



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

January 8, 2008

MEMORANDUM TO: Jennifer Harris, PE
Staff Engineer
N.C. Turnpike Authority

FROM: Terry W. Fox, LG
GeoEnvironmental Project Manager
Geotechnical Engineering Unit

TIP NO: R-2576
WBS: 34470.1.TA1
COUNTY: Currituck
DESCRIPTION: Mid-Currituck Bridge, from Coinjock to Corolla

SUBJECT: **GeoEnvironmental Impact Evaluation**

A handwritten signature in blue ink that reads "Terry W. Fox".

Purpose

This report presents the results of a geoenvironmental impact evaluation conducted along the above referenced project. The main purpose of this investigation is to identify properties within the project study area that are or may be contaminated and therefore result in increased project costs and future liability if acquired by the Department. Geoenvironmental impacts may include, but are not limited to, active and abandoned underground storage tank (UST) sites, hazardous waste sites, regulated landfills and unregulated dumpsites.

Techniques/Methodologies Used

The Geographical Information System (GIS) was consulted to identify known environmentally impacting sites in relation to the project corridor. GeoEnvironmental Section personnel conducted a field reconnaissance survey along the 9.9 mile project corridor on December 10, 2007. A search of appropriate environmental agencies' databases was performed to assist in evaluating sites identified during this survey.

Findings

Underground Storage Tank (UST) Facilities

Based on our study, eleven (11) sites presently, or formerly containing petroleum underground storage tanks (UST's) were identified within the project limits.

Hazardous Waste Sites

No Hazardous Waste Sites were identified within the project limits.

Landfills

No apparent landfills were identified within the project limits.

Other GeoEnvironmental Concerns

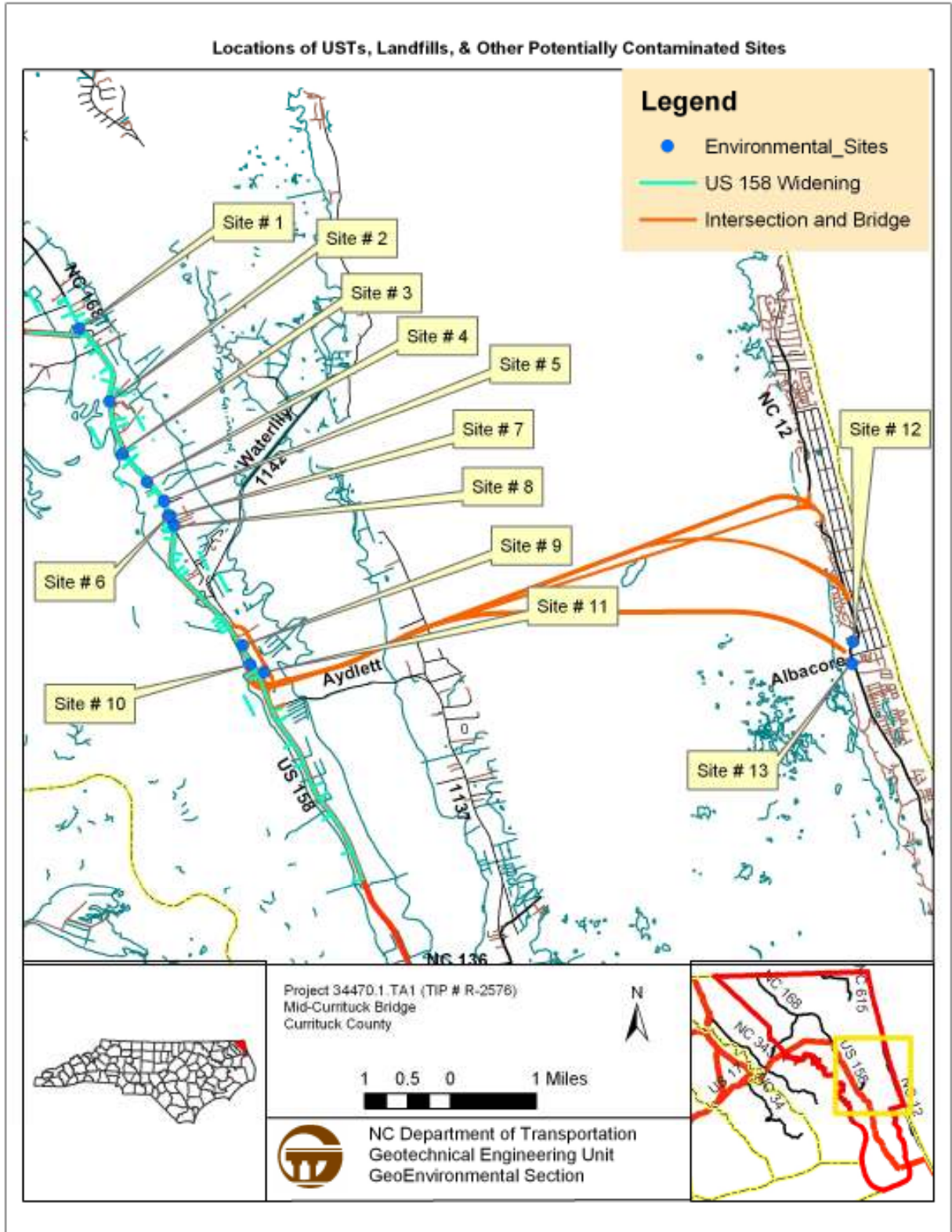
Two (2) other GeoEnvironmental Concerns (automotive junkyards) were identified within the project limits.

Anticipated Impacts

Eleven (11) possible UST facilities and two (2) automotive junkyards were identified within the proposed project corridor. We anticipate medium to non-existent monetary and scheduling impacts resulting from this site.

The GeoEnvironmental Section observed no additional contaminated properties during the field reconnaissance and regulatory agencies' records search. The GeoEnvironmental Section will provide soil and groundwater assessments on each of the above properties after identification of the selected alternative and before right of way acquisition. Please note that discovery of additional sites not recorded by regulatory agencies and not reasonably discernable 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.

TWF/CEH



Known and Potential GeoEnvironmental Impact Sites

1)	Property Name 7-Eleven 20996 3948 Caratoke Hwy Barco, NC 27917 Facility ID #: 0-011789 Incident #: 20049	Property Owner: 7-Eleven Inc. P.O. Box 711 Dallas, TX 75221 UST Owner: 7-Eleven Inc. P.O. Box 711 Dallas, TX 75221
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This facility currently operates as a convenience store & gas station. It is located in the northwest quadrant of Caratoke Hwy and Shortcut Road intersection. The tank bed is located approximately 50 feet from the edge of pavement. According to the UST Section registry there are two (2) tanks currently in use. Three (3) tanks were removed in 1999. There are several monitoring wells on site and appears to be under remediation. GWI # 20049 has been assigned to this facility. **This site is anticipated to present low geoenvironmental impacts to the project.**

2)	Property Name Poyner Auto Service 4178 Caratoke Hwy Barco, NC 27917 Facility ID #: 0-001907	Property Owner: Mary B. Poyner 4174 Caratoke Hwy Barco, NC 27917 UST Owner: Poyner Auto Service 4178 Caratoke Hwy Barco, NC 27917
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This facility (formerly Barco Esso) currently operates as Poyner Auto Service. It is located on the West side of Caratoke Hwy, approximately 375 feet south of Sam Wilkens Road. According to UST Section registry four (4) tanks were removed in 1988, and one (1) tank removed in 1993. According to the current owner, the tank bed was located just off the northeast corner of the building. No monitoring wells were noted at this facility. **This site is anticipated to present low geoenvironmental impacts to the project.**

3)	Property Name Currituck Sports 4306 Caratoke Hwy Barco, NC 27917 Facility ID #: 0-011515 Incident #: 13593	Property Owner: Ralph H. Lane P.O. Box 767 Maple, NC 27956 UST Owner: Eastern Fuels Inc.
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This facility (formerly Dixie Trading) currently operates as Currituck Sports. It is located on the West side of Caratoke Hwy, approximately 2900 feet north of Simmons Road. The former tank bed is located on the southeast end of the parking lot. According to the UST Section registry five (5) tanks were closed in 1994. Several monitoring wells were noted at this site and it appears to be under remediation. GWI # 13593 has been assigned to this facility. **This site is anticipated to present low geoenvironmental impacts to the project.**

4)	Property Name Exxon Coinjock 4412 Caratoke Hwy Barco, NC 27917 Facility ID #: 0-011575 Incident #: 08479	Property Owner: Maira Enterprises 4412 Caratoke Hwy Barco, NC 27917 UST Owner: Maira Enterprises 4412 Caratoke Hwy Barco, NC 27917
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This facility currently operates as convenience store & gas station. It is located on the West side of Caratoke Hwy approximately 540 feet north of Simmons Road. According to the UST Section registry there are three (3) tanks currently in use, and they are located approximately 65 feet from the edge of pavement. Seven (7) USTs were removed in 1992. GWI # 8479 has been assigned to this facility. There are several abandoned monitoring wells on site. It does not appear to be under remediation at this time. **This site is anticipated to present low geoenvironmental impacts to the project.**

5)	Property Name Nancy's BP 4473 Caratoke Hwy Barco, NC 27917 Facility ID #:0-011903 Incident #: 31533	Property Owner: Midcounty Properties, LLC 125 Deerfield Lane Aydlett, NC 27916 UST Owner: Paul and Nancy Arvanitis
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This facility currently operates as a convenience store & gas station. It is located in the northeast quadrant of Caratoke Hwy and Coinjock Village Drive intersection. According to the UST Section registry there are three (3) tanks currently in use and they are located approximately 69 feet from the edge pavement. GWI # 31533 has been assigned to this facility. There are approximately 15 monitoring wells on site. The wells are currently being sampled by Terraquest. **This site is anticipated to present low geoenvironmental impacts to the project.**

6)	Property Name J. I. Hayman Hardware 4510 Caratoke Hwy Barco, NC 27917 Facility ID #:N/A	Property Owner: Jo Anne S. Hayman PO Box 109 Coinjock, NC 27923 UST Owner: Jo Anne S. Hayman PO Box 109 Coinjock, NC 27923
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This facility currently operates as a Hardware Store & Lumber Yard. It is located on the West side of Caratoke Hwy approximately 450 feet north of Coinjock Acres Road. There is one (1) underground heating oil tank located on the North side of the building approximately 135 feet from the edge of pavement. **This site is anticipated to present negligible to low geoenvironmental impacts to the project.**

7)	Property Name Citgo (Coinjock Amoco) 4511 Caratoke Hwy Barco, NC 27917 Facility ID #:0-034349	Property Owner: C. Kevin and Cynthia Spain PO Box 158 Poplar Branch, NC 27965 UST Owner: Eastern Fuels
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This facility currently operates as a convenience store & gas station. It is located on the East side of Caratoke Hwy approximately 400 feet north of Coinjock Acres Road intersection. According to the UST Section registry there are five (5) tanks in use, and are located behind the building, approximately 130 feet from the edge of pavement. No monitoring wells were noted at this facility. **This site is anticipated to present negligible low geoenvironmental impacts to the project.**

8)	Property Name Coinjock Gas House 4529 Caratoke Hwy Barco, NC 27917 Facility ID #:0-036321	Property Owner: Quality Oil Company PO Box 2736 Winston-Salem, NC 27102 UST Owner: Quality Oil Company PO Box 2736 Winston-Salem, NC 27102
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This facility operates as a gas station. It is located in the southeast quadrant of Caratoke Hwy and Coinjock Acres Drive intersection. According to the UST Section registry there are two (2) tanks in use, and are located approximately 140 feet from the edge of pavement. No monitoring wells were noted at this facility. **This site is anticipated to present negligible to low geoenvironmental impacts to the project.**

9)	Property Name Coinjock Automotive 4901 Caratoke Hwy Coinjock, NC 27923 Facility ID #:N/A	Property Owner: Earl and Loretta Mason 48 Carpenter Ave Mansfield, MA 02048 UST Owner: Earl and Loretta Mason 48 Carpenter Ave Mansfield, MA 02048
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This facility operates as an auto service garage and small junk yard. It is located on the East side of Caratoke Hwy approximately 730 feet south of Young Road. There is no evidence of any UST system. The fenced area around the service area is approximately 200 feet from the edge of pavement. **This site is anticipated to present low to medium geoenvironmental impacts to the project.**

10)	Property Name Henry's 4952 Caratoke Hwy Coinjock, NC 27923 Facility ID #:0-024772	Property Owner: Barco and Cage Inc 4952 Caratoke Hwy Coinjock, NC 27923 UST Owner: Barco and Cage Inc 4952 Caratoke Hwy Coinjock, NC 27923
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This facility operates as a convenience store & gas station. The station is located on the West side of Caratoke Hwy approximately 160 feet north of Markert Road. According to the UST Section registry there are four (4) tanks in use, and are located approximately 75 feet from the edge of pavement. No monitoring wells were noted at this facility. This facility was not open at the time of our field investigation. **This site is anticipated to present low geoenvironmental impacts to the project.**

11)	Property Name Precision Auto Center 4987 Caratoke Hwy The Stuff Store 4995 Caratoke Hwy Coinjock, NC 27923 Facility ID #:N/A	Property Owner: David A. Baldwin 4987 Caratoke Hwy Coinjock, NC 27923 UST Owner: David A. Baldwin 4987 Caratoke Hwy Coinjock, NC 27923
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Two businesses operate on this location; an auto service garage and a junk yard. The parcel is located on the East side of Caratoke Hwy, approximately 600 feet south of Markert Road. There is no evidence of any UST system. Stained soil from the junk automobiles was noted through out the property. **This site is anticipated to present medium geoenvironmental impacts to the project.**

12)	Property Name OB Gas 814 Ocean Trail Corolla, NC 27927 Facility ID #:0-036374	Property Owner: OB Gas LLC PO Box 120 Kitty Hawk, NC 27949 UST Owner: OB Gas LLC PO Box 120 Kitty Hawk, NC 27949
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This facility operates as a convenience store & gas station. It is located on the West side of Ocean Trail approximately 330 feet North of Malia Drive. According to the UST Section registry there are three (3) tanks in use, and are located approximately 50 feet from the edge of pavement. No monitoring wells were noted at this facility. **This site is anticipated to present low geoenvironmental impacts to the project.**

13)	Property Name Brew Thru 790 N. Ocean Trail Corolla, NC 27927	Property Owner: T B Shops LLC 1100-C Suite 102 S. Stratford Road Winston-Salem, NC 27103
	Facility ID #:0-033608	UST Owner: MDC Assoc. Inc.

This facility operates as a convenience store & gas station. It is located in the southwest quadrant of the Ocean Trail and Sunset Blvd intersection. According to the UST Section registry there are two (2) tanks in use, and are located approximately 160 feet from the edge of pavement on Ocean Trail. No monitoring wells were noted at this facility. **This site is anticipated to present low geoenvironmental impacts to the project.**

Appendix A
USTs, Landfills & Other Potentially Contaminated Sites

Site #	Type	Location	UST Facility ID #	Property Owner	UST Owner	Anticipated Impacts	Anticipated Severity	Comments
1	UST	3948 Caratoke Hwy	0-011789	7-11 Inc	7-11 Inc.	Petroleum contaminated soils	Low	(US 158 to NC 168 Widening) Current gas station GWI # 20049
2	UST	4178 Caratoke Hwy	0-001907	Mary B. Poyner	Poyner Auto Service	Petroleum contaminated soils	Low	(US 158 to NC 168 Widening) Former Barco Esso
3	UST	4306 Caratoke Hwy	0-011515	Ralph H. Lane	Eastern Fuels Inc	Petroleum contaminated soils	Low	(US 158 to NC 168 Widening) Current gas station Former Dixie Trading GWI # 13593
4	UST	4412 Caratoke Hwy	0-011571	Maira Enterprises	Maira Enterprises	Petroleum contaminated soils	Low	(US 158 to NC 168 Widening) Current gas station Formerly Duck-N # 1 GWI # 8479
5	UST	4473 Caratoke Hwy	0-011903	Midcounty Properties, LLC	Paul & Nancy Arvanitis	Petroleum contaminated soils	Low	(US 158 to NC 168 Widening) Current gas station GWI # 31533
6	UST	4510 Caratoke Hwy	N/A	Jo Anne S. Hayman	Jo Anne S. Hayman	Petroleum contaminated soils	Low	(US 158 to NC 168 Widening) Underground Heating Oil Tank
7	UST	4511 Caratoke Hwy	0-034349	C. Kevin and Cynthia Spain	Eastern Fuels Inc	Petroleum contaminated soils	Low	(US 158 to NC 168 Widening) Current gas station

8	UST	4529 Caratoke Hwy	0-036321	Quality Oil Company	Quality Oil Company	Petroleum contaminated soils	Low	(US 158 to NC 168 Widening) Current gas station
9	Auto Repair and Junk yard	4901 Caratoke Hwy	N/A	Earl and Loretta Mason	Earl and Loretta Mason	Petroleum contaminated soils, batteries, tires, solvents	Low To Medium	(US 158 Intersection) Junk Yard
10	UST	4952 Caratoke Hwy	0-024772	Barco and Cage Inc	Barco and Cage Inc	Petroleum contaminated soils	Low	(US 158 Intersection) Current gas station Facility may be closed
11	Auto Repair and Junk Yard	4987/4995 Caratoke Hwy	N/A	David A. Baldwin	David A. Baldwin	Petroleum contaminated soils, batteries, tires, solvents	Medium	(US 158 Intersection) Junk yard
12	UST	814 Ocean Trail Corolla	0-036347	OB Gas LLC	OB Gas LLC	Petroleum contaminated soils	Low	(Bridge corridor on NC 12) Current gas station
13	UST	790 Ocean Trail	0-033608	T B Shops LLC	MDC Assoc. Inc	Petroleum contaminated soils	Low	(Bridge corridor on NC 12) Current gas station

Appendix B

**Site Photographs
December 10, 2007**



Site 1: 7-Eleven

Site 2: Poyner Auto Service



Site 3: Currituck Sports.

Site 4: Coinjock Exxon



Site 5: Nancy's Mini Mart



Site 6: J. I. Hayman Hardware



Site 7: Citgo (Coinjock Amoco)



Site 8: Coinjock Gas House



Site 9: Coinjock Automotive



Site 9: Coinjock Automotive



Site 9: Coinjock Automotive



Site 10: Henry's



Site 11: Precision Auto Center

Site 11: Precision Auto Center



Site 11: Precision Auto Center

Site 11: Precision Auto Center



Site 12: OB Gas



Site 13: Brew Thru