

Memo

Date: Friday, March 19, 2021

Project: B-3186/B-5898, US 23/74 (Great Smoky Mountains Expressway) from west of Richland Creek to west of NC 209 (Crabtree Road)
Lake Junaluska, Haywood County, NC
NCDOT Division 14

To: Garrett Higdon
Assistant Bridge Program Manager
NCDOT Division 14

From: Amanda B. Mills, HDR Engineering, Inc. of the Carolinas

Subject: **GeoEnvironmental Phase I Report**

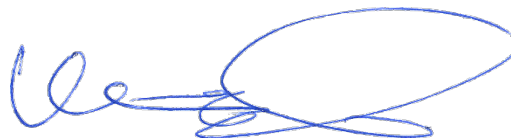
HDR has completed the attached GeoEnvironmental Phase I. Please contact the undersigned at (704) 338-6700 if you have questions concerning this project.

Sincerely,
HDR Engineering, Inc. of the Carolinas



Amanda B. Mills

Environmental Scientist



Mark P. Filardi, L.G.

Associate Senior Geologist

GeoEnvironmental Phase I Report

HDR Engineering, Inc. of the Carolinas (HDR) GeoEnvironmental staff conducted a Phase I for State Transportation Improvement Program (STIP) No. B-3186/B-5898, which involves the improvements along US 23/74 (Great Smoky Mountains Expressway) from west of Richland Creek to west of NC 209 (Crabtree Road) in Haywood County. Great Smoky Mountain Expressway is primarily a four-lane arterial extending northeast-southwest through the Study Area near Lake Junaluska, North Carolina. The portion of Dellwood Road within the Study Area extends west to east prior to merging with Great Smoky Mountain Expressway. A map showing the Study Area is shown in *Attachment 1*.

Note that this Phase I was conducted in accordance with the scope of work for North Carolina Department of Transportation (NCDOT) GeoEnvironmental Phase Is. As such, it is similar to an ASTM 1527-13 compliant Phase I but does not qualify the user for “All Appropriate Inquiry” protections.

Purpose

The main purpose of this investigation is to identify properties within the Study Area that are or may be contaminated and may therefore result in increased project costs and future liability if acquired by the NCDOT. Hazardous material 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

The Phase I of the B-3186/B-5898 Study Area consisted of an online review of applicable North Carolina Department of Environmental Quality (NCDEQ) databases and a field reconnaissance.

Information obtained from the NCDEQ database search and field reconnaissance were used to assign a risk ranking to sites of potential concern. General criteria used by HDR GeoEnvironmental staff in assigning risk are summarized in *Table 1* below.

Table 1 - Risk ranking criteria

Risk Ranking	Criteria
Low	Low risk sites may have minimal impact to the cost and schedule of the project. This designation generally applies to petroleum and automotive repair sites within the Study Area, regardless of status of release(s).
Moderate	Moderate risk sites may have moderate impact to the cost and schedule of the project redevelopment. This designation generally applies to dry cleaning sites within or hydrogeologically up-gradient of the Study Area that are not listed in the NCDEQ Dry-Cleaning Solvent Cleanup Act (DSCA) Program and other sites impacted by constituents deemed by the Environmental Professional as more difficult to handle/remediate. Sites with Land Use Restrictions intended to limit ground disturbance are also included in this designation.
High	High risk sites may have high impact to the cost and schedule. High risk sites may include active and former landfill sites, closed hazardous waste landfill sites, federal brownfields sites, DSCA Program sites, and Superfund sites. These sites pose “high risk” to a project if they are located within a short distance from the Study Area, within the Study Area, or have a documented history of groundwater or soil contamination that is upgradient from the Study Area.

Findings

Three sites of potential environmental concern were identified within the Study Area during this Phase I. These sites are summarized in *Table 2* below and discussed in more detail on the following pages.

Table 2 - Sites of potential environmental concern

Site No.	Site Address	NCDEQ Identification	NCDEQ Program ID and Status (if applicable)	Site Reconnaissance Usage	Potential Concern	Distance from Study Area (mi.)	Risk
1	Highways 19A-23 Lake Junaluska, NC 28785	Junaluska Chevron	UST Incident #7357; closed out 4/29/1991	Structures razed; retaining wall, access road	TPH in soil ranged from 7.8 to 11,889 ppm @ 10ft; soil excavated to 18ft.	SA ¹	Low
2	Access Rd. Exit 104 US 19-23 Waynesville, NC 28785	Quality Auto Parts	UST Incident #28941; closed out 9/24/2019	Structures razed; retaining wall, access road	GRO/DRO in soil exceeded the NC Action Levels; benzene, naphthalene, and toluene exceed 2L groundwater standards	SA	Low
3	59 Communications Drive Waynesville, NC 28785	NA	NA	Advanced Transmissions	Hydraulic lifts and possible oil/water separators	SA	Low

Notes:

1. SA indicates that the site is within the Study Area.

UST/AST Facilities

Based on the HDR study, two sites with former USTs were located within the Study Area. Both sites were listed in the NCDEQ UST database within the Study Area; both incidents are listed as closed with no further action required by NCDEQ. As such, the two former UST facilities are considered **Low Risk** to the Study Area.

Hazardous Waste Sites / Brownfields

There were no current or former hazardous waste sites or brownfields identified in NCDEQ databases or during the site reconnaissance.

Landfills

There were no current or former landfill sites identified in NCDEQ databases or during the site reconnaissance.

Dry Cleaners

There were no current or former dry cleaner sites identified in NCDEQ databases or during the site reconnaissance.

Other GeoEnvironmental Concerns

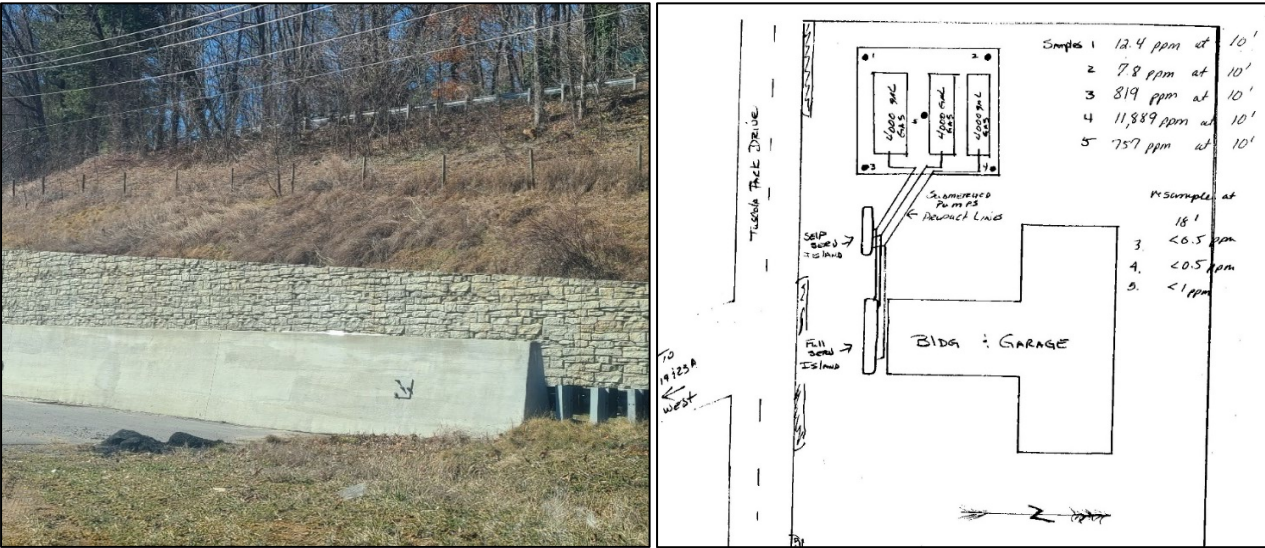
An automobile transmission service facility was identified within the Study Area during field reconnaissance but was not identified in NCDEQ databases. In-ground hydraulic lifts were visible through the open bay door during the site reconnaissance. Based on aerial photograph review, the building was constructed between 1998 and 2005, thus the potential for below-grade hydraulic cylinders is considered low; however, the potential use of an oil/water separator should be considered. The transmission facility is considered **Low Risk** to the Study Area.

Anticipated Impacts

In conclusion, no sites were identified that pose a **High Risk** or a **Moderate Risk** to the Study Area. Three sites were identified as **Low Risk** to the project based on site usage, distance and direction from the Study Area, or regulatory status. Additional details of these sites are provided below. GeoEnvironmental sites of concern are shown on the figure provided in *Attachment 1*.

Known and Potential Hazardous Material Sites

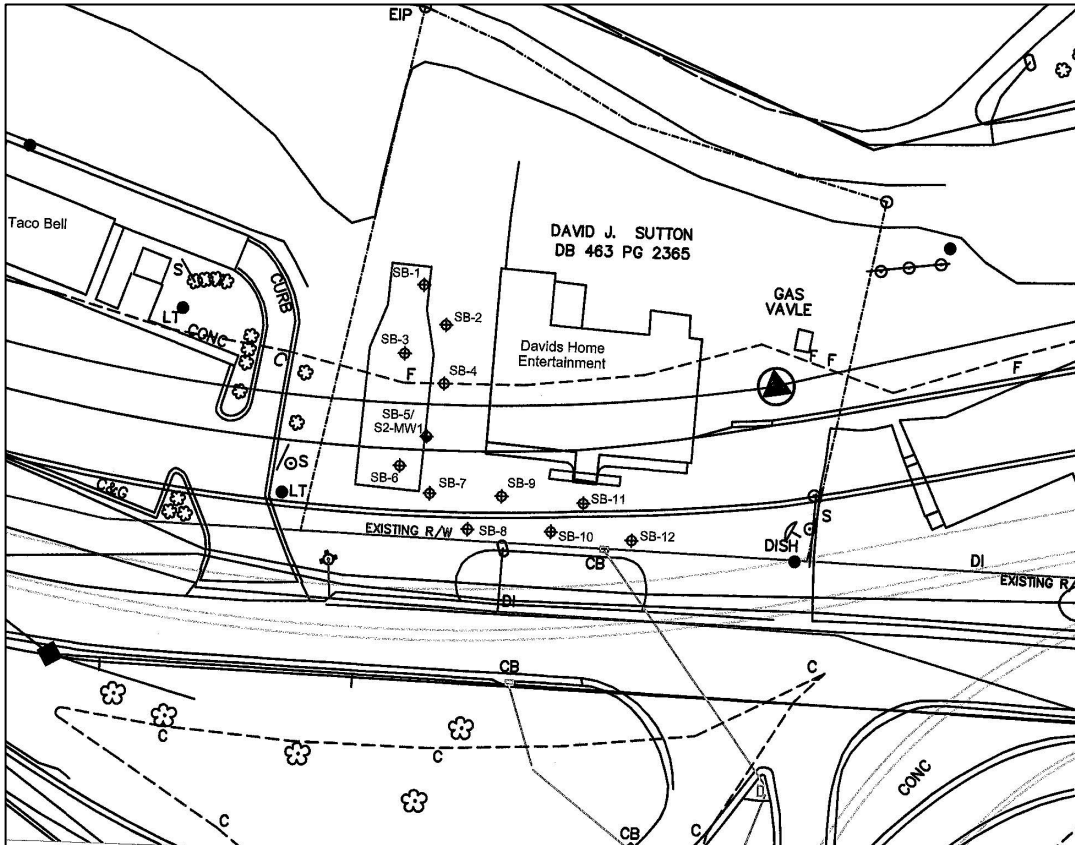
1. **Site:** Junaluska Chevron
Address: Highway 19A-23
Lake Junaluska, NC 28785
Haywood County PIN: NA
- Property Owner:**
NA – highway interchange was redone, and the gas station was demolished



Junaluska Chevron was previously located near the intersection of Crabtree Road and Highway 19A-23 within the Study Area. The NCDEQ database listed Junaluska Chevron in the leaking UST database identified as Incident #7357. Three 4,000-gallon USTs were removed and total petroleum hydrocarbons (TPH) were identified in soil ranging from 7.8 to 11,889 ppm at a depth of 10 feet below ground surface (bgs). Soil was excavated to 18 feet bgs and removed from the site. A Letter of No Further Action (NFA) was issued in April 1991 after soil excavation activities. During the site reconnaissance, the location of the former Junaluska Chevron was occupied by a highway interchange and former structures were no longer present.

This site is anticipated to present Low GeoEnvironmental impacts to the project.

2. Site:	Quality Auto Parts	Property Owner:
Address:	Access Rd. Exit 104 US 19-23 Waynesville, NC 28785	Department of Transportation 1546 Mail Service Center
Haywood County PIN:	8626-28-2825	Raleigh, NC 27611



The Quality Auto Parts site was previously located at Access Road Exit 104 US 19-23 and was within the Study Area. The site was listed in the leaking UST database as Incident #28941.

NCDOT commissioned separate Preliminary Site Assessments (PSA) of the Quality Auto Parts site for State Projects R-2210 and R-4047, respectively.

During the 1995 PSA, Front Royal advanced five soil borings within the former UST field on the southwestern quadrant of the property to evaluate soil quality. Samples were analyzed for total petroleum hydrocarbons (TPH) diesel range organics (DRO) and gasoline range organics (GRO) using EPA Methods 3550 and 5030, respectively. Soil sample results for GRO ranged from below detectable limits (BDL) to 4,779 mg/kg.

During the 2009 PSA, AMEC advanced 12 soil borings, installed two temporary monitoring wells, and collected one surface water sample in the vicinity of the former UST field, dispenser island, and adjacent to the right-of-way of Access Road. Soil was analyzed for diesel range organics (DRO) and gasoline range organics (GRO). Soil results indicated soil contamination above the NCDENR Initial Action Level of 10 mg/kg for DRO (30-210 mg/kg) and GRO (16-1,800 mg/kg). Groundwater was analyzed for benzene, toluene, ethylbenzene, xylenes (BTEX) and naphthalene. Groundwater results for benzene, toluene, and naphthalene exceeded the 2L Groundwater Standard, but not the gross contaminant levels. Surface water was analyzed for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). Neither VOCs nor SVOCs were detected in surface water samples. There was no information on site cleanup but an NFA was issued in September 2019.

Based on review of aerial photographs, the Quality Auto Parts facility was razed between 2013 and 2015 during widening of Access Road. The former location of the facility was occupied by a grassed slope and retaining wall during the current site reconnaissance.

This site is anticipated to present Low GeoEnvironmental impacts to the project.

3. **Site:** Advanced Transmissions
Address: 59 Communications Drive
Waynesville, NC 28785
Haywood County PIN: 8616-96-1210

Property Owner:
Advanced Transmissions
59 Communications Drive
Waynesville, NC 28785



Advanced Transmissions is located at 59 Communication Drive and is within the Study Area. The property was not listed in NCDEQ databases related to solid and hazardous waste incidents. However, hydraulic lifts were visible inside the open bay door and the presence of an oil/water separator is possible.

This site is anticipated to present Low GeoEnvironmental impacts to the project.

Closing

Please note that discovery of additional sites not recorded by regulatory agencies and not reasonably discernible during the field reconnaissance may occur. The GeoEnvironmental Section should be notified immediately after discovery of such sites so their potential impact(s) may be assessed.

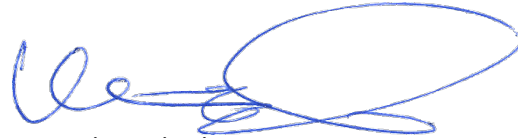
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Sincerely,

HDR Engineering, Inc. of the Carolinas



Amanda B. Mills
Environmental Scientist



Mark P. Filardi, LG
Senior Geologist

Attachments:

Location of GeoEnvironmental Sites of Concern Map

B-3186/B-5898 GeoEnvironmental Input Table (e-copy under separate cover)

B-3186/B-5898 DGN File showing Sites of Concern (e-copy under separate cover)

cc:

Philip Rogers, PE, HDR Project Manager

row-notify@ncdot.gov

File



LOCATION OF GEOENVIRONMENTAL SITES OF CONCERN
LIMITED ENVIRONMENTAL REVIEW T.I.P.: B-3186/B-5898
ATTACHMENT 1

