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MODOCK ROAD SPRINGS (835013)

IMMEDIATE INVESTIGATION WORK ASSIGNMENT

PROJECT WORK PLAN

I. SITE DESCRIPTION

Modock Road Springs is located in the Town of Victor (Ontario County) and served as part of the public water supply for the Village of Victor until 1990 when trichloroethylene, 1,1,1-trichloroethane, and 1,1-dichloroethene contamination (from an unknown source) was confirmed and resulted in the removal of the Springs from public water supply service. According to sampling completed by the Town of Victor and the New York State Department of Health, the levels of these chlorinated solvents have been rising within a fairly localized area. Two potential source areas have been identified within the vicinity of this localized area. This Immediate Investigation Work Assignment (IIWA) project will serve to determine if the given suspect areas are acting as a source for the identified chlorinated solvent contamination or simply situated within a plume of contamination that is emanating from some other source.

II. OBJECTIVES OF THE INVESTIGATION

The objectives of this IIWA project are:

- Evaluate the existing subsurface and groundwater conditions at and in the vicinity of the given potential source areas and investigate the nature and degree of any identified contamination within these areas.
- Define and evaluate any potential migration pathways relative to any identified contamination at or in the vicinity of the given potential source areas.
- Identify any required Interim Remedial Measures (IRMs) that may be needed to address specific problems recognized at or in the vicinity of the given potential source areas during this IIWA project.

III. SCOPE OF WORK

The primary focus of this IIWA project is to evaluate the existing subsurface and groundwater conditions at and in the vicinity of the given potential source areas in an effort to identify/eliminate potential contribution to the recognized chlorinated solvent (trichloroethylene, 1,1,1-trichloroethane, and 1,1-dichloroethene) contamination impacting the Modock Road Springs. In addition, the information collected during this IIWA project will be used to determine if any IRMs are needed to address any specific problems identified at or in the vicinity of the given potential source areas during this IIWA project. The overall IIWA project will include specific subsurface soil and groundwater sampling elements as part of a small diameter groundwater monitoring point installation program.

Small Diameter Groundwater Monitoring Point Installation

The advance and installation of up to twenty (20) exploratory groundwater monitoring points using a small

diameter groundwater probe (e.g. Geoprobe® or equivalent method) will be completed during the overall IIWA project. Locations of the exploratory groundwater monitoring points specified in this program will be determined by the NYSDEC representative during a project site visit with the representative(s) of the designated Standby Work Assignment Contractor. All of the exploratory groundwater monitoring points installed during this IIWA project are designed to aid in the collection of subsurface information relative to the overburden materials in the suspect areas, aid in the collection of subsurface soil samples for chemical analysis from these suspect areas, and monitor the water quality within the overburden materials at an unspecified depth below the stable, measured water level of the water table aquifer in these suspect areas.

All down-probe tools and equipment used during the advance and installation of the exploratory groundwater monitoring points specified in this IIWA project will be cleaned using the best available and NYSDEC approved method prior to their introduction or reintroduction into the monitoring point at the discretion of the NYSDEC representative. New single-use tubing, foot-valves, and related equipment (as applicable) will be used to establish and sample each groundwater monitoring point. New single-use liners or sleeves (as applicable) will be used to collect the subsurface soil materials during each interval advance at each monitoring point. These specifications will be followed in order to reduce the potential for cross contamination of all samples and ensure that the integrity of each exploratory groundwater monitoring point is reasonably maintained.

Subsurface Soil Sampling Element

Subsurface soil materials will be collected continuously during the advance of each exploratory groundwater monitoring point installed during this IIWA project in order to obtain subsurface information relative to the overburden materials in the suspect areas and aid in the collection of subsurface soil samples for chemical analysis from these suspect areas. The extracted subsurface soil materials will be described and logged with respect to their geologic character, features, and properties. The extracted subsurface soil materials will also be screened visually for signs of obvious contamination and with a calibrated flame or photo ionization instrument that has been adjusted for direct reading of trichloroethylene and/or 1,1,1-trichloroethane (or their daughter products as applicable). All or some part of any subsurface soil interval extracted from a specific monitoring point may be collected as a subsurface soil sample for chemical analysis at the discretion of the NYSDEC representative. Up to twenty-five (25) subsurface soil samples may be collected for chemical analysis during this IIWA project. This allows for the collection of a single subsurface soil sample from each of the twenty (20) (maximum) exploratory groundwater monitoring points specified in this IIWA project and allows for the collection of up to five (5) additional/contingent subsurface soil samples as needed. In addition to these subsurface soil samples, up to five (5) subsurface soil/waste samples may be collected for an appropriate TCLP chemical analysis during this IIWA project. The number of subsurface soil and/or soil/waste samples collected for chemical analysis from any one monitoring point is at the discretion of the NYSDEC representative. The selection of subsurface soil materials for submission as a subsurface soil or subsurface soil/waste sample will be made at the discretion of the NYSDEC representative and based on:

a.) subsurface soil materials that show visual signs of contamination;

b.) subsurface soil materials that cause a sustained response above the measured background response on a calibrated flame or photo ionization screening instrument that has been adjusted for direct reading of trichloroethylene and/or 1,1,1-trichloroethane (or their daughter products as applicable); or

c.) a combination of these situations.

After the subsurface soil materials from a particular interval have been described/logged/screened and all subsurface soil and/or soil/waste samples have been collected for chemical analysis (if applicable), the remaining subsurface soil materials may be discarded at the direction/discretion of the NYSDEC representative. If any of the remaining subsurface soil materials show visual signs of contamination, cause a sustained response above the measured background response on a calibrated flame or photo ionization screening instrument, or a combination of these situations, those materials

should be retained for alternative disposal.

Subsurface Soil Sample Analysis Up to twenty five (25) subsurface soil samples collected during this IIWA project will be analyzed using portable gas chromatograph (GC) equipment with a minimum of two detectors to facilitate the identification and confirmation of trichloroethylene (and its daughter products as applicable) and 1,1,1-trichloroethane (and its daughter products as applicable). Analysis will be done using the purge and trap method. In addition to these subsurface soil analyses, up to five (5) subsurface soil/waste samples collected during this IIWA project will be submitted for an appropriate TCLP analysis at an approved NYSDEC Contract Laboratory. Note that the NYSDEC will coordinate the appropriate TCLP analysis of all applicable subsurface soil/waste samples collected during this IIWA.

Groundwater Sampling Element

At a minimum, a single groundwater sample will be collected for chemical analysis from each of the exploratory groundwater monitoring points installed during this IIWA project in order to monitor the water quality within the overburden materials at an unspecified depth below the stable, measured water level of the water table aquifer. A total of up to twenty-five (25) groundwater samples will be collected during this IIWA project. This allows for the collection of a single groundwater sample from each of the twenty (20) (maximum) exploratory groundwater monitoring points specified in this IIWA project and allows for the collection of up to five (5) additional/contingent groundwater samples as needed. The number of groundwater samples collected for chemical analysis from any one monitoring point is at the discretion of the NYSDEC representative. The groundwater sampling depth within each monitoring point will be selected at the discretion of the NYSDEC representative and based on:

a.) subsurface soil materials that show visual signs of contamination;

b.) subsurface soil materials that cause a sustained response above the measured background response on a calibrated flame or photo ionization screening instrument that has been adjusted for direct reading of trichloroethylene and/or 1,1,1-trichloroethane (or their daughter products as applicable);

c.) the presence of a substantial subsurface soil interval that may significantly impede the downward migration of groundwater or possible contamination; or

d.) any combination of these situations.

When a particular sampling depth has been determined for a specific monitoring point and that monitoring point has been established, the static water level will be measured with reference to the ground surface and recorded along with the time and date for future use in the generation of a groundwater map. Groundwater will then be purged from the installed monitoring point until the pH, specific conductivity, temperature, and turbidity of the extracted water have stabilized. All parameters measured during this process will be recorded along with the time, date, and volume of water extracted. Once the given parameters have stabilized (or at the discretion of the NYSDEC representative), a portion of the groundwater extracted subsequently will be collected for chemical analysis.

After the applicable groundwater sample has been collected and all down-probe measurements have been made and recorded, all retrievable equipment will be removed from the monitoring point and either discarded or cleaned as appropriate using approved methods. The exploratory groundwater monitoring point will be abandoned by sealing it to the surface with a cement/bentonite mixture. The abandoned monitoring point will be clearly marked so that its location can be measured in a subsequent map survey.

Groundwater Sample Analysis All groundwater samples collected during this IIWA project will be analyzed using portable gas chromatograph (GC) equipment with a minimum of two detectors to facilitate the identification and confirmation of trichloroethylene (and its daughter products as

applicable) and 1,1,1-trichloroethane (and its daughter products as applicable). Analysis will be done using the purge and trap method.

Portions of the small diameter groundwater monitoring point installation program and its associated elements will be accomplished with the assistance of the designated Standby Work Assignment Contractor and approved Subcontractors as applicable and appropriate. Details of the work distribution for this program are presented in the "Notice to Proceed" letter issued for this IIWA project unless otherwise specified. A breakdown of the program related footages, miscellaneous requirements, and a description of the presumed geologic setting at the project site is presented in the attached Work Plan Summary Sheet. Note that all data interpretations associated with this program (and its elements) will be conducted using NYSDEC equipment and staff.

Map Survey

Map surveys will be completed at all areas investigated during this IIWA project and will result in the generation of a single map showing the relative location of all small diameter groundwater monitoring points or points of interest associated with the Modock Road Springs contamination and this IIWA project. For the purpose of this IIWA project, completion of the map survey and generation of the site map do not require the services of a licensed surveyor. All points of interest will be plotted on a base map using field measurements.

Portions of the map survey and map generation will be completed with the assistance of the designated Standby Work Assignment Contractor and approved Subcontractors as applicable and appropriate. Note that all data interpretations associated with this survey will be conducted using NYSDEC equipment and staff.

IIWA PROJECT - CONTRACTOR RELATED WORK SUMMARY

SITE: MODOCK ROAD SPRINGS

CODE: 835013

LOCATION: Town of Victor/Ontario County

ANTICIPATED LEVEL OF PERSONAL PROTECTION: Level D .

SMALL DIAMETER GROUNDWATER MONITORING POINT INSTALLATION CONTRACTOR ASSIGNMENT

NUMBER: Up to twenty-five (25) Total.

TARGET: Water table.

PROPOSED SAMPLING INTERVALS: + Subsurface materials will be collected continuously.

PROPOSED EXPLORATION METHOD: Small Diameter Groundwater Probe (Geoprobe® or equivalent).

PROJECTED FOOTAGE:

All Specified Monitoring Points

+ Overburden 35'

+ Total Depth 35'

... OVERBURDEN TOTAL: 700 Linear Feet.

ABANDONMENT: The proposed exploration probes will be sealed to the surface using a cement/bentonite mixture.

SMALL DIAMETER GROUNDWATER MONITORING POINT INSTALLATION SAMPLING SUMMARY CONTRACTOR ASSIGNMENT

PROPOSED ANALYTICAL METHOD: Portable Gas Chromatograph (GC) Equipment with a minimum of two detectors to facilitate the identification & confirmation of volatile organic compounds in extracted soils and groundwater samples.

TARGET COMPOUNDS: + Trichloroethylene (and its daughter products as applicable).

GROUNDWATER SAMPLES: Up to 25 Total. .....

+ One sample from each of the installed small diameter groundwater monitoring points.
+ Five unspecified (standby) samples.

SUBSURFACE SOIL SAMPLES (FOR CHEMICAL ANALYSIS): Up to 25 Total. .....

+ One sample from each of the installed small diameter groundwater monitoring points.
+ Five unspecified (standby) samples.

OTHER SAMPLING - SMALL DIAMETER GROUNDWATER MONITORING POINT INSTALLATION NYSDEC ASSIGNMENT

SUBSURFACE SOIL SAMPLES (FOR APPROPRIATE TCLP ANALYSIS): Up to 5 Total. .....

+ Five unspecified (standby) samples.

GEOLOGIC SETTING

The overburden materials at the subject site are expected to include various kame moraine and beach sand deposits. The actual thickness of the overburden is not known, but is expected to be greater than 35 feet (the maximum proposed small diameter groundwater probe installation depth). Depth to bedrock is not known. Depth to groundwater is the vicinity of the subject site is within 20 feet of the ground surface.