TETRA TECH EC, INC.

December 18, 2007
2907-07-0003-048

Mr. Bernard Franklin
New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C, 11th Floor
625 Broadway
Albany, New York 12233-7014

RE: NATIONAL GRID
ILION (EAST STREET) SITE, SITE NUMBER 6-22-019
REVISED SUPPLEMENTAL RI WORK PLAN

Dear Mr. Franklin:

On behalf of National Grid, Tetra Tech EC, Inc. (TtEC) herewith submits one (1) electronic copy of the Revised Supplemental Remedial Investigation Work Plan for the Ilion (East Street) Site. The Revised Work Plan incorporates comments provided in NYSDEC's November 26, 2007 letter.

The NYSDEC/NYSDOH comments were addressed as follows:

Comment 1. Section 2.0 Scope of Work: A Community Air Monitoring Plan should be implemented during all ground intrusive activities conducted as part of the remedial investigation.

Response: A Community Air Monitoring Plan (included on CD) will be implemented during all ground intrusive activities associated with the Supplemental RI.

Comment 2. Section 2.2 Offsite Area Soil Delineation: It is understood that site conditions (such as 'spoil piles') will determine where test pits and soil borings can be located. Locations can be determined during the field work.

Response: Acknowledged. Test pits and/or soil borings will be placed as near to the locations proposed in the Work Plan as site conditions encountered during the field activities will allow.

Comment 3. Section 2.3 Installation of Groundwater Monitoring Wells in the Off-site Area, Second paragraph, third sentence, *"If NAPL is encountered when installing the*

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well, the boring will be sealed and a new location will be selected." The Departments disagree with abandoning this type of location. This would be an ideal location to install a sump to determine if NAPL was mobile and recoverable. If a sample of the NAPL was obtained for analysis, it could be compared to a sample of on-site NAPL. Also, this would present the best location to determine if groundwater is adversely impacted.

Response: The Work Plan has been revised to indicate that if NAPL is encountered, a sump will be installed to assess the characteristics (e.g., mobility, etc.) of the NAPL. In the event this occurs, National Grid will also identify an additional location in order to have a monitoring well located downgradient of the NAPL-impacted area.

Comment 4. Section 2.5 Installation and Sampling of Soil Vapor Points Along Site Perimeter: The work plan makes numerous references to the National Grid SOP for Soil Vapor Intrusion Evaluation at National Grid MGP Sites in New York State, September 2007. The work plan should be revised to indicate the approved appendices from the National Grid SOP that will be utilized during collection of soil vapor samples on this site.

The work plan indicates that the soil vapor samples will be analyzed by USEPA Method TO-15 for the analytes described in the National Grid SOP. Again, it should be known that this document has not been approved by the agencies, however the list identified in the SOP appears to contain contaminates of concern for this site, therefore the TO-15 list in National Grid's SOP will address contaminates identified for this site. Sample point SV3 should be moved to be collected immediately north of the former 80,000 cu. Ft. holder in the northwest corner of the site along East Clark Street (inline with proposed SV1 and SV2 – Figure 1).

Response: The Work Plan has been revised to refer to the approved appendices from the National Grid SOP. In addition, Figure 1 has been revised as suggested – the location for SV3 has been relocated to be in line with SV1 and SV2.

Should you have questions or require additional information, please contact Mr. Brian Stearns via telephone (315-428-5731) or e-mail (Brian.Stearns@us.ngrid.com).

Sincerely,

Robert Chozick, PhD, PE
Project Manager

Cc: B. Stearns (National Grid)
T. Young (National Grid)
J. Parkinson (National Grid)
G. Heitzman (NYSDEC)
J. Drabicki (NYSDEC Region 6)
L. Eckhaus (NYSDEC)
N. Freeman (NYSDOH)
R. O'Neill (Brown and Caldwell)

REVISED

Supplemental Remedial Investigation Work Plan

for the

Ilion (East St.) Former MGP Site
Ilion, Herkimer County, New York

Prepared for

nationalgrid

Prepared by

TETRA TECH EC, INC.

December 2007

1.0 Purpose

The purpose of this Supplemental Remedial Investigation (RI) Work Plan is to present an approach for data gathering activities that will allow further delineation of MGP-related constituents in soil and groundwater in the off-site area of the Ilion (East St.) Former MGP Site (the Site) and that will investigate whether MGP-related volatile organics are migrating offsite via soil vapor pathways. The investigation activities are designed to address gaps identified in New York State Department of Environmental Conservation (NYSDEC) correspondence dated June 27, 2007 and further discussed in the response letter from National Grid dated July 25, 2007. This work plan will also address the strategies to complete the RI discussed in the meeting with Tetra Tech EC (TtEC), National Grid, NYSDEC and the New York State Department of Health (NYSDOH) on September 7, 2007, as summarized in meeting minutes forwarded to NYSDEC and NYSDOH on September 18, 2007.

The objective of the additional soil investigation will be to improve the delineation of MGP-related impacts in the off-site area. The objective of the onsite groundwater investigation will be to evaluate if the cyanide plume is expanding, or whether apparent variations in the plume are a result of seasonal fluctuations or a result of historical building demolition onsite. The objective of the groundwater investigation in the off-site area is to evaluate if MGP-related constituent concentrations are present relative to constituent concentrations from local non-MGP sources and to map the localized groundwater elevation and flow direction.

2.0 Scope of Work

This section describes the tasks to be performed as part of the Supplemental Remedial Investigation to address the Site data gaps. The investigation activities presented herein will be performed in accordance with previously submitted documents (e.g., RI Work Plan, Generic Field Sampling Plan, Generic Quality Assurance Project Plan, and Generic Health and Safety Plan).

2.1 Utility Markout

New York Dig Safely will be notified to identify the locations of utilities on the site and off-site area related to the soil vapor points, soil boring, test pits, and monitoring wells.

2.2 Off-site Area Soil Delineation

TtEC will investigate soil conditions in the off-site area east of test pits TTTP06 and TTT13. A gravel access drive exists east of these two test pits, therefore the two test pits will be located east of the gravel drive. The test pits will be completed with a conventional backhoe to a target depth of approximately 10-12 feet beneath ground surface (bgs). This depth corresponds to the depth of TTTP06 and TTTP13, and the approximate maximum depth of a conventional backhoe, and is below the depth where groundwater is anticipated to be encountered (approximately 4 to 6 feet below grade in this area). Proposed locations of the test pits are presented on Figure 2. In the event that site conditions make it impracticable to test pit and a suitable location cannot be

identified, and/or field observations indicate a need to investigate to a greater depth, a soil boring will be advanced instead of, or in addition to, a test pit.

The test pits will be logged to document subsurface conditions including soil type, description of non-soil materials, field instrument readings, depth to groundwater (if encountered) and presence, if any, of odors, vapors, soil discoloration or non-aqueous phase liquid (NAPL). A photoionization detector (PID) will be used to screen material from the test pit. If NAPL is observed, the test pit will be extended, to the extent practicable, until the extent of the NAPL is visual delineated. Material removed from the test pit will be returned to the open hole and placed in a stratigraphic manner similar to how it was removed.

Additional soil delineation was requested by the NYSDEC in the area between test borings FW-09C and FW-08A. Attempts were made to address data gaps in this area in previously approved workplans using a direct push rig with no success. Several large, densely vegetated, undulating spoil piles prohibit access to this area from any direction. TtEC conducted a site reconnaissance on October 9, 2007 to evaluate if suitable access to this area can be achieved. A determination was made that in general, access into the spoil pile area cannot be achieved to install soil borings and/or additional test pits. There is one low area between the piles where a direct-push boring was drilled in 2004, TTDP04, although sample recovery at TTDP04 was low. Accordingly, an attempt will be made to access this low area with the hollow stem auger (HSA) rig to install one or more soil borings and attempt to obtain greater sample recovery (see proposed SB-16 location on Figure 2). Photographs of the spoil piles from the reconnaissance are included in Appendix A.

2.3 Installation of Groundwater Monitoring Wells in the Off-site Area

TtEC will install four groundwater monitoring wells in the off-site area south of the spoil piles near where MGP-related impacts were previously identified (i.e., the vicinity of test pits where NAPL was identified). The proposed locations of the monitoring wells are presented on Figure 2. It is anticipated that the general direction of groundwater flow in this area is toward the north. Accordingly, three of the proposed wells are positioned at locations anticipated to be downgradient and/or sidegradient of the MGP impacts. The fourth well location is intended to be upgradient of the area with observed MGP impacts. The wells will be installed after the test pit/soil borings described in Section 2.2, such that the position of the wells can be adjusted based on the findings of the delineation.

The monitoring wells will be installed with 2-inch PVC risers using HSA methodologies. At each location, split-spoon soil samples will be collected continuously from ground surface to the bottom of the boring, and each sample logged and screened with a PID. If NAPL is encountered when installing the well, a sump will be installed to determine if the NAPL is mobile and recoverable. The annular space between the borehole and the sump will be filled with low permeability material (e.g., bentonite or grout) up to approximately the base of the screen. An additional location, downgradient of the

observed NAPL, will be identified for installation of a monitoring well in order to obtain a groundwater sample downgradient of the NAPL impacted area.

If NAPL is not encountered when installing the well, a soil sample will be collected from the planned screened interval or from the most impacted interval based on field screening. Samples will be submitted for BTEX and PAH analysis. The monitoring wells will be installed with a 10-foot length, 0.020-inch slotted screen (with appropriately-sized filter pack) spanning the water table, and will be completed with approximately a 3.5 foot PVC stick-up and a protective casing equipped with a lockable cap.

2.4 Groundwater Sampling

TtEC will collect groundwater samples from previously and newly installed monitoring wells (including MW-5, installed within the footprint of the octagonal holder). Groundwater samples will be collected to evaluate groundwater conditions onsite and in the off-site area. Prior to sampling, a round of groundwater levels measurements will be collected. Sampling will be conducted using the low-flow method and samples from onsite wells will be analyzed for BTEX and cyanide. The sample from onsite well MW-5 will be analyzed for TCL VOCs and cyanide. Samples collected from the newly-installed off-site wells will be analyzed for BTEX, PAHs and cyanide.

TtEC will also gauge the monitoring wells for NAPL. Gauging for DNAPL will be performed after groundwater samples are collected, so the gauging does not disturb silt in the bottom of the well. If DNAPL is observed in any of the wells, the groundwater sample from that well will not be analyzed, as it will not be representative of dissolved phase concentrations in the formation.

2.5 Installation and Sampling of Soil Vapor Points Along Site Perimeter

To assess the presence (if any) and concentration of MGP-related constituents in soil vapor that may be migrating off-site, TtEC will install up to seven soil vapor points around the perimeter of the site. These points will occupy a space between areas of identified on-site impacts (i.e., NAPL in subsurface soil in/near the area of the former 200,000 ft^3 holder and the former octagonal holder) and off-site receptors (e.g., residences). The proposed locations of the soil vapor points are on National Grid property, as presented on Figure 1.

The soil vapor points will be installed using direct push methodologies driving a temporary soil vapor probe. The target sample depth will be approximately eight feet bgs; however, due to the depth to groundwater at some locations, samples may be collected at shallower depths. Procedures for soil vapor sample collection are provided in Appendix A (approved by NYSDEC and NYSDOH) of National Grid's SOP for Soil Vapor Intrusion Evaluation. Prior to soil vapor sampling, a tracer gas evaluation will be

conducted to assess the effectiveness of the surface seals of the soil vapor points, as described in the above referenced document. Samples will be collected at a maximum flow of less than 0.2 liters per minute in evacuated Summa® canisters and analyzed by USEPA Method TO-15.

During the soil vapor sampling event, an ambient (outdoor) air sample will also be collected. The ambient air sample will be collected over an approximately 4-hour period at a location on the upwind side of the site. The sample will be collected as described in Appendix B (approved by NYSDEC and NYSDOH) of National Grid's SOP, and analyzed for the same analytes as the soil vapor samples.

The soil vapor sampling will be conducted close in time to the groundwater sampling described in Section 2.4 to facilitate interpretation of the soil vapor data. The soil vapor sampling event will be conducted on a day within a time period beginning approximately two weeks before the beginning of groundwater sampling, and ending approximately two weeks after the completion of groundwater sampling.

2.6 Surveying

The services of a New York State licensed land surveyor will be retained to survey the vertical and horizontal locations of the new soil borings, test pits, monitoring wells and soil vapor points. The elevation of reference point (the top of the well casing) will be surveyed so groundwater elevations and flow direction can be determined.

3.0 Revised Remedial Investigation Report

Upon completion of the supplemental investigation activities discussed above, a Revised Remedial Investigation Report (RIR) will be prepared and submitted to the NYSDEC. The Revised RIR will include the validated soil, vapor and groundwater sample analytical results, boring and test pit logs, and well construction diagrams from the supplemental investigation. The Revised RIR will also include the corrections and additional information National Grid agreed to provide in its July 25, 2007 letter responding to NYSDEC's June 27, 2007 comments on the RI Report.

Within 48 hours of receiving data for soil vapor samples from the laboratory (not validated), data tables and a figure showing the sample locations will be submitted to NYSDEC and NYSDOH. Because National Grid is the sole owner of the property to be sampled, interim soil vapor data reports to other parties will not be required. The soil vapor results will also be included in the Revised RIR.

4.0 Schedule

The following schedule is presented.

Task	Approximate Time Frame
Commence Field Activities	Within approximately 6-8 weeks of NYSDEC approval of Supplemental RI Work Plan pending weather conditions and securing/confirming access to off-site properties
Field Activities and Laboratory Analysis	60 days
Data Validation	Within 30 days of receipt of laboratory data
Submittal of Revised RI Report	Within 60 days of receipt of validated data

5.0 References

Remedial Investigation/Feasibility Study Work Plan for Niagara Mohawk Power Corporation's (NMPC) Ilion (East Street) Site, June 1999.

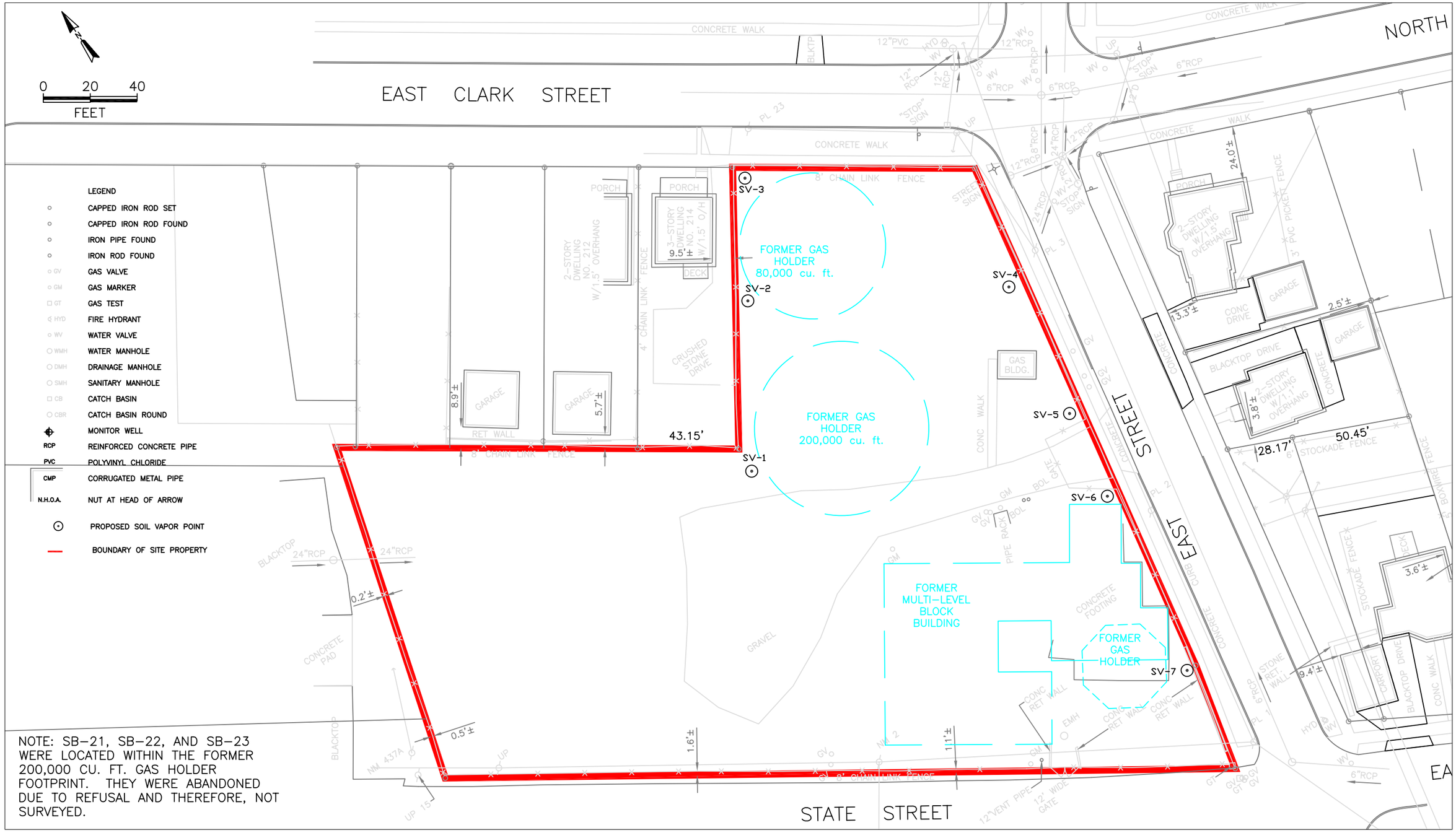
Generic Field Sampling Plan for Site Investigations at Manufactured Gas Plants, November 2002.

Generic Environmental Health and Safety Plan for Site Investigations at Manufactured Gas Plants, November 2002.

Generic Quality Assurance Project Plan for Site Investigations at Manufactured Gas Plants, November 2002.

National Grid, Soil Vapor Intrusion Evaluation at National Grid MGP Sites in New York State, September 2007. (Note: Appendices A and B referenced herein were approved by NYSDEC and NYSDOH on March 15, 2007).

FIGURES



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TETRA TECH EC, INC.

TITLE:

Proposed Soil Vapor Points – Site
Supplemental Remedial Investigation Work Plan
Ilion (East Street) Site

DWN.: SRA	DATE: 12/07/07	PROJECT NO.: 2907	
CHKD: RC	REV.: 1	FIGURE NO.: 1	
DES.: SRA	APPD: RC		

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nationalgrid / TETRA TECH EC, INC.	TITLE: Proposed Sample Locations – Off-Site Area Supplemental Remedial Investigation Work Plan Ilion (East Street) Site	DWN.: SRA CHKD: RC DES.: SRA	DATE: 10/30/07 REV.: 0 APPD: RC	PROJECT NO.: 2907 FIGURE NO.: 2

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APPENDIX A
October 2007 Reconnaissance Photos

On-site Proposed SV-1 Location

On-site, facing corner of State and East Street

On-Site, facing NE along East Street (proposed SV-7 location)

On-site facing WNW down State Street

On-site, facing N from gate entrance (proposed SV-5 location in right foreground, SV-2 location in left background)

On-site, facing NW from gate entrance (proposed SV-1 location behind trailer)

Off-site area, facing NW down East North St. Ext. (proposed MW-13 location to right)

Off-site area, mound at end of East North St. Ext.

2nd view of mound at East North Street Ext.

Off-site area, facing SW at mound at East North St,. Ext.

Off-site area, facing W, proposed MW-14 area

Off-site, facing SE, proposed test pit (2007 TP01/2007 TP02) area

Off-site area, facing N, proposed MW-16 area

Off-site area, facing N at “spoil pile”

Off-site area, facing NE at “spoil pile”

Off-site area, facing NE at existing TTDP04 boring location (proposed SB-16 location to left)

Off-site area, facing N at “spoil pile”

Off-site area, facing NW at “spoil pile”

Off-site area, facing NE at “spoil pile”

Off-site area, facing SE from FW-08C “spoil pile” on right

Off-site area, facing SE at “spoil pile” W of FW-08C

Community Air Monitoring Plan (Revised 12-12-2007)

Volatile organic compounds VOCs will be monitored at the downwind perimeter of the exclusion zone on a continuous basis, and at the upwind perimeter periodically to establish background conditions.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shutdown.

All readings will be recorded in the field logbook and be available for State (NYSDEC & NYSDOH) personnel to review.

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration will be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (ug/m3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work may continue with dust suppression techniques, provided that downwind PM-10 particulate levels do not exceed 150 ug/m3 above the upwind level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 ug/m3 above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate

concentration to within 150 ug/m3 of the upwind level and in preventing visible dust migration.

All readings will be recorded in the field logbook and be available for State (NYSDEC & NYSDOH) personnel to review. These action levels can be modified with the agreement of NYSDEC & NYSDOH if particulates are better characterized and identified.

Vapor Emission Response Plan

If organic vapor levels greater than 5 ppm over background for the 15-minute average are identified 200 feet downwind from the investigation Site, or half the distance to the nearest residential or commercial property line, whichever is less (but in no case less than 20 feet), all work will cease. If, following cessation of work activities and implementation of odor control contingencies, organic vapor levels persist above 5 ppm above background 200 feet downwind or half the distance to the nearest residential or commercial property from the exclusion zone, then air quality will be monitored within 20 feet of the perimeter of the nearest residential/commercial structure (the "20 foot zone").

If organic vapor levels approach 5 ppm above background within the "20 foot zone" for a period of more than 30 minutes, or organic vapor levels greater than 10 ppm above background for any time period occur within the "20 foot zone", then the following steps will be taken:

- The local police authorities will immediately be contacted and advised of the situation.
- Frequent air monitoring will be conducted at 30-minute intervals within the 20 foot zone. If two successive readings below action levels are measured, air monitoring may be halted or modified.
- All emergency contacts will go into effect as appropriate.