the review of this document.

If any further environmental review documents are prepared for this project, they should be forwarded to this office for intergovernmental review.

Should you have any questions, please do not hesitate to call.

Sincerely,

CRYSTAL BEST
State Environmental Review Clearinghouse

Attachments

Mailing Address:
NC DEPARTMENT OF ADMINISTRATION
1301 MAIL SERVICE CENTER
RALEIGH, NC 27699-1301

Telephone: (919)807-2425
Fax: (919)733-9571
COURIER: #51-01-00
Email: state.clearinghouse@doa.nc.gov
Website: www.ncadmin.nc.gov

Location:
116 WEST JONES STREET
RALEIGH, NORTH CAROLINA

Control No.: 22-E-0000-0186

County.: CUMBERLAND

Date Received: 3/18/2022

Agency Response: 4/18/2022

Review Closed: 4/18/2022

JINTAO WEN
CLEARINGHOUSE COORDINATOR
DPS - DIV OF EMERGENCY MANAGEMENT

Project Information

Type: National Environmental Policy Act ironmental Assessment

Applicant: NC Housing Finance Agency

Project Desc.: Proposed project is for the construction of Cliffmore Park. The proposed project will consist of a 72 unit apartment community for low to moderate income seniors. The single building design consists of three floors with two elevators and a unit mix of 36- one bedroom units and 36- two bedroom units. The building incorporates a variety of community amenities throughout each floor and includes multiple seating and lounge areas, multi-purpose room with a kitchenette, computer area, exercise room, tenant storage units, large balconies and a laundry room.

As a result of this review the following is submitted:

☑ No Comment ☐ Comments Below ☐ Documents Attached

Reviewed By: JINTAO WEN Date: 4/5/2022

Control No.: 22-E-0000-0186

County.: CUMBERLAND

Date Received: 3/18/2022

Agency Response: 4/18/2022

Review Closed: 4/18/2022

LYN HARDISON
CLEARINGHOUSE COORDINATOR
DEPT OF ENVIRONMENTAL QUALITY

Project Information

Type: National Environmental Policy Act ironmental Assessment

Applicant: NC Housing Finance Agency

Project Desc.: Proposed project is for the construction of Cliffmore Park. The proposed project will consist of a 72 unit apartment community for low to moderate income seniors. The single building design consists of three floors with two elevators and a unit mix of 36- one bedroom units and 36- two bedroom units. The building incorporates a variety of community amenities throughout each floor and includes multiple seating and lounge areas, multi-purpose room with a kitchenette, computer area, exercise room, tenant storage units, large balconies and a laundry room.

As a result of this review the following is submitted:

☐ No Comment ☐ Comments Below ☑ Documents Attached

Reviewed By: LYN HARDISON Date: 4/18/2022

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary

NORTH CAROLINA
Environmental Quality

To: Crystal Best
State Clearinghouse
NC Department of Administration

From: Lyn Hardison
Division of Environmental Assistance and Customer Service
Washington Regional Office

RE: 22-0186
Environmental Assessment - Proposed project is for the construction of Cliffmore Park which will consist of a 72-unit apartment community for low to moderate income seniors.
Cumberland County

Date: April 18, 2022

The Department of Environment Quality has reviewed the proposal for the referenced project. Based on the information provided, two (2) contamination sites were identified within one mile of the project site. In addition, several of our agencies have identified permits that may be required and offered some valuable guidance. The comments are attached for the applicant's review.

The Department will continue to be available to assist the applicant with any question or concerns.

Thank you for the opportunity to respond.

Attachments

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
MICHAEL SCOTT
Director

NORTH CAROLINA
Environmental Quality

Date: April 11, 2022

To: Michael Scott, Director
Division of Waste Management

Through: Janet Macdonald
Inactive Hazardous Sites Branch

From: Bonnie S. Ware
Inactive Hazardous Sites Branch

Subject: NEPA Project # 22-0186, NC Housing Finance Agency, Cumberlandt County, North Carolina

The Superfund Section has reviewed the proximity of sites under its jurisdiction to the NC Housing Finance Agency project. Proposed project is for the construction of Cliffmore Park which will consist of a 72-unit apartment community for low to moderate income seniors.

Two (2) Superfund Section sites were identified within one mile of the project as shown on the attached report. However, these two separate incident numbers are in fact associated with one site. The Superfund Section recommends that site files be reviewed to ensure that appropriate precautions are incorporated into any construction activities that encounter potentially contaminated soil or groundwater. Superfund Section files can be viewed at: http://deq.nc.gov/waste-management-laserfiche.

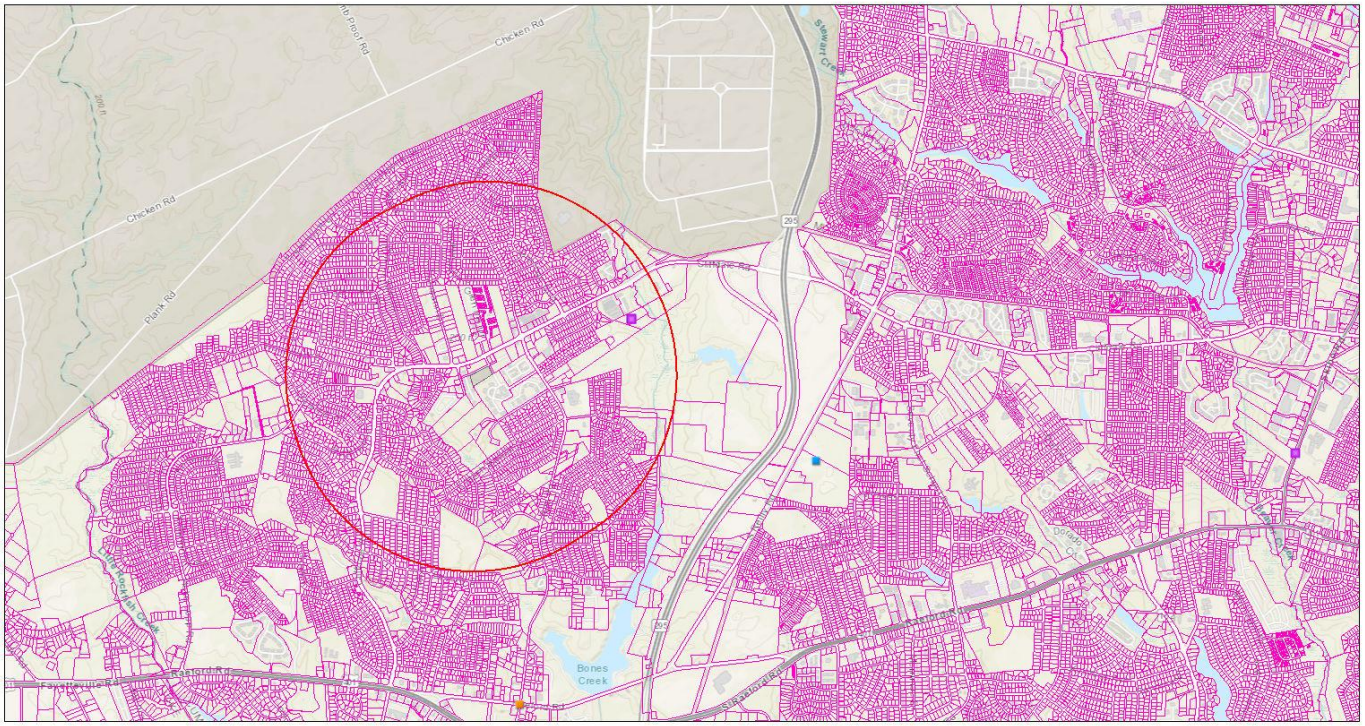
Please contact Janet Macdonald at 919.707.8349 if you have any questions concerning the Superfund Section review portion of this SEPA/NEPA inquiry.

SUPERFUND SECTION SITES ONLY : SEPA/NEPA

Area of Interest (AOI) Information

Area : 2,235.09 acres

Apr 11 2022 12:53:57 Eastern Daylight Time



Superfund Section Sites Only : 22-0186 Cumberland County

Summary

Name	Count	Area(acres)	Length(mi)
Certified DSCA Sites	0	N/A	N/A
Federal Remediation Branch Sites	0	N/A	N/A
Inactive Hazardous Sites	0	N/A	N/A
Pre-Regulatory Landfill Sites	2	N/A	N/A
Brownfields Program Sites	0	N/A	N/A

Pre-Regulatory Landfill Sites

#	EPAID	SITENAME	Count
1	NCD980502900	CUMBERLAND COUNTY/CLIFFDALE LF	1
2	NONCD0000733	CUMBERLAND COUNTY LANDFILL - BONES CREEK	1

ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
MICHAEL SCOTT
Director

NORTH CAROLINA
Environmental Quality

MEMORANDUM

TO: Michael Scott, Division Director through Sharon Brinkley

FROM: Drew Hammonds, Eastern District Supervisor - Solid Waste Section

DATE: April 14, 2022

SUBJECT: Review: SW 22-0186 – Cumberland County (EA – NC Housing Finance Agency – Proposed project is for the construction of Cliffmore Park which will consist of an 72-unit apartment community for low to moderate income families)

The Division of Waste Management, Solid Waste Section (Section) has reviewed the documents submitted for the subject project in Cumberland County, NC. Based on the information provided in these documents, the Section at this time does not see an adverse impact on the surrounding communities and likewise knows of no situations in the communities, which would affect this project.

As always for any planned or proposed projects, it is recommended that during any land clearing, demolition and construction, the responsible party and/or its contractors would make every feasible effort to minimize the generation of waste, to recycle materials for which viable markets exist, and to use recycled products and materials in the development of this project where suitable. **Any waste generated by and of the projects that cannot be beneficially reused or recycled must be disposed of at a solid waste management facility permitted by the Division. The Section strongly recommends that the responsible party require all contractors to provide proof of proper disposal for all generated waste to permitted facilities.**

Permitted solid waste management facilities are listed on the Division of Waste Management, Solid Waste Section portal site at: https://deq.nc.gov/about/divisions/waste-management/waste-management-rules-data/solid-waste-management-annual-reports/solid-waste-permitted-facility-list

Questions regarding solid waste management for this project should be directed to Mr. David Powell, Environmental Senior Specialist, Solid Waste Section, at (910) 433-3350.

cc: David Powell, Environmental Senior Specialist

State of North Carolina Department of Environmental Quality
INTERGOVERNMENTAL REVIEW PROJECT COMMENTS

Reviewing Regional Office: FRO
Project Number: 22-0186 Due Date: 04/14/2022
County: Cumberland

After review of this project it has been determined that the DEQ permit(s) and/or approvals indicated may need to be obtained in order for this project to comply with North Carolina Law. Questions regarding these permits should be addressed to the Regional Office indicated on the reverse of the form. All applications, information and guidelines relative to these plans and permits are available from the same Regional Office.

	PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (statutory time limit)
☒	Permit to construct & operate wastewater treatment facilities, non-standard sewer system extensions & sewer systems that do not discharge into state surface waters.	Application 90 days before begins construction or award of construction contracts. On-site inspection may be required. Post-application technical conference usual.	30 days (90 days)
☒	Permit to construct & operate, sewer extensions involving gravity sewers, pump stations and force mains discharging into a sewer collection system	Fast-Track Permitting program consists of the submittal of an application and an engineer's certification that the project meets all applicable State rules and Division Minimum Design Criteria.	30 days (N/A)
☒	NPDES - permit to discharge into surface water and/or permit to operate and construct wastewater facilities discharging into state surface waters.	Application 180 days before begins activity. On-site inspection. Pre-application conference usual. Additionally, obtain permit to construct wastewater treatment facility-granted after NPDES. Reply time, 30 days after receipt of plans or issue of NPDES permit-whichever is later.	90-120 days (N/A)
☐	Water Use Permit	Pre-application technical conference usually necessary.	30 days (N/A)
☒	Well Construction Permit	Complete application must be received and permit issued prior to the installation of a groundwater monitoring well located on property not owned by the applicant, and for a large capacity (>100,000 gallons per day) water supply well.	7 days (15 days)
☐	Dredge and Fill Permit	Application copy must be served on each adjacent riparian property owner. On-site inspection. Pre-application conference usual. Filling may require Easement to Fill from N.C. Department of Administration and Federal Dredge and Fill Permit.	55 days (90 days)
☐	Permit to construct & operate Air Pollution Abatement facilities and/or Emission Sources as per 15 A NCAC (2Q.O100 thru 2Q.0300)	Application must be submitted and permit received prior to construction and operation of the source. If a permit is required in an area without local zoning, then there are additional requirements and timelines (2Q.0113).	90 days
☒	Any open burning associated with subject proposal must be in compliance with 15 A NCAC 2D.1900	N/A	60 days (90 days)
☐	Demolition or renovations of structures containing asbestos material must be in compliance with 15 A NCAC 20.1110 (a) (1) which requires notification and removal prior to demolition. Contact Asbestos Control Group 919-707-5950	Please Note - The Health Hazards Control Unit (HHCU) of the N.C. Department of Health and Human Services, must be notified of plans to demolish a building, including residences for commercial or industrial expansion, even if no asbestos is present in the building.	60 days (90 days)
☒	The Sedimentation Pollution Control Act of 1973 must be properly addressed for any land disturbing activity. An erosion & sedimentation control plan will be required if one or more acres are to be disturbed. Plan must be filed with and approved by applicable Regional Office (Land Quality Section) at least 30 days before beginning activity. A NPDES Construction Stormwater permit (NCG010000) is also usually issued should design features meet minimum requirements. A fee of $65 for the first acre or any part of an acre. An express review option is available with additional fees.		20 days (30 days)
☐	Sedimentation and erosion control must be addressed in accordance with NCDOT's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable Stormwater conveyances and outlets.		(30 days)
☐	Sedimentation and erosion control must be addressed in accordance with _____ Local Government's approved program. Particular attention should be given to design and installation of appropriate perimeter sediment trapping devices as well as stable Stormwater conveyances and outlets.		Based on Local Program
☒	Compliance with 15A NCAC 2H .0126 - NPDES Stormwater Program which regulates three types of activities: Industrial, Municipal Separate Storm Sewer System & Construction activities that disturb ≥1 acre.		30-60 days (90 days)
☐	Compliance with 15A NCAC 2H 1000 -State Stormwater Permitting Programs regulate site development and post-construction stormwater runoff control. Areas subject to these permit programs include all 20 coastal counties, and various other counties and watersheds throughout the state.		45 days (90 days)

State of North Carolina Department of Environmental Quality
INTERGOVERNMENTAL REVIEW PROJECT COMMENTS

Reviewing Regional Office: FRO
Project Number: 22-0186 Due Date: 04/14/2022
County: Cumberland

	PERMITS	SPECIAL APPLICATION PROCEDURES or REQUIREMENTS	Normal Process Time (statutory time limit)
☐	Mining Permit	On-site inspection usual. Surety bond filed with DEQ Bond amount varies with type mine and number of acres of affected land. Affected area greater than one acre must be permitted. The appropriate bond must be received before the permit can be issued.	30 days (60 days)
☐	Dam Safety Permit	If permit required, application 60 days before begin construction. Applicant must hire N.C. qualified engineer to: prepare plans, inspect construction, and certify construction is according to DEQ approved plans. May also require a permit under mosquito control program. And a 404 permit from Corps of Engineers. An inspection of site is necessary to verify Hazard Classification. A minimum fee of $200.00 must accompany the application. An additional processing fee based on a percentage or the total project cost will be required upon completion.	30 days (60 days)
☐	Oil Refining Facilities	N/A	90-120 days (N/A)
☐	Permit to drill exploratory oil or gas well	File surety bond of $5,000 with DEQ running to State of NC conditional that any well opened by drill operator shall, upon abandonment, be plugged according to DEQ rules and regulations.	10 days N/A
☐	Geophysical Exploration Permit	Application filed with DEQ at least 10 days prior to issue of permit. Application by letter. No standard application form.	10 days N/A
☐	State Lakes Construction Permit	Application fee based on structure size is charged. Must include descriptions & drawings of structure & proof of ownership of riparian property	15-20 days N/A
☒	401 Water Quality Certification	Compliance with the T15A 02H .0500 Certifications are required whenever construction or operation of facilities will result in a discharge into navigable water as described in 33 CFR part 323.	60 days (130 days)
☐	Compliance with Catawba, Goose Creek, Jordan Lake, Randleman, Tar Pamlico or Neuse Riparian Buffer Rules is required. Buffer requirements: http://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/401-wetlands-buffer-permits/401-riparian-buffer-protection-program		
☐	Nutrient Offset: Loading requirements for nitrogen and phosphorus in the Neuse and Tar-Pamlico River basins, and in the Jordan and Falls Lake watersheds, as part of the nutrient-management strategies in these areas. DWR nutrient offset information: http://deq.nc.gov/about/divisions/water-resources/planning/nonpoint-source-management/nutrient-offset-information		
☐	CAMA Permit for MAJOR development	$250.00 - $475.00 fee must accompany application	75 days (150 days)
☐	CAMA Permit for MINOR development	$100.00 fee must accompany application	22 days (25 days)
☒	Abandonment of any wells, if required must be in accordance with Title 15A. Subchapter 2C.0100.		
☒	Notification of the proper regional office is requested if "orphan" underground storage tanks (USTS) are discovered during any excavation operation.		
☒	Plans and specifications for the construction, expansion, or alteration of a public water system must be approved by the Division of Water Resources/Public Water Supply Section prior to the award of a contract or the initiation of construction as per 15A NCAC 18C .0300 et. seq., Plans and specifications should be submitted to 1634 Mail Service Center, Raleigh, North Carolina 27699-1634. All public water supply systems must comply with state and federal drinking water monitoring requirements. For more information, contact the Public Water Supply Section, (919) 707-9100.		30 days
☒	If existing water lines will be relocated during the construction, plans for the water line relocation must be submitted to the Division of Water Resources/Public Water Supply Section at 1634 Mail Service Center, Raleigh, North Carolina 27699-1634. For more information, contact the Public Water Supply Section, (919) 707-9100.		30 days
☐	Plans and specifications for the construction, expansion, or alteration of the _____ water system must be approved through the _____ delegated plan approval authority. Please contact them at _____ for further information.		

State of North Carolina Department of Environmental Quality
INTERGOVERNMENTAL REVIEW PROJECT COMMENTS

Reviewing Regional Office: FRO
Project Number: 22-0186 Due Date: 04/14/2022
County: Cumberland

Other Comments (attach additional pages as necessary, being certain to comment authority)

Division	Initials	No comment	Comments	Date Review
DAQ	JDC	☒		3/21/2022
DWR-WQROS	KMB	☒		3/25/2022
DWR-PWS	HLC	☐	see above comments	4/11/2022
DEMLR (LQ & SW)	MAJ	☐	A Sedimentation and Erosion Control Plan will need to be submitted and approved and a NCG01 Certificate of Coverage obtained prior to initiating the project.	3/21/2022
DWM – UST	KEC	☐	The UST Section, Fayetteville Regional Office, does not have record of a petroleum release in the general area of the physical address provided for this project number (5133 Identity Ln., Fayetteville), nor are there any records of registered USTs at this address. The closest known UST facility is the Refuel 151, 8385 Cliffdale Road, Fayetteville, Facility ID #00-0-0000037127. There are no reported petroleum releases for the Refuel 151. https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=7dd59be2750b40bebebfa49fc383f688	3/21/22
Other Comments		☐		/ /

REGIONAL OFFICES

Questions regarding these permits should be addressed to the Regional Office marked below.

☐ **Asheville Regional Office**
2090 U.S. 70 Highway
Swannanoa, NC 28778-8211
Phone: 828-296-4500
Fax: 828-299-7043

☒ **Fayetteville Regional Office**
225 Green Street, Suite 714,
Fayetteville, NC 28301-5043
Phone: 910-433-3300
Fax: 910-486-0707

☐ **Mooresville Regional Office**
610 East Center Avenue, Suite 301,
Mooresville, NC 28115
Phone: 704-663-1699
Fax: 704-663-6040

☐ **Raleigh Regional Office**
3800 Barrett Drive,
Raleigh, NC 27609
Phone: 919-791-4200
Fax: 919-571-4718

☐ **Washington Regional Office**
943 Washington Square Mall,
Washington, NC 27889
Phone: 252-946-6481
Fax: 252-975-3716

☐ **Wilmington Regional Office**
127 Cardinal Drive Ext.,
Wilmington, NC 28405
Phone: 910-796-7215
Fax: 910-350-2004

☐ **Winston-Salem Regional Office**
450 Hanes Mill Road, Suite 300,
Winston-Salem, NC 27105
Phone: 336-776-9800
Fax: 336-776-9797

Department of Environmental Quality
Project Review Form

Project Number: 22-0186 **County: Cumberland** **Date Received: 3-18-2022**

Due Date: 4-14-2022

Project Description: *Environmental Assessment - Proposed project is for the construction of Cliffmore Park which will consist of a 72-unit apartment community for low to moderate income seniors.*

This Project is being reviewed as indicated below:

Regional Office	Regional Office Area	In-House Review	
___ Asheville	✓ Air	___ Air Quality	___ Coastal Management
✓ Fayetteville	✓ DWR	___ Parks & Recreation	___ Marine Fisheries
___ Mooresville	✓ DWR - Public Water	✓ Waste Mgmt	___ Military Affairs
___ Raleigh	✓ DEMLR (LQ & SW)	___ Water Resources Mgmt (Public Water, Planning & Water Quality Program)	___ DMF-Shellfish Sanitation
___ Washington	✓ DWM		✓ Wildlife Gabriela
___ Wilmington		___ DWR-Transportation Unit	___ Wildlife/DOT
___ Winston-Salem			

Manager Sign-Off/Region:	Date:	In-House Reviewer/Agency:
	4/13/22	Melodi Deaver, Hazardous Waste Section

Response (check all applicable)

___ No objection to project as proposed.

x ___ No Comment

___ Insufficient information to complete review

___ Other (specify or attach comments)

If you have any questions, please contact:

Lyn Hardison at lyn.hardison@ncdenr.gov or (252) 948-3842
943 Washington Square Mall Washington NC 27889
Courier No. 16-04-01

Department of Environmental Quality
Project Review Form

Project Number: 22-0186 **County: Cumberland** **Date Received: 3-18-2022**

Due Date: 4-14-2022

Project Description: *Environmental Assessment - Proposed project is for the construction of Cliffmore Park which will consist of a 72-unit apartment community for low to moderate income seniors.*

This Project is being reviewed as indicated below:

Regional Office	Regional Office Area	In-House Review	
___ Asheville	✓ Air	___ Air Quality	___ Coastal Management
✓ Fayetteville	✓ DWR	___ Parks & Recreation	___ Marine Fisheries
___ Mooresville	✓ DWR - Public Water	✓ Waste Mgmt	___ Military Affairs
___ Raleigh	✓ DEMLR (LQ & SW)	___ Water Resources Mgmt (Public Water, Planning & Water Quality Program)	___ DMF-Shellfish Sanitation
___ Washington	✓ DWM		✓ Wildlife Gabriela
___ Wilmington		___ DWR-Transportation Unit	___ Wildlife/DOT
___ Winston-Salem			

Manager Sign-Off/Region:	Date:	In-House Reviewer/Agency:
		Gabriela Garrison/NCWRC

Response (check all applicable)

___ No objection to project as proposed. X No Comment

___ Insufficient information to complete review ___ Other (specify or attach comments)

If you have any questions, please contact:

Lyn Hardison at lyn.hardison@ncdenr.gov or (252) 948-3842
943 Washington Square Mall Washington NC 27889
Courier No. 16-04-01