

Robbins, Susanne

From: Michael Pfeifer <MPfeifer@smeinc.com>
Sent: Thursday, April 28, 2016 2:12 PM
To: Lefler, Bruce
Cc: Robbins, Susanne; Ed Woloszyn
Subject: RE: Wilmington Iron Works (FRMR) (NONCD0001179): S&ME Project No. 43-1600271 Approved as Complete

Ok...no too surprised - I corresponded with Sue about the status of access earlier in the week.

Thanks Bruce.

Michael W. Pfeifer

Project Manager



S&ME, Inc.

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From: Lefler, Bruce [mailto:bruce.lefler@ncdenr.gov]
Sent: Thursday, April 28, 2016 2:10 PM
To: Michael Pfeifer <MPfeifer@smeinc.com>
Cc: Robbins, Susanne <susanne.robbs@ncdenr.gov>; Ed Woloszyn <EWoloszyn@smeinc.com>
Subject: Wilmington Iron Works (FRMR) (NONCD0001179): S&ME Project No. 43-1600271 Approved as Complete

Michael,

Due to access issues, work associated with the subject project will not proceed. Please submit an itemized invoice to Sue Robbins (ccing me) that is in the same format as the approved cost proposal by **May 6, 2016**.

Thanks

Bruce E. Lefler, Jr.

Hydrogeologist

Division of Waste Management

North Carolina Department of Environmental Quality

919-707-8332 office

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Robbins, Susanne

From: Robbins, Susanne
Sent: Thursday, April 14, 2016 2:53 PM
To: John, Walch,
Cc: Lefler, Bruce
Subject: Wilmington Iron Works

Here's an update on the Wilm Iron Works access for soil gas sampling.

I talked with Michael Pfeifer, S&ME, about the work schedule, time to perform the work, and possible alternative sampling methods. They would be happy to perform sampling in the off hours (i.e. overnight), however we would still have to be sensitive to the condo residences as the drill rig would be right next to them. Please note Chandler's Wharf <http://chandlerwharfshops.com/> is a warehouse converted to shops and restaurants, so they are open on the weekends and evenings. The property owner is very concerned with taking up space in the parking lot and environmental type work being visible to her tenants. I emailed the property owner and kindly asked her to reconsider allowing access. Can only wait to see if they change their minds. As far as sampling options, hand auger would not work since a tight seal is needed.

Sampling in the parking garage does not appear to be a viable option. The height would be too limiting for the drill rig. Coring through the concrete to install a typical sub-slab is another option discussed, however, it is likely that the thickness of concrete is greater than 2-3 inches (probably more like 6-8 inches). The coring machine is only designed for a standard few inches. There are also many utilities in this area, especially the driveway into the parking deck. Note that there is only one single width drive into the parking deck and sampling in this area would block all access to the residents. It should also be noted that in speaking with the parking lot property owner, she indicated that she was present every day during the construction of the condos and that she never smelled anything and was not aware that anyone had complained about turpentine odors.

Another issue that may be a problem is the depth to groundwater which is shallow and the parking garage area is lower than the surrounding grade.

We talked briefly about a flux chamber sampler, which could be used at the property, but the results will not be quantitative.

Sue Robbins

Hydrogeologist
Division of Waste Management
North Carolina Department of Environmental Quality

Wilmington Regional Office
(910) 796-7411



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Robbins, Susanne

From: Robbins, Susanne
Sent: Monday, April 11, 2016 2:19 PM
To: 'Michael Pfeifer'
Subject: FW: Wilmington Iron Works VI Sampling

Hi Michael,

I left you a phone message Friday and was hoping to get a quick reply. Seems like the property owner has changed her mind now. It's a delicate access as she didn't want any of her tenants concerned about contamination on the property (her property is adjacent to the subject site). Call me so we can discuss some options on this Site. I will be out of the office tomorrow and Wednesday but will be able to return calls in the afternoon.

Sue Robbins

Hydrogeologist
Division of Waste Management
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(910) 796-7411



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From: Walch, John
Sent: Monday, April 11, 2016 1:11 PM
To: Jesneck, Charlotte <charlotte.jesneck@ncdenr.gov>; Lefler, Bruce <bruce.lefler@ncdenr.gov>
Cc: Robbins, Susanne <susanne.robbins@ncdenr.gov>
Subject: Wilmington Iron Works VI Sampling

Sue Robbins just called to tell me that the owner of the parking lot immediately adjacent to the site and has rescinded the verbal approval that was given late last week. Apparently the property owner is concerned that her tenants will see the sampling taking place.

Sue is contacting S&ME to see how long they estimate it would take to collect the two VI samples and how early the work could begin. In hopes that if the work could start very early and be only for a few hours before her tenants arrive, the owner may change her mind.

John W. Walch

Environmental Program Supervisor
Division of Waste Management
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Robbins, Susanne

From: Michael Pfeifer <MPfeifer@smeinc.com>
Sent: Tuesday, March 15, 2016 8:21 AM
To: Robbins, Susanne
Cc: Lefler, Bruce
Subject: Proposal for Wilmington Ironworks NONCD0001179
Attachments: Proposal 43-16000227 Wilmington Iron Work NONCD0001179s.pdf

Good Morning Sue –

Attached is the proposal for Soil Gas Assessment at the former Wilmington Ironworks site in Wilmington, New Hanover, North Carolina (NONCD0001179). Please contact me if you have any questions about the proposal.

Thank You -

Michael W. Pfeifer

Project Manager



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March 15, 2016

North Carolina Department of Environmental Quality
217 West Jones Street
Raleigh, North Carolina 27603

Attention: Ms. Sue Robbins

via email: Susanne.robbins@ncdenr.gov

Reference: **Proposal for Soil Gas Assessment
Former Wilmington Iron Works**
Site ID: NONCD0001179
S. Water, S. Front & Orange Streets, Wilmington, North Carolina
S&ME Proposal No. 43-1600271

Dear Ms. Robbins:

S&ME, Inc. (S&ME) appreciates this opportunity to present the following proposal for environmental services. The scope of services outlined herein is provided as a Sampling and Analysis Plan (SAP) to provide soil gas sampling services at the property identified above in Wilmington, New Hanover County, North Carolina. S&ME's scope of services will be provided under the terms and conditions of North Carolina Department of Environment Quality (NCDEQ) Contract #N14009i, dated September 26, 2014.

This proposal is in response to a request for assessment services in a March 11, 2016, email from Ms. Sue Robbins of the NCDEQ, Inactive Hazardous Sites Branch (IHSB). Based on the email, S&ME understands that NCDEQ wants to assess the soil gas located adjacent to the property line in a parking area at the above-referenced site for potential presence of turpentine in the soil. The site was reportedly formerly used as iron works, and mill site, and also produced turpentine.

❖ SCOPE OF SERVICES

Task 1: Property Access and Project Preparation

Task 1 includes the preparation of this SAP and project management. Ms. Robbins indicated in her email that NCDEQ is arranging for site access and will notify S&ME when a completed access agreement is received from the property owner. Prior to mobilization to the site, S&ME will notify the public utility location service (NC One Call) and retain the services of a private utility locator to clear the locations of underground utilities at the property where subsurface assessment activities will take place. S&ME's field services will be conducted under a site specific Health and Safety Plan (HASP) to comply with 29 CFR 1910.120, hazardous waste operations and emergency response.

Task 2: Soil Gas Monitoring Point Installation and Sampling

S&ME proposes to install soil gas implants (SGIs) in a narrow strip of soil between the gravel parking area and the condominium complex located at the site. S&ME will use a track-mounted drill rig with direct push technology (Geoprobe®) to install up to two SGIs for the collection of soil gas samples. Due to the anticipated shallow groundwater table at the site, S&ME will assess depth to groundwater prior to installing the SGIs by advancing the Macro-Core® sample to a depth of apparent groundwater or five feet below ground surface (bgs), whichever comes first. If groundwater is encountered at depths shallower than two feet below the ground surface, S&ME will install the SGIs at a depth at least one foot above the observed water table. The SGIs will be installed as follows:

- Using a Macro-Core® sampler or 1-inch direct push rods, the SGI sampling tool will be installed in general conformance with Geoprobe's® "Implants Operation" manual.
- A SGI will be attached to a Teflon® tubing assembly and will be inserted into the hole. Following the installation, glass beads or fine grained washed sand will be utilized to fill the annular space around the SGI. S&ME will seal the SGI with hydrated bentonite clay.

Following installation, S&ME will perform a leak test by attaching a brass T-connector to the end of Teflon® tubing and connecting a section of Teflon® tubing to one part of the T-connector and another section will be attached to an individually certified six liter Summa canister. A plastic shroud will be placed overtop the SGI tubing array and Summa canister. The other section of tubing from the T-connector will be fitted through the shroud and attached to a helium detector. S&ME will then inject helium (tracer) gas into the plastic shroud. The sampling array will be monitored for leaks by monitoring for the presence of helium gas concentrations within the Teflon® tubing. If the tracer gas is not detected through the sampling array then the sampling array will be considered leak free. If leaks are detected, the sampling array will be re-built and re-tested for leaks.

After successfully passing the leak test, the leak detection shroud will be removed and three volumes of air will be purged from the SGI sampling array using a calibrated low flow pump (similar to personal air monitoring pump). After purging the sampling array, an individually certified six-liter Summa canister fitted with a one-hour regulator will be used for sample collection.

Two record soil gas samples will be collected. For QA/QC protocols, one split sample (duplicate) sample will also be collected. The individually-certified Summa canisters will be shipped to ESC Lab Sciences, a North Carolina-certified laboratory for analysis. The record soil gas samples and QA/QC sample will be analyzed only for turpentine only by US EPA Method TO-15 with library search.

After the soil gas samples are collected, the ground coordinates of the SGI locations will be recorded with a GPS receiver with sub-meter accuracy and differentially corrected, then S&ME will remove the SGI tubing approximately one foot below the ground surface and backfill the borings with bentonite.



Task 3: Data Submittal

After completing Tasks 1 and 2, and upon receipt of the laboratory analytical reports, S&ME will prepare and submit a report which includes the following:

- ◆ Introduction: Describes the site conditions at the time of field activities.
- ◆ Methods: Describes the procedures for installation of the soil vapor points and collecting soil vapor samples.
- ◆ Results: S&ME will review and tabulate the laboratory analytical results and SGI locations and compare the laboratory results to applicable screening levels. S&ME will provide figures showing the sample locations and analytical results. Quality control data will be presented and discussed with regard to data quality.
- ◆ Conclusions: S&ME will summarize the findings of the investigation.
- ◆ Appendices: S&ME will provide completed field logs, photographic logs, vapor monitoring point construction details, and a copy of the laboratory analytical report and chain of custody.

S&ME will generate a portable document file (pdf) of the report and issue the report to IHSB via email. Submitted file sizes will be limited to 20 MB.

❖ Schedule

Upon receipt of the Task Authorization, S&ME will proceed with the following schedule:

Task	Timeline (Business Days)
Task 1: Project Preparation	
Time from receipt of TA and signed property access agreement to mobilization	10
Task 2: Soil Gas Monitoring Implant Installation and Sampling	
Field Services	1
Laboratory Processing Time	10
Task 3: Data Reduction, Analysis and Report	
Report Preparation	8
Review of Draft Report by DEQ Proj. Mgr.	5
Final Report Submittal	2
PROJECT SCHEDULE – TOTAL PROJECTION	36 BUSINESS DAYS

❖ Assumptions and Limitations

This SAP is intended as an initial assessment of soil gas and is not intended as a comprehensive assessment to delineate the constituents of concern (COC) in soil, nor will S&ME assess and approximate vapor intrusion pathways. This SAP does not include risk assessment or analysis of exposure to the COC.



❖ Associated Fees

The services described herein, including the analytical services, will be provided on a time and materials basis in accordance with the contract fee schedule. The proposed budget for the scope of services described above is \$ [REDACTED]. The proposed fee is based on the attached itemized fee schedule (**Attachment I, Table 1**).

❖ Authorization

It is our understanding that IHSB will authorize these services by signing the attached Task Authorization (**Attachment I, Table 1**). Upon receipt of the authorization, S&ME will proceed with our services.

We trust that this work plan and cost proposal is responsive to your needs. S&ME welcomes the opportunity to assist IHSB. Please contact us at (919) 872-2660 if you have any questions or comments regarding this proposal.

Sincerely,

S&ME, Inc.

Michael W. Pfeifer
Project Manager
mpfeifer@smeinc.com

Edmund Woloszyn, Jr., R.E.M.
Principal Scientist
ewoloszyn@smeinc.com

cc: Bruce Lefler, NCDEQ via email at bruce.lefler@ncdenr.gov

Attachments:

Attachment I – Table 1: Itemized Fees / Task Authorization

Attachments

Attachment I – Itemized Fee Estimate / Task Authorization

Robbins, Susanne

From: Michael Pfeifer <MPfeifer@smeinc.com>
Sent: Friday, March 11, 2016 2:50 PM
To: Robbins, Susanne
Cc: Lefler, Bruce
Subject: RE: Wilmington Iron Works Request for Proposal

Hi Susanne –

Thank you for sending the information along – we will have a proposal to you early next week. Please let me know when you have the signed Access Agreement in hand.

Thank you for this project!

Michael W. Pfeifer

Project Manager



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From: Robbins, Susanne [mailto:susanne.robbins@ncdenr.gov]
Sent: Friday, March 11, 2016 1:42 PM
To: Michael Pfeifer <MPfeifer@smeinc.com>
Cc: Lefler, Bruce <bruce.lefler@ncdenr.gov>
Subject: Wilmington Iron Works Request for Proposal

Hi Michael,

I need to get a proposal for a soil-gas sampling event in Wilmington, NC. I am sending the property owner an access agreement and will notify you when that is completed.

General Objective: Collect one or two soil-gas samples in a natural area between the Subject Site's Condo Complex and an off-site gravel parking lot. Marked in red on the attached map.

Site Information: Wilmington Iron Works
S Water, S Front, & orange Streets (downtown riverfront)
Wilmington, New Hanover, NC
NONCD0001179

Site Status: Complaint concerning turpentine odors during excavation for condos in 2000. Also a former UST site which received a NFA with residual contamination. Site was formerly an iron works and mill site and produced turpentine. Establishing a location for a vapor sample has been difficult due to building/utility locations and a high water table.

Request: Collect one to two samples in the soil area next to property line. You will be working and sampling in an off-site parking area. Samples are to be analyzed for turpentine using TO-15 with library search. Water table at site is very shallow. Sampling area is a narrow strip of soil and there are trees in the area. Please see the attached photos.

Please send the proposal as soon as possible. Thanks

Sue Robbins

Hydrogeologist

Division of Waste Management

North Carolina Department of Environmental Quality

Wilmington Regional Office

(910) 796-7411



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