



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

October 28, 2022

MEMORANDUM TO: Elmo Vance, Jr.
Project Manager
Project Management Team, Division 5 and 8
Project Management Unit

FROM: Ashley B Cox, Jr, LG
GeoEnvironmental Project Manager
GeoEnvironmental Section
Geotechnical Engineering Unit

TIP NO: R-5709
WBS: 50205.1.1
COUNTY: HOKE
DIVISION: 8
DESCRIPTION: Widen NC 211 from US 15-501 in Aberdeen to SR 1244 (W. Palmer St.)/SR 1311 (Mockingbird Hill Rd.) in Raeford, Moore & Hoke Counties.

SUBJECT: **GeoEnvironmental Phase I Report**

DocuSigned by:

Ashley B Cox, Jr
Manager
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The GeoEnvironmental Section of the Geotechnical Engineering Unit performed a Phase I field investigation on October 7, 2019 for the above referenced project to identify geoenvironmental sites of concern. On October 5, 2022, an expanded study area encompassing Arthur Lane was provided to the Geotechnical Engineering Unit for further investigation. The purpose of this report is to document sites of concern within the project study area that are or may be contaminated. These sites of concern should be included in the environmental planning document in an effort to assist the project stakeholders in reducing or avoiding impacts to these sites. Sites of concern may include, but are not limited to, underground storage tank (UST) sites, dry cleaning facilities, hazardous waste sites, regulated landfills and unregulated dumpsites.

Findings

Twenty (24) sites of concern were identified within the proposed study area. We anticipate low to high monetary and scheduling impacts resulting from these sites. See the following table and figure for details. No additional sites of concern were identified within the Arthur Lane expanded study area.

Please note that discovery of additional sites not recorded by regulatory agencies and not reasonably discernible during the project reconnaissance may occur. The GeoEnvironmental

Section should be notified immediately after discovery of such sites so their potential impact(s) may be assessed.

Sites of concern identified in this report should be reviewed by the GeoEnvironmental Section once the Final Right of Way plans are complete to determine if Phase II Investigations and Right of Way Recommendations are necessary prior to right of way being acquired.

If there are questions regarding the geoenvironmental issues, please contact me, at (919) 707-6857.

cc:

John Pilipchuk, LG, PE, State Geotechnical Engineer

Brian Hanks, PE, State Structures Engineer

Brent Hall, Locations and Surveys

Byron Sanders, Jr, PE, State Utilities Engineer

Reuben Blakley, PE, Division 8 Construction Engineer

William B. Scholl, Division 8 Right of Way Agent

Eric Williams, PE, Geotechnical Regional Manager

Kevin B. Miller, PG, Regional Geological Engineer

Luis Pages, State Negotiator

row-notify@ncdot.gov

roadwaydesign@ncdot.gov

hydraulics_notify@ncdot.gov

(01) Property Name:

KANGAROO EXPRESS-BP (Former Pantry #3301)

11495 Hwy 15/501 and NC 211
Aberdeen, NC 28315

Property Owner:

PRIME REALTY, INC

CIRCLE K STORES INC.

C/O CIRCLE K PROP TAX DC-17PHOENIX
AZ

Facility ID: 00-0-0000020957

Incident Type/Number: 22728

UST Owner:

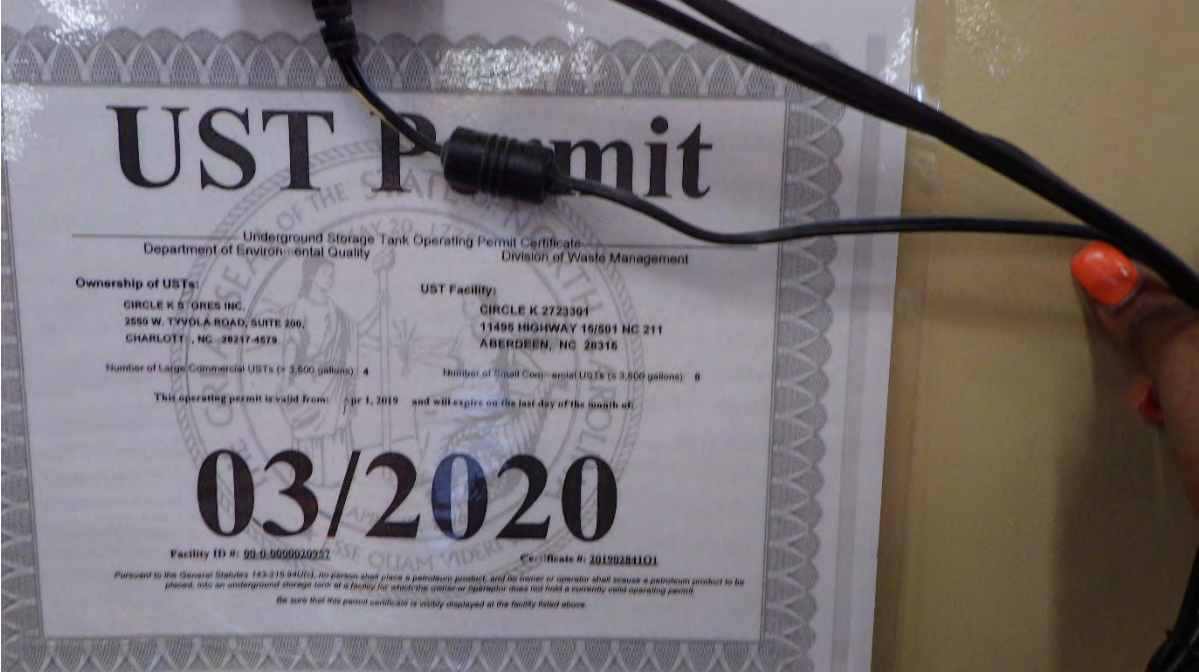
CIRCLE K STORES INC.

2550 W TYVOLA ROAD, SUITE 200,
CHARLOTTE, NC 28217-4579



Anticipated Impacts: LOW

This is an active gas station with four USTs permitted in use at the site. Monitoring wells and remediation wells were observed on site and one groundwater incident is recorded in NCDEQ's UST incident database.



UST permit



UST Area



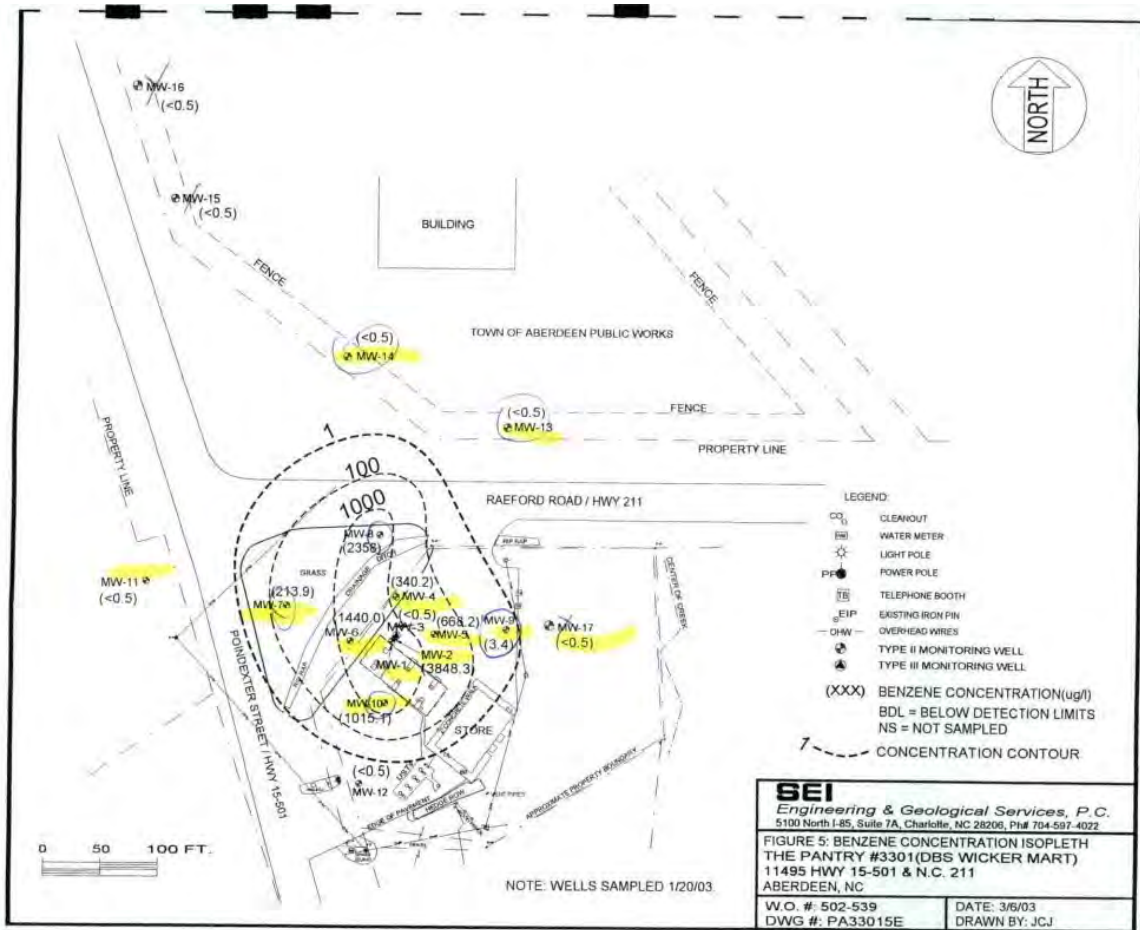
Remediation well



Monitoring well



Multiple monitoring wells



Groundwater plume- 2003

(02) Property Name:
VACANT STORE
200 GLASGOW ST
ABERDEEN, NC 28315

Property Owner:
JAMES, LARRY J
1250 RESERVATION RD
ABERDEEN, NC 28315

Facility ID: N/A
Incident Type/Number: N/A

UST Owner:
N/A



Anticipated Impacts: LOW

This is a former gas station with at least 2 small USTs observed on site. The store building was probably built in 1930s and is in fair condition. No monitoring wells were observed on site and no incident record can be located in NCDEQ's database.



UST fill port with cover



UST fill port uncovered.

(03) Property Name:
VACANT BUILDING
9820 NC 211 HWY
ABERDEEN, NC 28315

Property Owner:
SCHLOEGL, ROBERT L
200 BLUE ST
ABERDEEN, NC 28315

Facility ID: N/A
Incident Type/Number: N/A

UST Owner:
N/A



Anticipated Impacts: LOW

This is an old former gas station with former dispenser island remains on site (under the trees in front of the building). The store building was in poor condition and probably built in 1930s or earlier. Two small USTs probably still remain underneath the island and no monitoring wells were observed on site. No incident record can be located in NCDEQ's database.



UST features in the dispenser island area



UST features in the dispenser island area-product line

(04) Property Name:
VACANT LOT with foundations
9849 NC 211 HWY
ABERDEEN, NC 28315

Property Owner:
OATES, KARLTON
C/O LESLIE M GATES
NEW YORK, NY 10005

Facility ID: N/A
Incident Type/Number: N/A

UST Owner:
N/A



Anticipated Impacts: LOW

This is a vacant lot with building foundation remained on site. It was a possible former gas station with USTs removed. One monitoring well observed on site and no incident record can be located in NCDEQ's database.



UST removal area.



Recently installed monitoring well

(05) Property Name:
GEIGY CHEMICAL CORP. (ABERDEEN
PLANT) former KAISER CHEMICAL BLDG
10192 NC 211 HWY
ABERDEEN, NC 28315

Property Owner:
ABERDEEN & ROCKFISH RAILROAD
101 EAST MAIN ST
ABERDEEN, NC 28315

Facility ID: Superfund site ID-NCD981927502
Incident Type/Number: N/A

UST Owner:
N/A

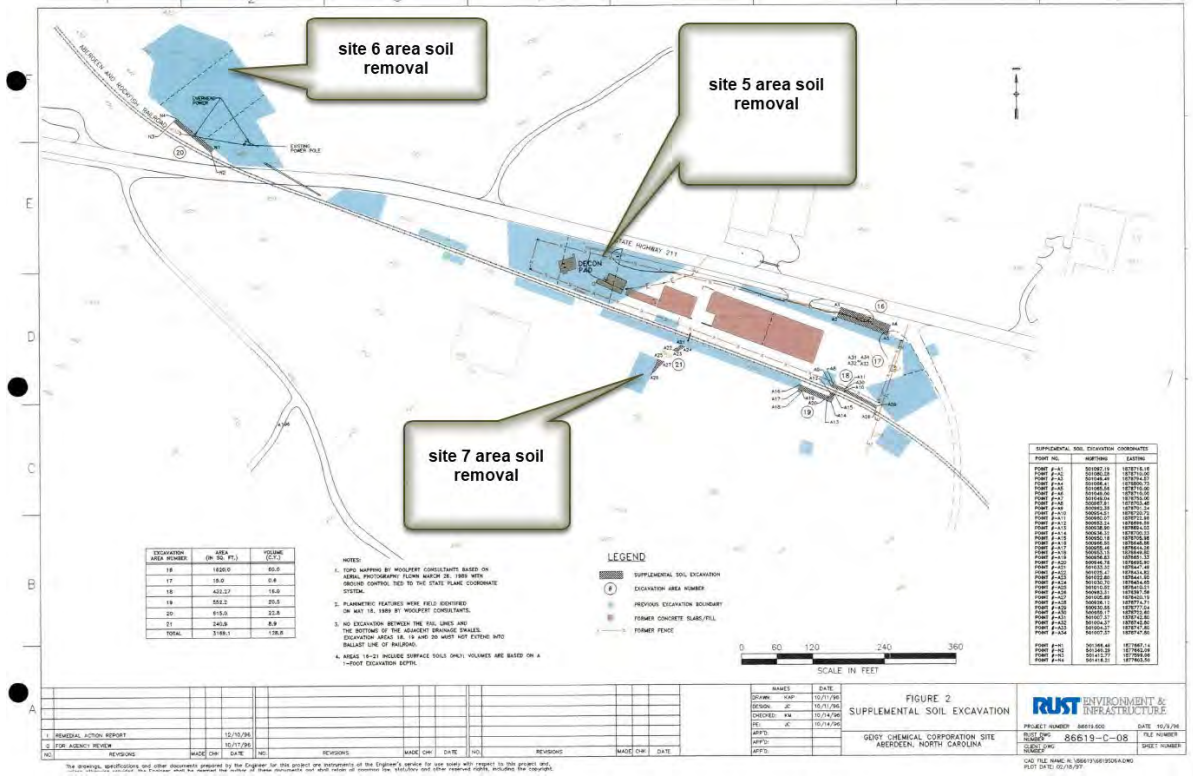


Anticipated Impacts: High

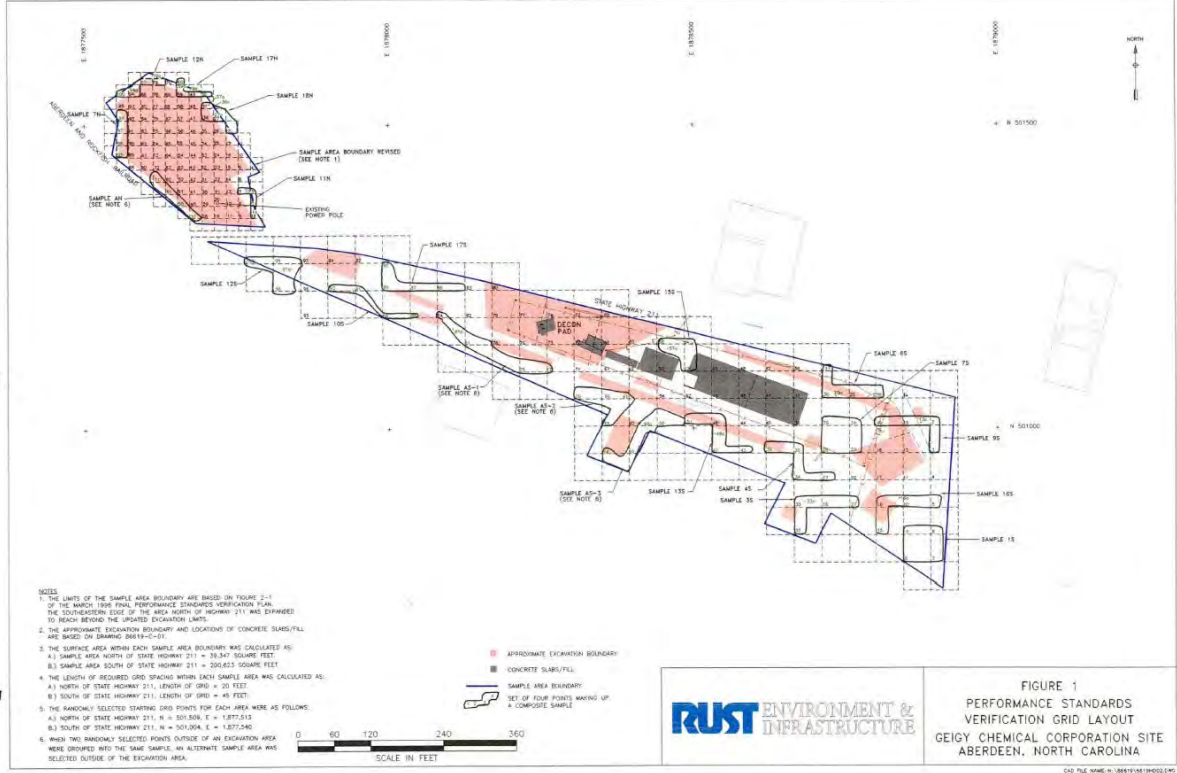
This is a vacant lot owned by a railroad company. There was a KAISER CHEMICAL building removed from the site years ago. Soils contaminated with pesticides were identified by EPA and soil excavation were completed in 1996 and 1997. One monitoring well was observed on site, and no USTs observed on site.



Monitoring well



Soil removal areas for this site (Site 5) and Site 6



Soil removal sample verification for this site (Site 5) and Site 6

(06) Property Name:

14 acres North of NC 211 of GEIGY Superfund site
10191 NC 211 HWY
ABERDEEN, NC 28315

Property Owner:

BETHESDA CEMETERY ASSOCIATION
1002 N SANDHILLS BLVD
ABERDEEN, NC 28315

UST Owner:

N/A

Facility ID: Superfund site ID: NCD981927502

Incident Type/Number: N/A

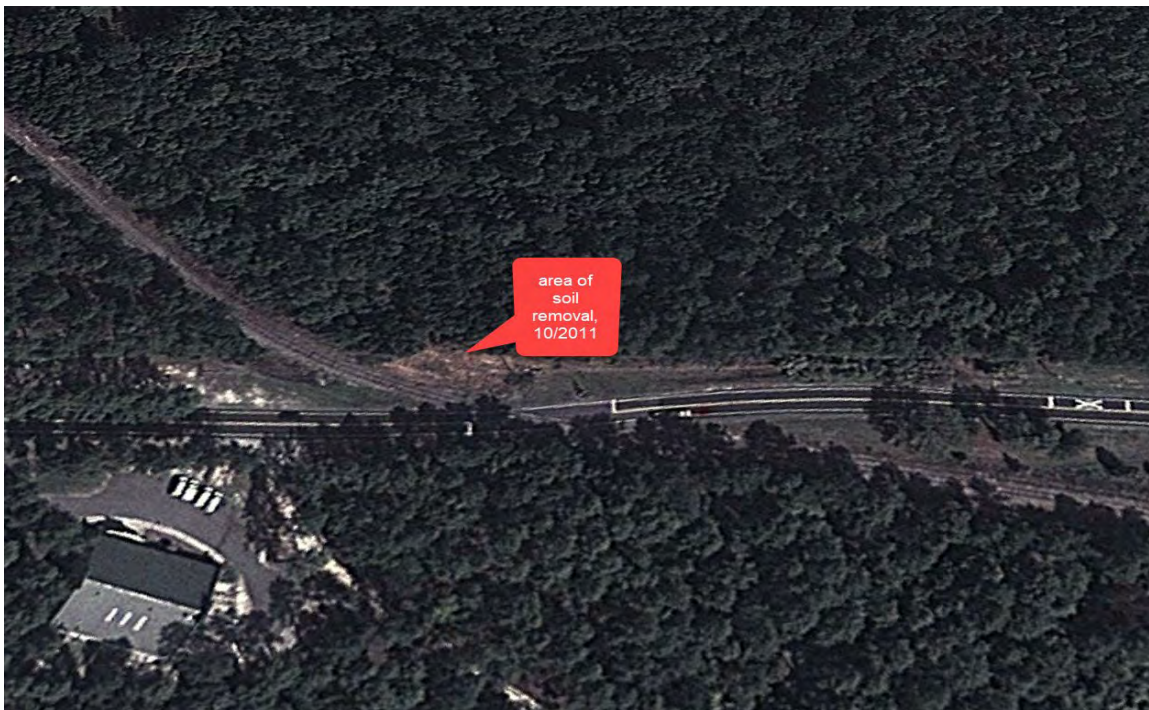


Anticipated Impacts: LOW

This is a vacant wooded lot. There were superfund soil clean-up activities at this property in 1996/1997 and in 2011. Soils contaminated with pesticides were documented to be cleaned up to the satisfaction of EPA (also see Site 5 figures).



Soil removal area with young trees (see below)



Soil Removal area in 2011- North of NC 211 (also see site 5 figures)

(07) Property Name:

Vacant Land South of NC 211-GEIGY
CHEMICAL CORP
10180 NC 211 HWY
ABERDEEN, NC 28315

Property Owner:

ANDERSONG MANAGEMENT, LLC
PO BOX 228
SOUTHERN PINES, NC 28388

UST Owner:

N/A

Facility ID: Superfund site ID: NCD981927502

Incident Type/Number: N/A



Anticipated Impacts: High

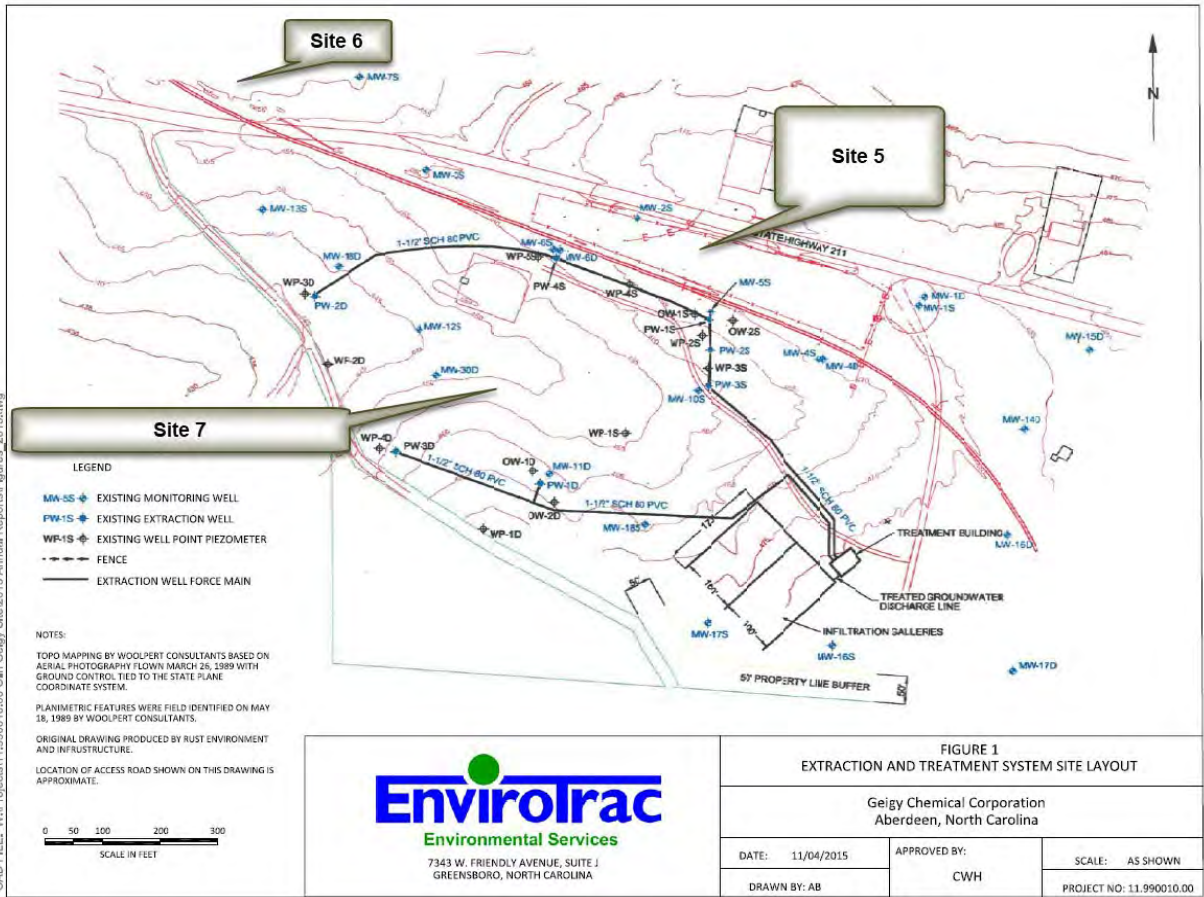
This is a large track of wooded vacant lot. The contamination on this site is directly related to site 5 (GEIGY CHEMICAL) activities. Superfund soil removal (see site 5 figures) and groundwater clean-up action have occurred at this site. Multiple groundwater monitoring wells and remediation systems were observed over the site.



Remediation/monitoring wells



Monitoring well



CAD FILE: V:\Projects\11.990010.00_01n_Calvey_Site\2015 Annual Reports\Figures_2015.dwg

Geigy Superfund groundwater remediation system layout.



Recently accessed off site monitoring well

(08) Property Name:

Former Powder Metals Products (PMP) site
215 CRESTLINE LN
ABERDEEN, NC 28315

Property Owner:

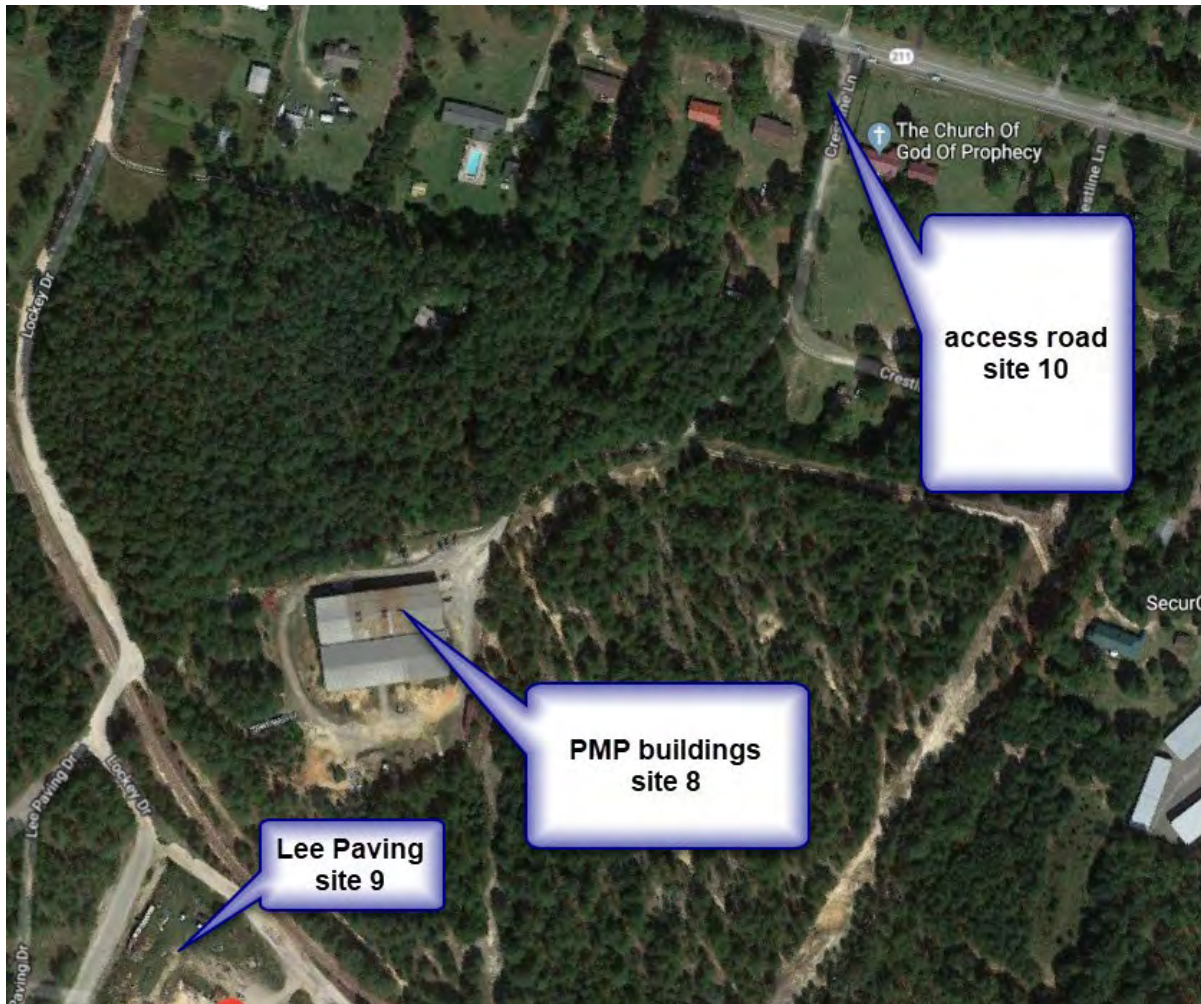
HUDSON, MATTHEW B
644 KIRK RD
ABERDEEN, NC 28315

Facility ID: Superfund site ID: NCD00407447

Incident Type/Number: N/A

UST Owner:

N/A



Anticipated Impacts: High

This is a large track of land with former Powder Metals Products (PMP) buildings on site. Minor soil and limited groundwater contamination were identified in 2000 with solvents. Groundwater contamination was assessed by EPA related to the incident. However, no soil and groundwater remediation activities were documented at this site.

(09) Property Name:

MT Recycling (Former Lee Paving Company)
280 LUCKEY DRIVE,
ABERDEEN, NC 28315

Property Owner:

HUDSON, MATTHEW B
644 KIRK RD
ABERDEEN, NC 28315

Facility ID: Superfund site ID: NCD00407447
(new, three sites)

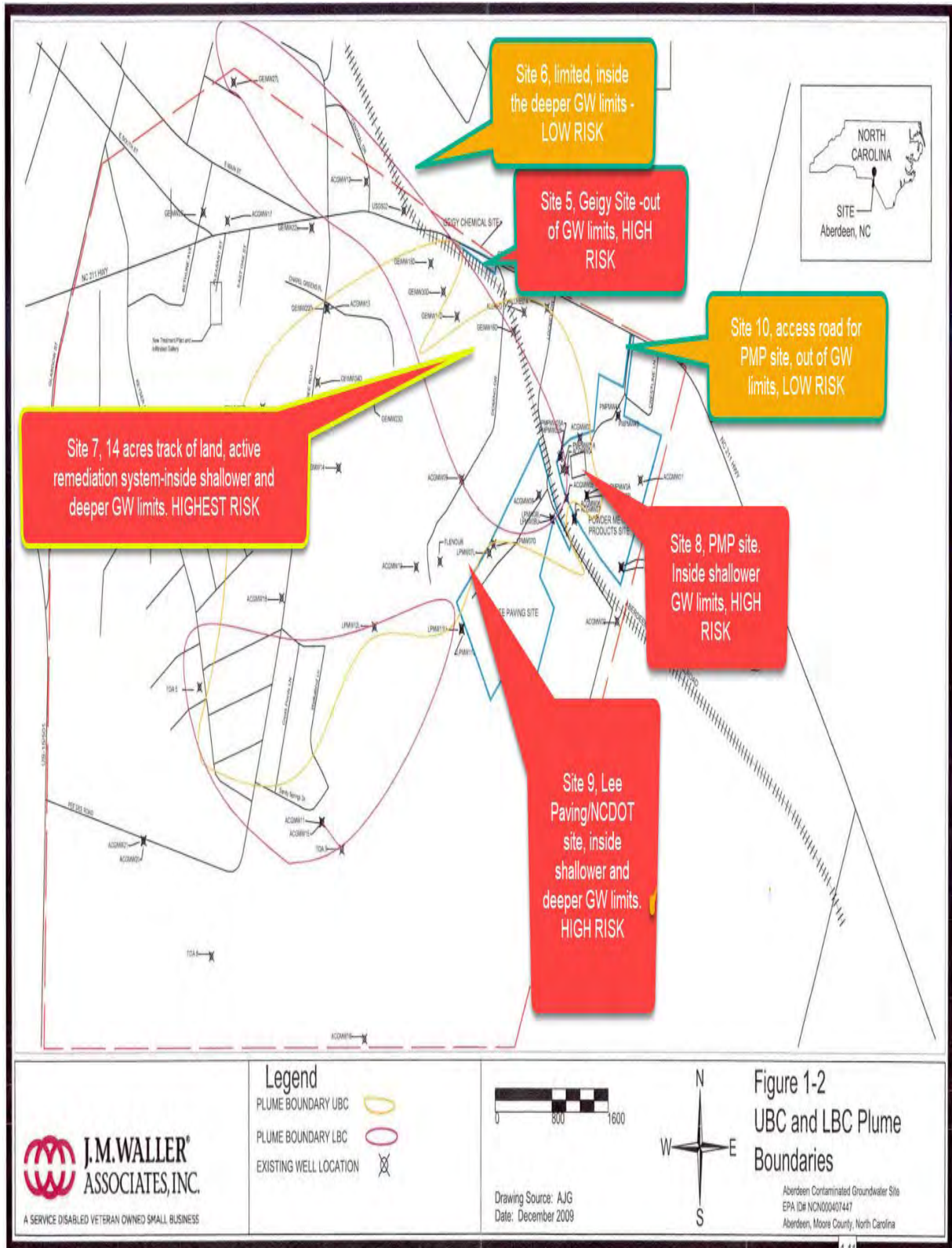
UST Owner:
N/A

Incident Type/Number: 85090

**Anticipated Impacts: High**

This is currently a recycling facility. It was a part of the larger Lee Paving Company site. NCDOT started to investigate this site for its previous asphalt testing laboratory activities related to possible solvent release from 1964 to 1989. As a result of the investigation, TCE was detected in the groundwater. Numerous remediation/monitoring activities and reports have been completed since 1992 and the site was recently designated as a part of the newly assigned/listed Superfund site in combine with Site 5, 7 and 8. This site is located further south of the NC 211 project in a topographical and hydrogeologic down gradient location (also see Site 5, 6,8 and 10). Multiple monitoring wells were observed on site during this visit. Documents/reports can be located in NCDEQ's and EPA website:

https://edocs.deq.nc.gov/WasteManagement/Search.aspx?dbid=0&searchcommand=%7b%5bWM%5d%3a%5bProgram_ID%5d%3d%22*NCN000407447*%22%7d



NCDOT site (9) in relation with Geigy Site (Site 5,6,7) and PMP site (8,10)- Groundwater plumes (2009 data) in upper (UBC-shallower) and lower black creek (LBC-deeper) formations (aquifers) in the area of Site 5,6,7,8,9, and 10 (also see Site 10)



NCDOT site- aerial photo

(10) Property Name:

Access Road to NC 211 (part of former PMP-site)
215 CRESTLINE LN
ABERDEEN, NC 28315

Property Owner:

HUDSON, MATTHEW B
644 KIRK RD
ABERDEEN, NC 28315

Facility ID: Superfund site ID: NCD00407447**Incident Type/Number:** 85083**UST Owner:**

N/A

**Anticipated Impacts: LOW**

This is the access road to a large track of land with the former Powder Metals Products (PMP) superfund site (Site 9) and the project design is likely to impact this area. Soil and water contamination related to the former PMP site (site 8) were identified in 2000 with solvents release but not to extend to this location (Site 10). Groundwater contamination were investigated by EPA related to the incident, however, there has been no active remediation of the groundwater on the former PMP site. No monitoring wells were documented or observed in the area. This access road is situated adjoint NC 211 and to be in a topographical and hydrogeological up gradient location to the groundwater contaminated area at this property and other sites (5,7,8 and 9) in the area.



Location of this site (site 10) and other superfund associated sites. Blue line is approximate groundwater plume (2009).

(11) Property Name:
VACANT GARAGE BUILDING
10531 NC 211 HWY
ABERDEEN, NC 28315

Property Owner:
BOLIN, JOHN & KAY
129 APRIL LN
ABERDEEN, NC 28315-9801

Facility ID: N/A
Incident Type/Number: N/A

UST Owner:
N/A



Anticipated Impacts: LOW

This is a vacant garage building and a possible former gas station with dispenser island remains on site. No monitoring wells or USTs were observed on site. No incident record can be located in NCDEQ's database.



Possible former disperser island



Possible abandoned UST product line/pipe

(12) Property Name:
GARAGE BUILDING (NO SIGN)
10528 NC 211 HWY
ABERDEEN, NC 28315

Property Owner:
YOW, RICHARD S &
4937 HWY 15/501
CARTHAGE, NC 28327

Facility ID: N/A
Incident Type/Number: N/A

UST Owner:
N/A



Anticipated Impacts: LOW

This former auto retailer is now a truck repair business. It may have operated once as a gas station. However, no monitoring wells or UST features were observed on site. No incident record can be located in NCDEQ's database.

(13) Property Name:

211 FAST MART (JAY'S FOOD MART)
10827 NC 211 HIGHWAY
Aberdeen, NC 28315

Property Owner:

GILLIS, DONALD EARL & KAREN &
P O BOX 535
Aberdeen, NC 28315

Facility ID: 00-0-0000031525

Incident Type/Number: N/A

UST Owner:

MCNEILL OIL CO INC
P O BOX 396
Aberdeen, NC 28315



Anticipated Impacts: LOW

This is an active gas station with four (4) USTs permitted in use at the site. No monitoring wells were observed on site and no groundwater incident is recorded in NCDEQ's UST incident database.



UST permit



UST area

(14) Property Name:

ALCO 28 (Shell Gas Station))
10870 NC 211 HIGHWAY
Aberdeen, NC 28315

Property Owner:

AOC INVESTMENTS, L.L.C.
P O BOX 1059
ALBEMARLE, NC 28001-1059

Facility ID: 00-0-0000036840

Incident Type/Number: N/A

UST Owner:

ALBEMARLE OIL COMPANY
P O BOX 1059
ALBEMARLE, NC 28001-1059



Anticipated Impacts: LOW

This is an active gas station with four USTs permitted in use at the site. No monitoring wells were observed on site and no groundwater incident is recorded in NCDEQ's UST incident database.



UST permit



UST area

(15) Property Name:
ABANDONED FORMER COUNTRY
STORE/GAS STATION
10575 NC 211 HWY
ABERDEEN, NC 28315

Property Owner:
LOWERY, GREGORY
767 ODUM ROAD
LUMBERTON, NC 28360

Facility ID: N/A
Incident Type/Number: N/A

UST Owner:
N/A



Anticipated Impacts: LOW

This former gas station is a part of a large parcel with a multiple mobile home park development. No monitoring wells or USTs were observed on site. Former UST features remain on site. No incident record can be located in NCDEQ's database.



Side of the store building



Possible former disperser

(16) Property Name:
DISCOUNT FABRIC (RETAIL STORE)
10002 NC 211 HWY
ABERDEEN, NC 28315

Property Owner:
CLARK, PANAYOTA
P O BOX 271
ABERDEEN, NC 28315-9801

Facility ID: N/A
Incident Type/Number: N/A

UST Owner:
N/A



Anticipated Impacts: LOW

This is a fabric retail store and a possible former gas station with possible dispenser islands (removed). No monitoring wells or USTs were observed on site. No incident record can be located in NCDEQ's database.



Possible former disperser island location.



Possible testing boring location.

(17) Property Name:
ABANDONED RETAIL STORE
8850 NC 211 HWY
ABERDEEN, NC 28315

Property Owner:
WILSON, WOODROW
203 PINECONE AVENUE
RAEFORD, NC 28376

Facility ID: N/A
Incident Type/Number: N/A

UST Owner:
N/A



Anticipated Impacts: LOW

This is an abandoned retail store and a possible former gas station with possible dispenser island remains. No monitoring wells or USTs were observed on site. No incident record can be located in NCDEQ's database.



Possible UST disperser island.



Unknown feature on site.

(18) Property Name:
VACANT LOT WITH SMALL STRUCTURE
8692 NC 211 HWY
ABERDEEN, NC 28315

Property Owner:
GEORGE, MICHAEL WAYNE
3820 DOC BROWN RD
RAEFORD, NC 28376

Facility ID: N/A
Incident Type/Number: N/A

UST Owner:
N/A



Anticipated Impacts: LOW

This is a vacant lot and possible former gas station based on the historic photos reviewed. No monitoring wells or UST features were observed on site. No incident record can be located in NCDEQ's database.



Historic aerial photo-2003

(19) Property Name:
211 LUCKY STOP
6797 ABERDEEN RD
RAEFORD, NC 28376

Property Owner:
211 SHOPPING CENTERS, LLC
PO BOX 2048RAEFORD NC

Facility ID: 00-0-0000020957
Incident Type/Number: N/A

UST Owner:
LUCKY STOP 211 INC
6797 ABERDEEN RD
RAEFORD, NC 28376



Anticipated Impacts: LOW

This is an active gas station with three (3) USTs permitted in use at the site. No monitoring wells were observed on site and no groundwater incident is recorded in NCDEQ's UST incident database.



UST permit



UST area

(20) Property Name:
JUST THE COUNTRY (FORMER COUNTRY
STORE/GAS STATION)
5735 ABERDEEN RD
RAEFORD, NC 28376-0000

Property Owner:
JONES, HERBERT L
5735 ABERDEEN RD
RAEFORD, NC 28376-0000

Facility ID: N/A
Incident Type/Number: N/A

UST Owner:
N/A



Anticipated Impacts: LOW

This is a vacant Bed and Breakfast and possible former gas station with UST features remaining on site. No monitoring wells or USTs were observed on site. No incident record can be located in NCDEQ's database.



Possible former disperser island location



Possible abandoned product line/pipe.

(21) Property Name:

LUCKY 7 EXPRESS
526 ABERDEEN RD
RAEFORD, NC 28376

Property Owner:

SHAHBAIN PROPERTY, INC.
PO BOX 66RAEFORD NC

Facility ID: 00-0-0000023511

Incident Type/Number: 18744

UST Owner:

LUCKY 7 EXPRESS INC.
526 ABERDEEN RD
RAEFORD, NC 28376



Anticipated Impacts: LOW

This is an active gas station with four (4) USTs permitted in use at the site. No monitoring wells were observed on site and one groundwater incident is recorded in NCDEQ's UST incident database.



UST permit



UST area 1



UST area 2

(22) Property Name:
SPEEDWAY #7903
HIGHWAY 211 AND TURNPIKE ROAD
(422 ABERDEEN ROAD)
RAEFORD, NC 28376

Facility ID: 00-0-0000036768

Incident Type/Number: N/A

Property Owner:
DOWNING, NANCY W.
1829 SHOREHAM DR CHARLOTTE NC

UST Owner:
SPEEDWAY (NORTH CAROLINA) LLC
500 SPEEDWAY DRIVE
ENON, OH 45323-1026



Anticipated Impacts: LOW

This is an active gas station with three (3) USTs permitted in use at the site. No monitoring wells were observed on site and no groundwater incident is recorded in NCDEQ's UST incident database.



UST permit



UST area

(23) Property Name:
SAYONA INC/FAST SHOP FOOD MART
644 WEST PROSPECT AVE
RAEFORD, NC 28376

Property Owner:
SAYONA INC
3104 COMMERCE DRRICHBURG NC

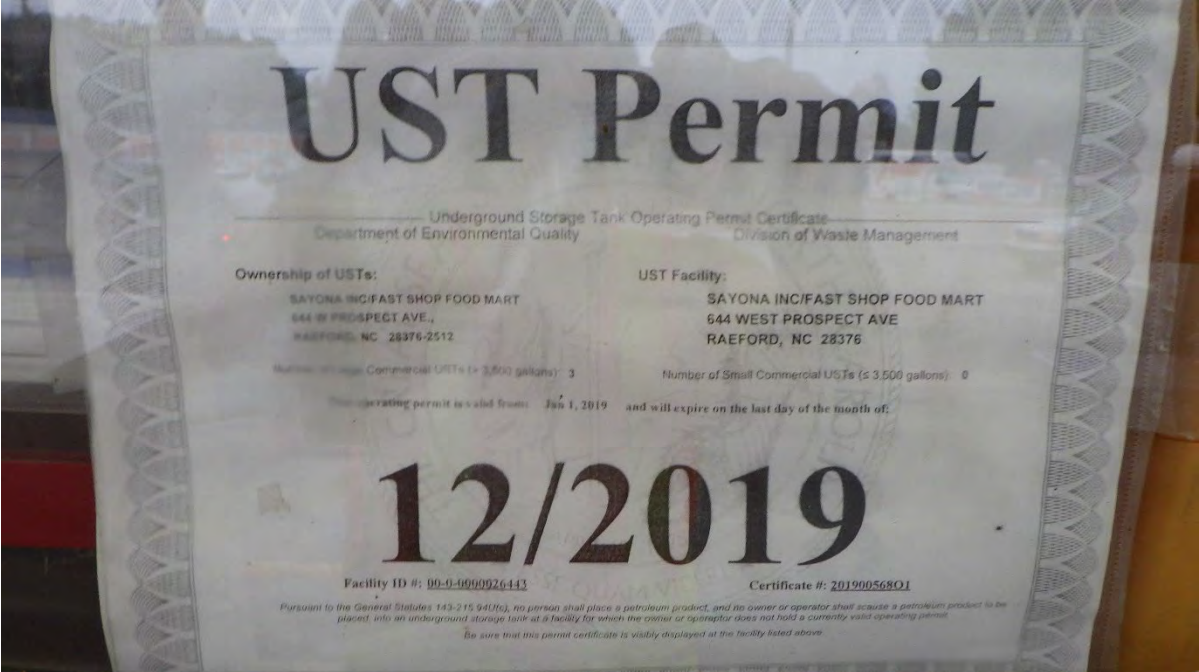
Facility ID: 00-0-0000026443
Incident Type/Number: N/A

UST Owner:
SAYONA INC/FAST SHOP FOOD MART
644 WEST PROSPECT AVE
RAEFORD, NC 28376-2512



Anticipated Impacts: LOW

This is an active gas station with three (3) USTs permitted in use at the site. No monitoring wells were observed on site and no groundwater incident is recorded in NCDEQ's UST incident database.



UST permit



UST area

(24) Property Name:
McNeill Oil and Propane
641 WEST PROSPECT AVE
RAEFORD, NC 28376

Property Owner:
TEAL OIL COMPANY INC
113 E. DONALDSON AVERAEFORD NC

Facility ID: N/A

Incident Type/Number: N/A



Anticipated Impacts: LOW

This is an oil and propane retail facility. It was a former gas station. No monitoring wells were observed on site and no groundwater incident is recorded in NCDEQ's UST incident database.

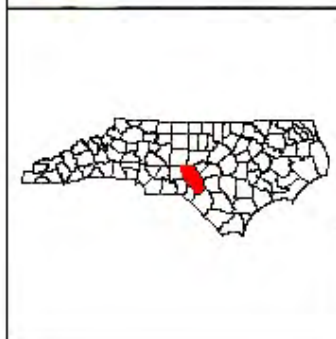
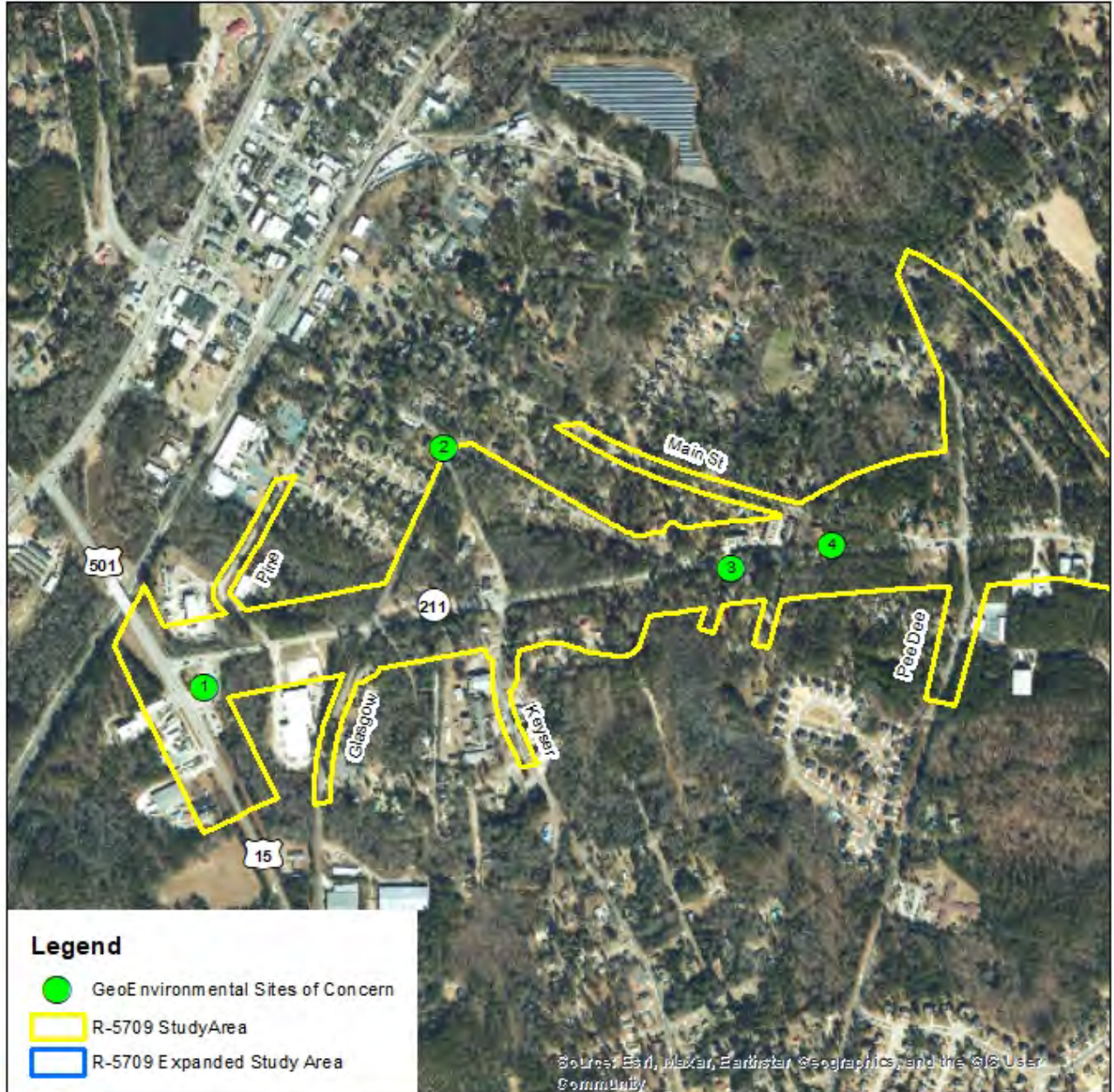


Facility yard in the back of the store building




Possible former disperser island location in front of the store building

Figure 1
Location of GeoEnvironmental Sites of Concern



Project 50205.1.1 (TIP # R-5709)
 Widen NC 211 from US 15-501 in Aberdeen to
 SR 1244 (W. Palmer St.)/SR 1311 (Mockingbird
 Hill Rd.) in Raeford, Moore & Hoke Counties

1,400 700 0 1,400 Feet

 NC Department of Transportation
 Geotechnical Engineering Unit
 GeoEnvironmental Section

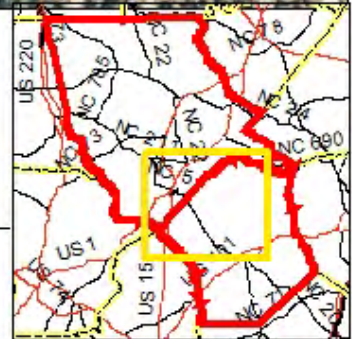
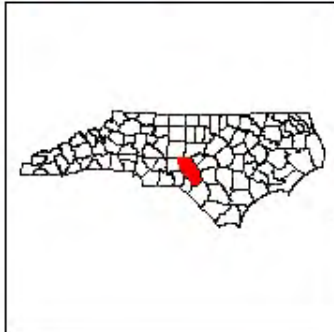
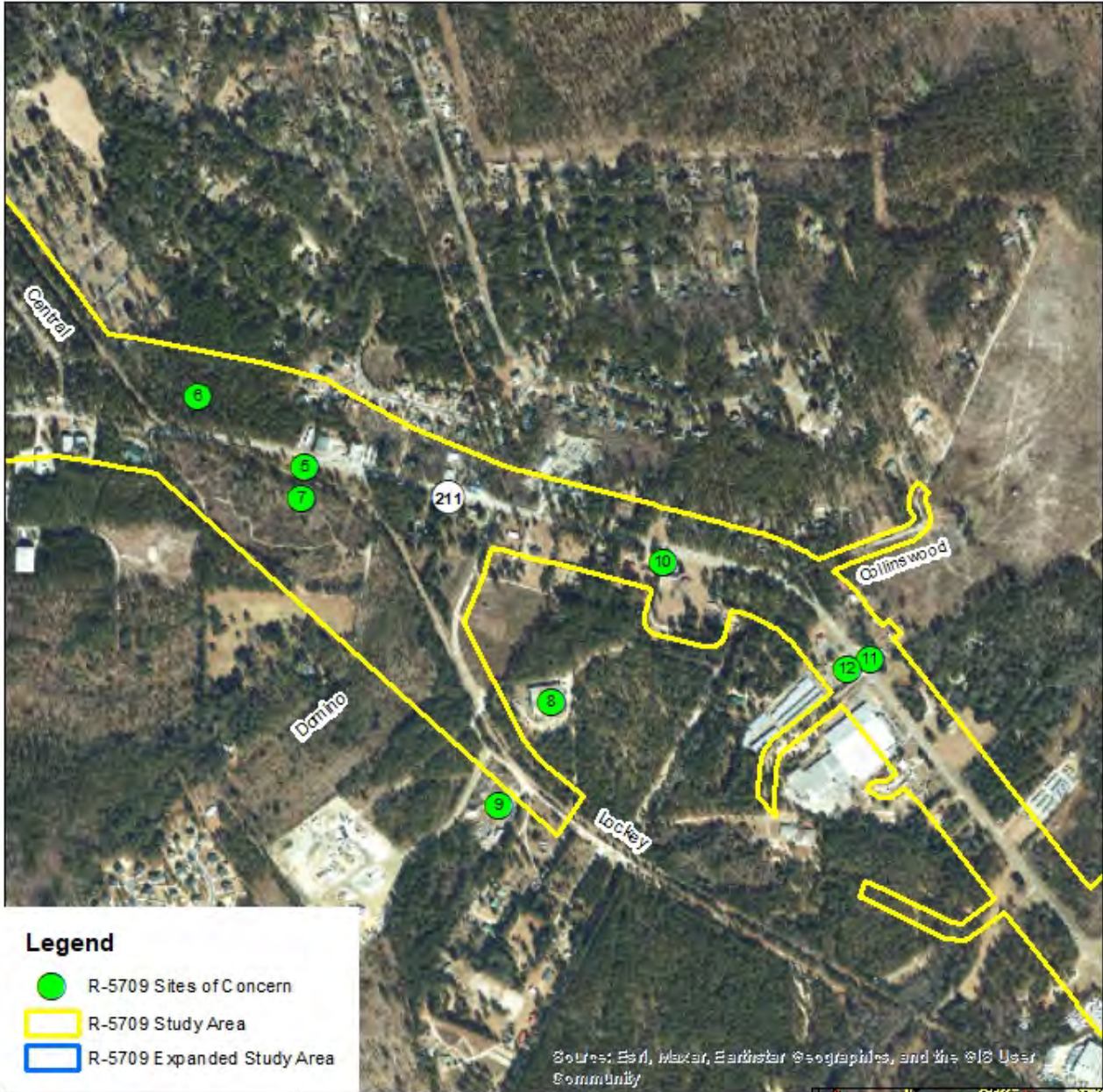


Figure 2
Location of GeoEnvironmental Sites of Concern



Project 50205.1.1 (TIP # R-5709)
 Widen NC 211 from US 15-501 in Aberdeen to
 SR 1244 (W. Palmer St.)/SR 1311 (Mockingbird
 Hill Rd.) in Raeford, Moore & Hoke Counties

1,400 700 0 1,400 Feet



NC Department of Transportation
 Geotechnical Engineering Unit
 GeoEnvironmental Section

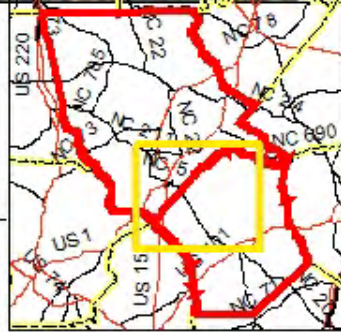
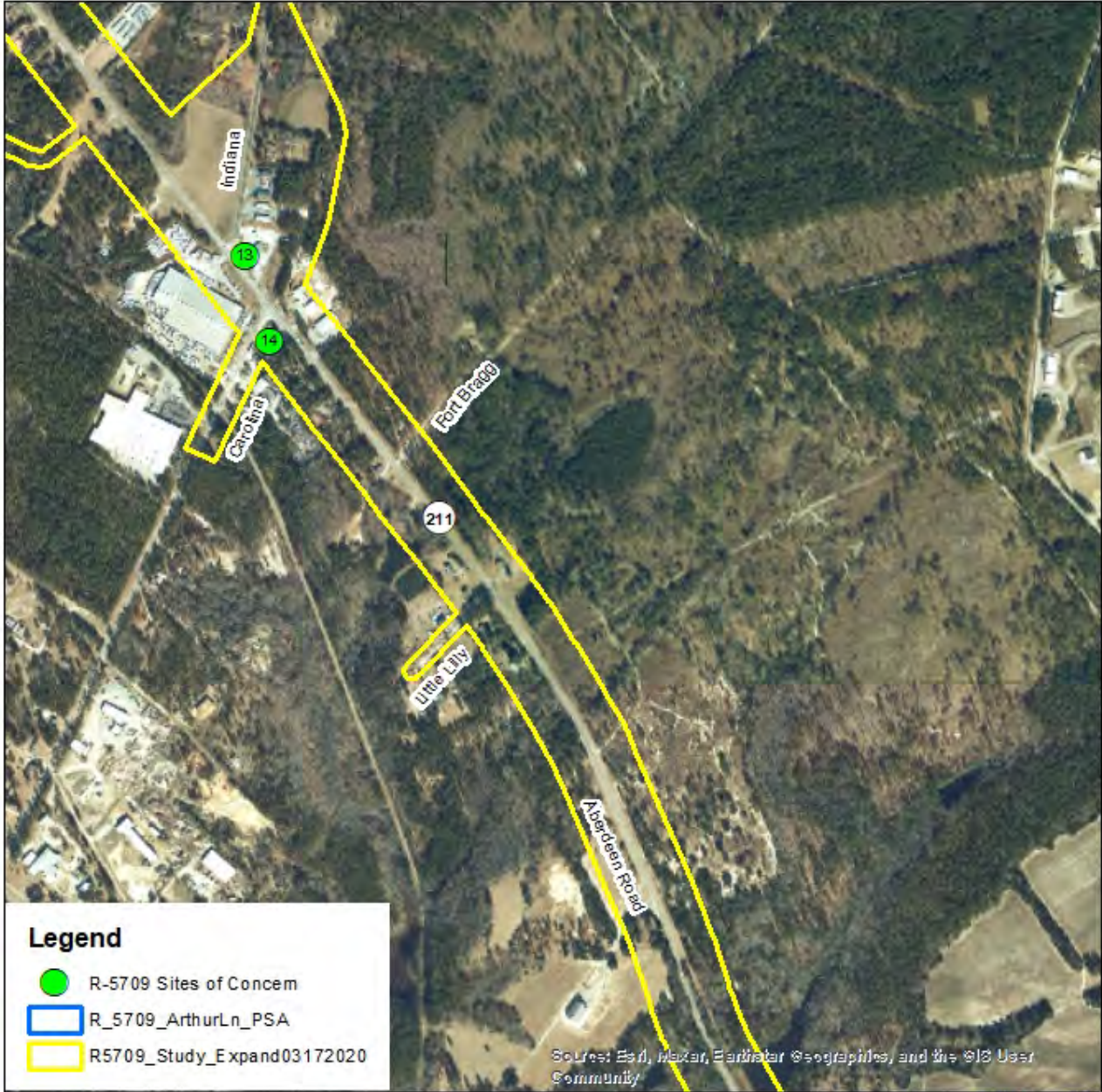


Figure 3
Location of GeoEnvironmental Sites of Concern

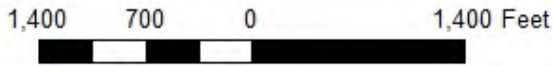


Legend

- R-5709 Sites of Concern
- R_5709_ArthurLn_PSA
- R5709_Study_Expand03172020



Project 50205.1.1 (TIP # R-5709)
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 SR 1244 (W. Palmer St.)/SR 1311 (Mockingbird
 Hill Rd.) in Raeford, Moore & Hoke Counties



NC Department of Transportation
 Geotechnical Engineering Unit
 GeoEnvironmental Section

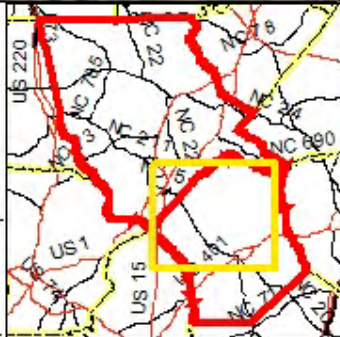
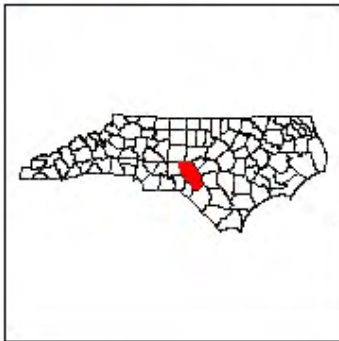


Figure 4
Location of GeoEnvironmental Sites of Concern



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 Hill Rd.) in Raeford, Moore & Hoke Counties

3,000 1,500 0 3,000 Feet



NC Department of Transportation
 Geotechnical Engineering Unit
 GeoEnvironmental Section

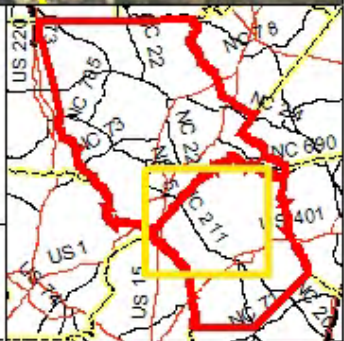


Figure 5
Location of GeoEnvironmental Sites of Concern



- Legend**
- R-5709 Sites of Concern
 - ▭ R-5709 Study Area
 - ▭ R-5709 Expanded Study Area



Project 50205.1.1 (TIP # R-5709)
Widen NC 211 from US 15-501 in Aberdeen to
SR 1244 (W. Palmer St.)/SR 1311 (Mockingbird
Hill Rd.) in Raeford, Moore & Hoke Counties



2,300 1,150 0 2,300 Feet



NC Department of Transportation
Geotechnical Engineering Unit
GeoEnvironmental Section

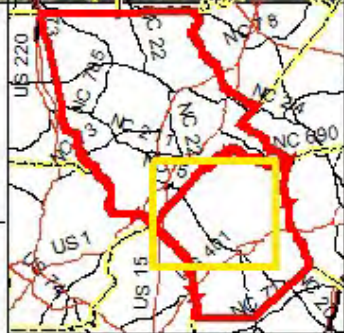
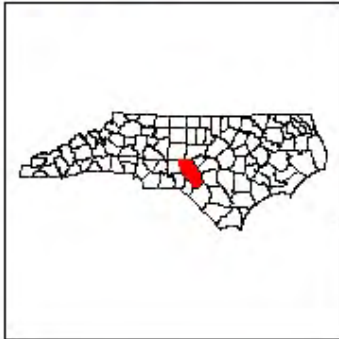
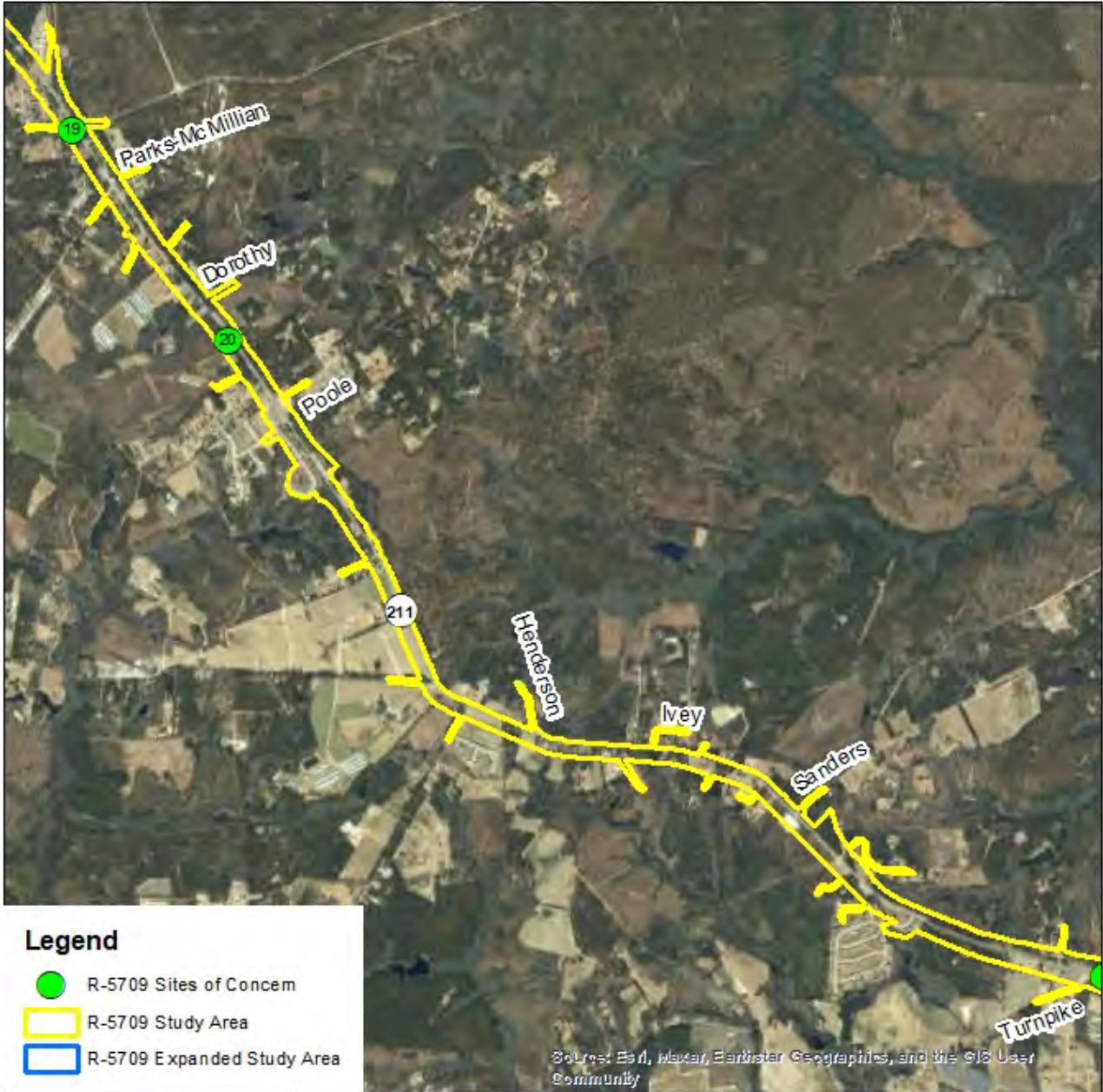



Figure 6
Location of GeoEnvironmental Sites of Concern



Project 50205.1.1 (TIP # R-5709)
 Widen NC 211 from US 15-501 in Aberdeen to
 SR 1244 (W. Palmer St.)/SR 1311 (Mockingbird
 Hill Rd.) in Raeford, Moore & Hoke Counties

5,700 2,850 0 5,700 Feet

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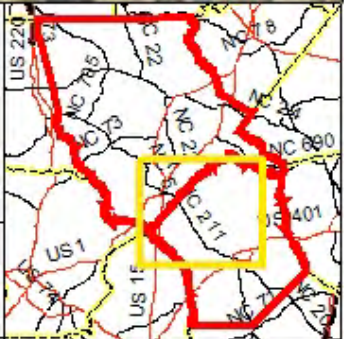


Figure 7
Location of GeoEnvironmental Sites of Concern

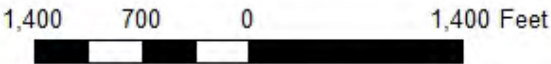



Legend

- R-5709 Sites of Concern
- R-5709 Study Area
- R-5709 Expanded Study Area



Project 50205.1.1 (TIP # R-5709)
 Widen NC 211 from US 15-501 in Aberdeen to
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