ARCADIS
Infrastructure, environment, buildings

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Transmittal Letter

To:
Dave Szymanski

Copies:
Dawn Horst, IR
Marty Doster, NYSDEC
Cameron O'Connor, NYSDOH
File

From:
Marc Sanford

Date:
May 21, 2009

Subject:
Work Plan for Off-Site Groundwater Sampling, ARO Corporation Site, Cheektowaga, New York (Site No. 915147)

ARCADIS Project No.:
AY000220.0013

We are sending you:

☐ **Attached** ☐ **Under Separate Cover Via _____ the Following Items:**

☐ Shop Drawings ☐ Plans ☐ Specifications ☐ Change Order
☐ Prints ☐ Samples ☐ Copy of Letter ☒ Reports
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Copies	Date	Drawing No.	Rev.	Description	Action*
1	5/21/09			Work Plan for Off-Site Groundwater Sampling	
1	5/21/09			Table 7. Summary of Historical Monitoring Well TCE and DCE Results, Remedial Investigation Report – Volume 1, Law Environmental, Inc., Aro Corporation, Cheektowaga, New York.	
1	5/21/09			Appendix D. Tracer Report of Soil Gas Survey and Ground-Water Investigation, Remedial Investigation Report – Volume 1, Law Environmental, Inc., Aro Corporation, Cheektowaga, New York.	

Action*

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Mr. Dave Szymanski
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203

Subject:
Work Plan for Off-Site Groundwater Sampling, ARO Corporation Site, Cheektowaga, New York (Site No. 915147)

ENVIRONMENTAL

Date:
21 May 2009

Contact:
Marc Sanford

Phone:
518.452.7826

Email:
Marc.sanford@arcadis-us.com

Our reference:
AY000220.0013

Dear Mr. Szymanski:

This letter work plan has been prepared to supplement the on-going Soil Vapor Investigation (SVI) at the ARO Corporation site in Cheektowaga, New York. ARCADIS has previously collected soil gas samples on three separate occasions (in May 2008, September 2008, and February 2009) specifically related to an evaluation of whether volatile organic compounds (VOCs) are entering the soil gas in the vadose zone from site groundwater, and if these VOCs have the potential to migrate via soil gas into indoor air in nearby buildings. The purpose of the supplemental groundwater investigation is to evaluate whether groundwater in the vicinity of two households near the site (3745 and 3707 Broadway Street) has detectable concentrations of site-related VOCs.

Site Description and History

The ARO Corporation site (Site) is located on Broadway Street (Route 130) in the Town of Cheektowaga, Erie County, New York (Figure 1). The property consists of the former ARO Corporation parcel and two parcels formerly owned by Richard J. Zydel located adjacent to and west of the ARO parcel. The area surrounding the site is zoned as light industrial/residential. The site is an inactive hazardous waste disposal site and listed in the Registry of Inactive Hazardous Waste Disposal Sites in New York State as Site Number 915147. The site is designated as a Class “4” site.

The site is currently in the remedial action (RA) phase of the remedial program under the Consent Order with the NYSDEC. A vacuum-enhanced recovery (VER) system has been operating at the site to remediate chlorinated hydrocarbons in groundwater, with up to ten recovery wells operating under the current VER system configuration. Monitoring activities include monthly visits to conduct system operation and maintenance and the collection of water and vapor samples to monitor the local

POTW. Semi-annual groundwater monitoring and annual reporting are also performed as part of the remedial program.

Objective

As described in the *Work Plan for Soil Vapor Investigation Study* (ARCADIS 2007), the vapor intrusion pathway is being evaluated in a phased manner. In the initial phase of work, ARCADIS conducted 3 soil gas and ambient air surveys to determine the presence of soil gas upgradient of the area of groundwater impacts and in the direction of the adjacent households. In result of the outcome of the first phase of work, an evaluation whether groundwater in the vicinity of two households near the site (3745 and 3707 Broadway Street) have detectable concentrations of VOCs at levels that could produce impacted soil gas at those locations.

Scope of Work

Access Agreement

On behalf of Ingersoll Rand, ARCADIS will request access to the off-site properties from the owners at 3745 and 3707 Broadway Street to collect groundwater samples at the proposed locations (Figure 2). Each property owner will be provided with a letter explaining the proposed work on their property and an access agreement requesting permission to enter the property. Receipt of a signed access agreement will need to be obtained prior to the initiation of any work.

Utility Mark Out

Following being granted access to the properties and prior to drilling activities, ARCADIS will conduct utility clearance and site mapping in order to establish the locations of underground utilities. Local authorities will be contacted about the locations of underground utility lines (fiber optic, water, gas, electrical, telephone, cable television, etc.). The Underground Facilities Protective Organization (UFPO) will be contacted, and a request for marking underground utilities will be submitted. Excavation activities will not begin until clearance of subsurface utilities is obtained from UFPO. In addition, prior to beginning fieldwork, a visual reconnaissance of the work area will be conducted to identify overhead utilities (e.g., electrical lines) that could create hazardous conditions during execution of the work.

As part of utility clearance, it may be required to complete some initial intrusive activities (i.e. air knifing, hand excavation) to locate and/or expose underground utilities in those areas. The need for these activities will be evaluated following utility mark-out and site mapping. In general, extreme care and evaluation of underground utilities will be completed to minimize potential impacts on local utilities.

Soil Boring Installation and Groundwater Sampling

ARCADIS will oversee the completion of one boring on each of the properties at 3745 and 3707 Broadway Street (approximate locations are shown on Figure 2). It is anticipated that each of the borings will be drilled using a truck mounted Geoprobe™ drill rig. Continuous soil samples will be collected at each boring location using macro core open-ended samplers to a maximum depth of 5-feet below the water table or to the refusal, whichever occurs first. The macro core samplers are 2-inches in diameter and are approximately 60-inches long, and are fitted with a removable cutting shoe and a clear acetate liner. Soil samples will be visually described for composition, texture and logged by an ARCADIS scientist.

Groundwater samples will be collected from the open borehole using standard purge and bail techniques. Up to three well volumes will attempt to be purged prior to sampling. If water yield is low, three well volumes may not be purged. A temporary well screen will be installed in the borehole, as appropriate, to facilitate groundwater sampling. In addition, a groundwater sample will be collected from monitoring well MW-1 which is located on the ARO Corporation property and to the west of the 3707 Broadway residence. Groundwater samples will be submitted to TestAmerica, Inc. located in Amherst, New York for laboratory analysis of the site-related volatile organic compounds (VOCs) trichloroethene, cis -1,2 Dichloroethene and vinyl chloride with a standard turnaround time.

At the completion of sampling activities, the soil borings will be backfilled with native materials and sand to the ground surface. Any repairs to landscaping in each of the private residence yards resulting from the installation of the soil borings will also be completed.

Quality Assurance/Quality Control

One duplicate sample will be collected from a random location during the groundwater investigation. Following the receipt of laboratory data, a review of the

deliverables (independent of the analytical laboratory) will be completed according to the guidelines established by NYSDEC for Data Usability Summary Review (DUSR). A DUSR report will be prepared for the sample data package prepared by the laboratory. This DUSR report will be appended to the summary report (as described below).

Summary Report Preparation

Following completion of the supplemental groundwater investigation tasks, the results of the groundwater sampling will be presented in a summary letter report. The final report will include a figure showing the boring locations, soil boring logs, presentation of the analytical results for the groundwater samples, and a discussion of any additional work, if warranted.

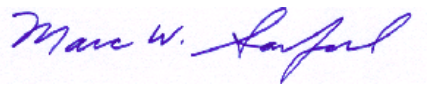
Schedule

ARCADIS will initiate field activities within 30 days of NYSDEC approval of this Work Plan, pending access from the property owners. A summary letter report will be provided to NYSDEC within 30 days of the receipt of analytical data from the laboratory.

Please contact me if you have any questions or require additional information.

Sincerely,

ARCADIS



Marc W. Sanford
Project Manager

Copies:

Dawn Horst – Ingersoll Rand

CITY:(ALBANY) DIV/GROUP:(ENV) DB:(R.HOOTMAN) LD:(B.ALTOM) PIC:(M.SANFORD) PM:(M.SANFORD) TM:(G.MILES)
G:\ENVCAD\Knoxville\RETURN-TO\Albany-NY\AY000220\0012\200905 WPLAN\AY000220_WP_reg.dwg LAYOUT: 1 SAVED: 5/21/2009 9:46 AM ACADVER: 17.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: TN1_STANDARD.CTB PLOTTED: 5/21/2009 9:46 AM BY: ALTOM, BRENDA

INGERSOLL RAND, ARO CORPORATION SITE
CHEEKTOWAGA, NEW YORK
WORK PLAN FOR OFF-SITE GROUNDWATER SAMPLING

Site Location Map

ARCADIS

FIGURE
1

SOURCE: RAY L. SONNENBERGER LAND SURVEYOR, 1997

LEGEND

MW–17	MONITORING WELL LOCATION AND DESIGNATION
OW–101	OBSERVATION WELL LOCATION AND DESIGNATION
RW–2	RECOVERY WELL LOCATION AND DESIGNATION
VEROW–2	MONITORING WELL LOCATION AND DESIGNATION
PF–2	PNEUMATIC FRACTURING WELL LOCATION AND DESIGNATION
SG–1	SOIL–GAS PROBE LOCATION
AA	AMBIENT AIR SAMPLING LOCATION
	RECOVERY SYSTEM TRENCH/PIPING
	PROPOSED GROUNDWATER SAMPLE LOCATION

N

0 80 FT

INGERSOLL RAND, ARO CORPORATION SITE
CHEEKTOWAGA, NEW YORK
WORK PLAN FOR OFF-SITE GROUNDWATER SAMPLING

Proposed Groundwater Sample Locations

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FIGURE
2