



September 22, 2023
Kleinfelder File No. RAL23R158568

Mr. Matthew J Alexander, P.E.
North Carolina Department of Transportation
State Geotechnical Engineer
1589 Mail Service Center
Raleigh, North Carolina 27699-1589

**SUBJECT: UST CLOSURE REPORT
WBS ELEMENT NO. 54035.1.1, TIP NO. U-5757
NC 8 (WINSTON RD) FROM 9TH STREET TO SR 1408 (BIESECKER RD) IN
LEXINGTON
PARCEL 22 PSH 5, SAM & SOAS LEM
1223 OLD US 52 (N 8), LEXINGTON, NC 27295
DAVIDSON COUNTY, NORTH CAROLINA
KLEINFELDER PROJECT NO. 24001596.001A**

Dear Mr. Alexander:

Please find enclosed Kleinfelder's report summarizing the underground storage tank (UST) removal activities and initial abatement actions performed at the referenced site. This report summarizes Kleinfelder's field activities, observations, and includes the laboratory reports.

Should questions arise or additional information be required, please contact the undersigned.

Sincerely,
KLEINFELDER, INC.

Adam Mahr
Staff Professional

Michael J. Burns, LG
Environmental Program Manager

AM/MJB: das
Enclosure

U-5757-P22
24001596.001A | RAL23R158568
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1223 Old US 52
September 23, 2023
www.kleinfelder.com



**UST CLOSURE REPORT
1223 OLD US 53 (N 8)
LEXINGTON, DAVIDSON COUNTY, NORTH CAROLINA 27295**

**TIP NUMBER U-5757
WBS ELEMENT NUMBER 54035.1.1**

**NC 8 (WINSTON RD) FROM 9TH STREET TO SR 1408
(BIESECKER RD) IN LEXINGTON
PARCEL 22 PSH 5/PARCEL NUMBER 1101000000058**

KLEINFELDER PROJECT NUMBER 24001596.001A

SEPTEMBER 22, 2023

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ONLY THE CLIENT OR ITS DESIGNATED REPRESENTATIVES MAY USE THIS DOCUMENT AND ONLY FOR THE SPECIFIC PROJECT FOR WHICH THIS REPORT WAS PREPARED.

A Report Prepared for:

North Carolina Department of Transportation
Geotechnical Unit
GeoEnvironmental Section
1020 Birch Ridge Drive
Raleigh, North Carolina 27610

UST CLOSURE REPORT

1223 OLD US 52 (N 8)

LEXINGTON, DAVIDSON COUNTY, NORTH CAROLINA 27295

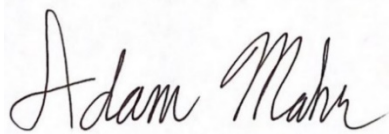
TIP NUMBER U-5757

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NC 8 (WINSTON RD) FROM 9TH STREET TO SR 1408 (BIESECKER RD) IN LEXINGTON

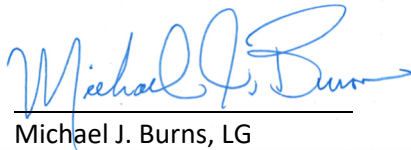
PARCEL 22 PSH 5/PARCEL NUMBER 1101000000058

Prepared by:



Adam Mahr
Staff Professional

Reviewed by:



Michael J. Burns, LG
Program Manager

KLEINFELDER, INC.

3200 Gateway Centre Blvd. | Suite 100
Raleigh, North Carolina 27560

September 22, 2023

Kleinfelder Project No. 24001596.001A

UST CLOSURE AND INITIAL ABATEMENT ACTION REPORT

1. SITE IDENTIFICATION

Facility I.D.:	Not Assigned
UST Incident Number (if known):	Not Assigned
Site Risk:	Not Determined
Site Name:	Not Assigned
Site Street Address:	1223 Old US 52 (N 8)
City/Town:	Lexington
Zip Code:	27295
County:	Davidson
Parcel ID	1101000000058
Description of Geographical Data Point (e.g., diesel fill port):	Center of UST Basin
Location Method (GPS, topographical map, other):	GPS
Latitude (decimal degrees):	35.842183
Longitude (decimal degrees):	-80.253675
Date of Report:	September 22, 2023

2. Information about Contacts Associated with the UST System

UST Owner:	Sam and Soas Lem
Address:	1306 Winston-Salem Road Lexington, North Carolina 27295
Phone:	Unknown
UST Operator:	Sam and Soas Lem
Property Owner:	Sam and Soas Lem
Address:	1306 Winston-Salem Road Lexington, North Carolina 27295
Property Occupant:	No current occupant
Consultant:	Kleinfelder, Inc.
Address:	3200 Gateway Centre Blvd. Suite 100

Phone: Morrisville, NC 27560
919.755.5011
Contact: Michael J. Burns, LG

Analytical Laboratory: Waypoint Analytical
Address: 449 Springbrook Road
Charlotte, NC 28217

Phone: 704.529.6364

State Certification No. 402

3. Information about Release

Date Discovered: August 22, 2023

Estimated Quantity of Release: Unknown

Cause of Release: Metal corrosion of UST

**Source of Release
(Dispenser/Piping/UST):** UST


Sizes and Contents of Tanks:
One (1) 1,000-gallon steel UST
One (1) 500-gallon steel UST
One (1) 200-gallon steel UST

Release Information: The UST system at the referenced site included one (1) 1,000-gallon commercial UST, one (1) 500-gallon commercial UST, and one (1) 200-gallon commercial UST. The USTs and associated piping were removed on August 22, 2023. Laboratory analysis of soil samples collected from the UST basin during closure indicated that a release of petroleum had occurred. Following limited over-excavation activities, no impacted soils above the TPH action levels, the Soil-to-Water MSCCs or Residential MSCCs.

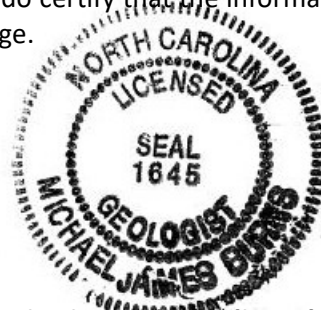
4. CERTIFICATION

SEAL AND SIGNATURE OF CERTIFYING LICENSED GEOLOGIST

I, Michael J. Burns, a Licensed Geologist for Kleinfelder, Inc., do certify that the information contained in this report is correct and accurate to the best of my knowledge.

DocuSigned by:

7E53DC44AC794CA...
Michael J Burns, LG
NC License No. 1645

09/25/2023



Kleinfelder, Inc. is permitted to practice geology | engineering in North Carolina. The certification number of the corporation is C521 | F-1312.

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- 3 Soil Sample Analytical Summary

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- 2 Site Plan
- 3 Soil Sample Locations

APPENDICES

- A UST-2B Site Investigation Report for Permanent Closure or Change-in-Service of Unregistered UST
UST-3 Permanent Closure or Change-in-service
- B Liquid Disposal Manifest
- C UST Disposal Certificates
- D Soil Disposal Material Manifests and Weight Tickets
- E Photographs
- F Laboratory Reports and Chain-of-Custody Forms

A EXECUTIVE SUMMARY

The subject site is located at 1223 Old US 52 in Lexington, Davidson County, North Carolina (Figure 1). The site is identified as Davidson County Parcel Number 1101000000058. The site was vacant at the time of removal of the USTs. Prior assessments indicated that the site operated as a gasoline service station in the 1960s.

During a Preliminary Site Assessment (PSA) performed at the site in July 2019 by Kleinfelder, two (2) orphan USTs were identified on Parcel 22 adjacent to the southwest corner of a single-story structure. No petroleum-impacted soil was identified in soil borings advanced on Parcel 22 at the time.

On August 22, 2023, Kleinfelder provided oversight of the removal of one (1) 1,000-gallon commercial UST (UST #1), one (1) 500-gallon commercial UST (UST #2), and one (1) 200-gallon commercial UST (UST #3). The USTs contained a water/petroleum mixture that was removed prior to removal of the USTs. Upon removal of the USTs, the tanks were observed to be in relatively poor condition.

After the removal of the USTs, Kleinfelder provided oversight of the over-excavation of petroleum impacted soil around UST #3. A total of 11.6 tons of soil was removed from the site. Confirmation sampling indicated no contaminant concentrations in excess of the Soil-to-Water Maximum Contaminant Concentrations (MSCCs) or Residential Cleanup MSCCs.

B SITE HISTORY AND CHARACTERIZATION

The subject site is located at 1223 Old US 52 (N 8) in Lexington, Davidson County, North Carolina (Figure 1). The site is identified as Davidson County Parcel Identification Number 1101000000058. The site was vacant at the time of removal of the USTs. Prior assessments indicated that the site operated as a gasoline service station in the 1960s.

C SITE CHECK

There was no evidence of a release from the UST prior to closure, therefore site check assessment procedures were not performed.

D UST CLOSURE PROCEDURES

Kleinfelder was contacted to remove two (2) USTs at a commercial property located at 1223 Old US 52 (N 8) in Lexington, Davidson County, North Carolina. A third UST was identified at the time of the removal of the USTs. NCDOT provided authorization to remove the third UST.

The following is a chronological description of the closure activities that were performed on August 22, 2023. Initial abatement measures are described in Section D.

August 22, 2023

- Kleinfelder personnel met A&D Environmental, Inc. (A&D) of Archdale, North Carolina at the site to begin UST closure activities.
- The location of the USTs were marked prior to removal activities. A&D began breaking up the concrete pad covering the USTs. Following the removal of the concrete, A&D began excavating the soil around the location of UST #1 to better uncover the fill port.
- A&D utilized a vacuum truck to remove a small quantity of residual product and water from UST #1. The liquid was manifested and taken offsite for disposal at A&D's facility in Archdale, North Carolina. A copy of the liquid material manifest is included in Appendix B.
- A&D began excavating the soil around UST #1. The top of UST #1 was located approximately three (3) feet below the ground surface (bgs) and had visible signs of corrosion. A hole was intentionally punctured in the top of UST #1 for cleanout access.
- A&D excavated along the sides of UST #1 to expose the top of the tank. The tank was loosened and removed from the ground.
- No evidence of oil staining was observed beneath the location of the tank after removal.
- UST #1 was a single-wall steel tank that had a capacity of 1,000-gallons. The UST information is included on Table 1. A visual observation of the tank identified areas of corrosion and pitting. UST #1 was loaded onto a truck for proper off-site disposal by A&D. Copies of the tank manifests are included in Appendix C. Photographs of the UST removal are included in Appendix E.
- The same procedure as described for UST #1 was performed to remove UST#2.

- No evidence of oil staining was observed beneath the location of UST #2 after removal.
- UST #2 was a single-wall steel tank that had a capacity of approximately 500-gallons. The UST information is included on Table 1. A visual observation of the tank identified areas of corrosion and pitting. The UST was loaded onto a truck for proper off-site disposal by A&D.
- Following the removal of UST #1 and UST #2, Kleinfelder collected soil samples from the bottom of the tank basin underneath the former location of the USTs.
- The soil in the sampling areas were screened with a Photoionization Detector (PID) to minimize the amount of soil that needed to be hauled to a disposal facility.
- PID readings did not indicate the presence of impacted soils from underneath UST #1 and UST #2.
- Kleinfelder collected confirmatory total petroleum hydrocarbon (TPH) gasoline range organic (GRO) bottom samples to be analyzed by Waypoint Analytical.
- Following the removal of UST #1 and UST #2, a third UST was identified adjoining to the excavated tank basin.
- A&D excavated along the sides of UST #3 to expose the tank. UST #3 was visibly in poor condition and corroded into multiple pieces. The pieces of UST #3 were removed from the ground.
- UST #3 was a single-wall steel tank that had a capacity of approximately 200-gallons. The UST information is included in Table 1.
- Following the removal of UST #3, Kleinfelder collected a soil sample from underneath UST #3 to be screened with a PID. The PID reading indicated the likely presence of impacted soils from underneath UST #3.

E INITIAL RESPONSE AND ABATEMENT

- Soil screening with a PID was performed at the locations of UST #1, UST #2, and UST #3. Only soil around UST #3 appeared to be impacted based on PID readings. Therefore, initial abatement activities were only performed at UST #3.
- After screening with a PID and results indicated impacted soil, A&D excavated additional soil vertically and horizontally around the location of UST #3 until PID readings indicated the unlikely presence of impacted soils.
- Kleinfelder collected soil samples from the bottom of the tank basin and the north, east, and south sidewalls for risk-based lab testing. The soil was placed into laboratory provided containers, labeled, and maintained on ice until pickup by Waypoint Analytical.
- The samples were analyzed for volatile organic compounds (VOCs) by EPA method 8260, semi-volatile organic compounds (SVOCs) by EPA method 8270, extractable petroleum hydrocarbons (EPH), and volatile petroleum hydrocarbons (VPH) using the Massachusetts Department of Environmental Protection (MADEP) methods. The sample locations are shown on Figure 3. Analytical results are provided in Table 3.
- A total of 11.6 tons of soil was excavated, loaded, and transported offsite for disposal at Great Oak Landfill in Randleman, North Carolina. A copy of the transportation manifests is included in Appendix D.
- Following soil sample collection, the excavation was backfilled with clean soil, compacted, and covered with gravel.

F SAMPLE RESULTS

The laboratory analysis of the soil samples surrounding UST #3 had no concentrations that exceeded Soil-to-Water or Residential MSCCs. Petroleum-impacted soil was not identified at concentrations that exceeded the total petroleum hydrocarbon (TPH) gasoline range organic (GRO) actions level from underneath UST #1 and UST #2.

The sample locations are shown on Figure 3 and the laboratory results are summarized in Table 3. The laboratory report and associated chain-of-custody document are included in Appendix F.

G CONCLUSIONS

Based Kleinfelder's field observations, and the results of the laboratory analyses, Kleinfelder presents the following conclusions:

- Three (3) USTs were closed by removal on August 22, 2023. The USTs were observed to be in poor condition with obvious signs of corrosion and pitting.
- A total of 324 gallons of liquid was collectively removed from the USTs prior to excavation.
- A total of 11.6 tons of soil was excavated, manifested, and hauled offsite for disposal.
- The excavation was backfilled with clean soil, compacted, and covered with gravel.
- Confirmation laboratory analysis of soil samples indicated no residual soil contamination above the Soil-to-Water or Residential Cleanup MSCCs.

H LIMITATIONS

Kleinfelder's work will be performed in a manner consistent with that level of care and skill ordinarily exercised by other members of its profession practicing in the same locality, under similar conditions and at the date the services are provided. Kleinfelder's conclusions, opinions and recommendations will be based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no guarantee or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

Kleinfelder offers various levels of investigative and engineering services to suit the varying needs of different clients. It should be recognized that definition and evaluation of geologic and environmental conditions are a difficult and inexact science. Judgments leading to conclusions and recommendations are generally made with incomplete knowledge of the subsurface conditions present due to the limitations of data from field studies. Although risk can never be eliminated, more-detailed and extensive studies yield more information, which may help understand and manage the level of risk. Since detailed study and analysis involves greater expense, Kleinfelder's clients participate in determining levels of service that provide adequate information for their purposes at acceptable levels of risk. More extensive studies, including subsurface studies or field tests, should be performed to reduce uncertainties. Acceptance of this report will indicate that NCDOT has reviewed the document and determined that it does not need or want a greater level of service than provided.

During the course of the performance of Kleinfelder's services, hazardous materials may have been discovered. Kleinfelder assumes no responsibility or liability whatsoever for any claim, loss of property value, damage, or injury that results from pre-existing hazardous materials being encountered or present on the project site, or from the discovery of such hazardous materials. Nothing contained in this report should be construed or interpreted as requiring Kleinfelder to assume the status of an owner, operator, or generator, or person who arranges for disposal, transport, storage or treatment of hazardous materials within the meaning of any governmental statute, regulation or order. NCDOT is solely responsible for directing notification of all governmental agencies, and the public at large, of the existence, release,

treatment or disposal of any hazardous materials observed at the project site, either before or during performance of Kleinfelder's services. NCDOT is responsible for directing all arrangements to lawfully store, treat, recycle, dispose, or otherwise handle hazardous materials, including cuttings and samples resulting from Kleinfelder's services.

TABLES

FIGURES

APPENDIX A
UST-2B SITE INVESTIGATION REPORT FOR PERMANENT CLOSURE OR CHANGE-IN-SERVICE OF
UNREGISTERED UST
UST-3 PERMANENT CLOSURE OR CHANGE-IN-SERVICE

APPENDIX B
LIQUID DISPOSAL MANIFEST

APPENDIX C
UST DISPOSAL CERTIFICATES

APPENDIX D
SOIL DISPOSAL MATERIAL MANIFESTS AND WEIGHT TICKETS

APPENDIX E PHOTOGRAPHS

APPENDIX F
LABORATORY REPORTS AND CHAIN-OF-CUSTODY FORMS
