

Interim Remedial Measures Work Plan

BCP Site #C828137

Location:

Former Monoco Oil
75 Monroe Avenue
Pittsford, New York

Prepared for:

Pittsford Canalside Properties, LLC
301 Exchange Boulevard
Rochester, New York 14608

LaBella Project No. 210259

Draft: March 25, 2010

Revised: April 6, 2010

Revised: July 22, 2010

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1.0 Introduction & Background

LaBella Associates, P.C. (LaBella) is pleased to submit this Interim Remedial Measures (IRM) Work Plan to provide engineering services at 75 Monroe Avenue, Pittsford, Monroe County, New York, herein after referred to as the "Site". A project locus map is included as Figure 1. The Site is known as the former Monoco Oil facility. LaBella is submitting this IRM Work Plan on behalf of Pittsford Canalside Properties, LLC (PCP).

LaBella conducted a Remedial Investigation (RI) at the Site and submitted an RI Report to the NYSDEC in July 2009. The RI Report represented the findings of the RI completed at the Site. The findings of the RI indicated the presence of several 'data gaps' at the Site. The data gaps were the result of either a lack of supporting analytical data to clearly characterize areas of the Site and/or the result of obstructions at the Site which prevented an area at the Site from being investigated. Subsequently, PCP intends to address several source areas and/or previously uninvestigated areas identified at the Site during the RI through the completion of four (4) remedial excavations. The objectives of the proposed IRMs are two-fold:

1. the proposed IRMs are designed to remove source areas from the Site, but are not designed to be the final remedy for the Site; and,
2. the proposed IRMs are designed to complete the characterization of the areas of the Site which were unable to be fully characterized during the RI.

The overall objective for the Site is to redevelop the property for commercial/residential use. The Site is currently part of the New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) Site number C828137.

1.1 Site Description

The Site is approximately 7.5-acres and located in the Village of Pittsford (under Tax Account #151.18-1-51). The Village of Pittsford tax parcel is zoned R-5 Canal Waterfront Business District. The surrounding areas currently include residential, agricultural, commercial and municipal properties. Specifically, the following properties are adjacent to the Site:

- North – Erie Canal with a New York State Department of Transportation (NYSDOT) facility to the north of the Erie Canal
- East – Monroe Avenue with a commercial shopping building and a gas station beyond
- South – Railroad tracks and a Rochester Gas & Electric (RG&E) substation, an office park, and Pittsford School's Athletic Fields
- West – Vacant undeveloped land

The Site contains one vacant building and some remaining exterior infrastructure, which includes an apparent former railcar loading area in the eastern portion of the Site. An asphalt parking lot covers much of the eastern portion of the Site and extends into the central portion of the Site. The Site has been unoccupied since approximately 2000.

1.2 Standards, Criteria and Guidelines

This section identifies the Standards, Criteria and Guidelines (SCGs) for the Site. The SCGs identified are used in order to quantify the extent of contamination at the Site that may require remedial work. The SCGs for soil and groundwater are provided below.

Soil SCGs

The SCGs for soil used in this IRM are:

- NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives (RPSCOs) for the Protection of Public Health – Restricted Residential Use; and

Table 1 presents the complete list 6 NYCRR Subpart 375-6 RPSCOs for the Protection of Public Health – Restricted Residential Use.

- NYCRR Subpart 375-6 RPSCOs for the Protection of Groundwater.

Groundwater SCGs

The SCGs for groundwater used in this IRM are:

- NYSDEC Part 703 Groundwater Standards.

2.0 Objective

The objective of the IRMs defined in this Work Plan is two-fold:

- 1.) Complete the RI at the Site by fully defining data gaps associated with the nature and extent of impacts at the Site where impacts to soil and/or groundwater were identified in the RI Report as well as to fully characterize areas at the Site where investigation during the RI was unable to be completed due to Site obstructions.
- 2.) Remove the identified “source-area” as practicable from the Site in order to effectively eliminate the potential for further migration of constituents of concern at the Site.

3.0 Site Background Information

The following previous environmental assessments/investigations have been completed at the Site by LaBella and were relied upon for the development of this IRM Work Plan:

- *Remedial Investigation Work Plan, BCP Site #C828137., 75 Monroe Avenue, Pittsford, New York, April 25, 2008.*
- *Remedial Investigation Report, BCP Site #C828237, 75 Monroe Avenue, Pittsford, New York, July, 2009.*

Based on the cumulative findings of the reports listed above, the following areas of concern have been identified at the Site.

3.1 AOC #5 (TP-9 & TP-11) Remedial Excavation

Evidence of impairment and/or elevated photoionization detector (PID) readings, i.e., greater than 25 parts per million (ppm) were encountered in soil collected from test pit TP-9. Additionally, laboratory analytical data indicate VOCs exceed the SCGs for soil collected from TP-9 as well as from soil borings completed in and around AOC #5.

Based on the findings of the RI, it appears that approximately 2,945 cubic yards of petroleum impacted soil is present in this area at levels potentially exceeding the SCOs. The approximate limits of the proposed remedial excavation are depicted on Figure 2. However, the northern limits of this release have not been confirmed and may extend into the subsurface in the area of the large concrete slab north of TP-9. The entire concrete slab associated with AOC 5 will be removed as part of the IRM.

3.2 TP-22 Remedial Excavation

Evidence of impairment and/or elevated photoionization detector (PID) readings, i.e., greater than 25 parts per million (ppm) were encountered in soil collected from test pit TP-22. Additionally, laboratory analytical data indicated VOCs exceedances to the SCGs from soil collected from TP-22 as depicted by Figure 2.

Based on the findings of the RI, it appears that approximately 95 cubic yards of petroleum impacted soil is present in this area at levels potentially exceeding the SCOs. The approximate limits of the proposed remedial excavation are depicted on Figure 2. However, the actual limits of the proposed excavation will need to be defined during the remedial excavation in order to fully characterize the nature and extent of petroleum impacts in area of test pit TP-22.

3.3 AOC #3 (TP-3) Remedial Excavation

During the RI phase of the project, a test pit (TP-3) was attempted in this location at the Site. AOC #3 was called out during the Phase I ESA as the possible location of a former filling station. Although no anomalies were called out at this location during the geophysical survey, the potential for the presence of underground storage tanks (USTs) and/or petroleum impacts to soil and/or groundwater due to the former filling station operations exists.

Test pit TP-3 was unable to be completed past approximately 1.5' below the ground surface (bgs) due to the presence of a large concrete slab. The equipment on-site was unable to penetrate this slab or move it to observe soil conditions immediately beneath the slab.

Due to these unknown conditions, AOC #3 needs to be fully characterized. Because AOC #3 has not been characterized, it will be assessed in accordance with the RIWP.

3.4 LNAPL in MW-7 Remedial Excavation

Light Non-aqueous phase liquid (LNAPL) was first observed by LaBella in monitoring well MW-7 during the second round of groundwater sampling completed as part of the RI during February 2009. LNAPL was observed within monitoring well MW-7 with a thickness of approximately 0.15-inches. As such, a sample of this LNAPL was recovered and submitted for laboratory analysis of PCBs, total petroleum hydrocarbons (gasoline range organics), total petroleum hydrocarbons (diesel range organics), and for a petroleum fingerprint analysis. The laboratory analytical results did not report any detections of PCBs above the reported laboratory method detection limits. However, the petroleum fingerprint analysis indicated that the LNAPL is likely #4 fuel oil as this was detected at 56,000 ppm within the sample. #2 fuel oil, #6 fuel oil, gasoline, kerosene, and motor oil were included in this analysis of the LNAPL, but none of these constituents were detected above the reported laboratory method detection limits.

LNAPL was not observed in any of the other monitoring wells sampled as part of the RI. As such, it appears that impacts to groundwater due to LNAPL are limited to the area immediately around MW-7. However, it is proposed that a remedial excavation be completed at the location of MW-7 to fully characterize the nature and extent of impacts due to this LNAPL.

Due to these unknown conditions, LNAPL impacts within MW-7 need to be fully characterized. The approximate limits of the proposed remedial excavation are depicted on Figure 2. However, the actual limits of the proposed excavation will need to be defined during the remedial excavation in order to fully characterize the nature and extent of petroleum impacts, if any, in area of monitoring well MW-7.

4.0 Summary of the Remedial Goals

The proposed future use for the Former Monoco Oil Site is commercial/residential uses. As such, at a minimum, the IRMs must eliminate or mitigate all significant threats to public health and/or the environment presented by the subsurface impacts identified at the Site through the proper application of scientific and engineering principles.

The Remedial Goals for this IRM Work Plan are as follows:

- 1.) excavate soils impacted with constituents previously identified in the RI Report and including, but not limited to VOCs, SVOCs, and fill materials to the extent practicable given the presence of the on-site features (i.e., property boundaries, railroad, utilities, etc);
- 2.) remove and dispose of NAPL, residual liquids, solids, and/or sludge located within the proposed excavation area at MW-7 and remove any soil impacts associated with presence of the NAPL; and
- 3.) dewater, containerize, treat (if necessary), and disposed of any liquid materials generated during the IRMs as well as liquid materials found to accumulate within the remedial excavations in any significant quantity.

Impacted soils and liquid materials shall be containerized, characterized, and disposed of off-site and in accordance with applicable local, state, and federal regulations.

5.0 Interim Remedial Measures: Scope of Work

Based on the laboratory analytical data and field observations during the implementation of the RI, it is estimated that cumulatively approximately 3,175 cubic yards of on-site soils may be impacted with petroleum constituents above the SCOs. To mitigate this issue, these IRMs are designed to remove 'source area' soils from the Site for off-site disposal at a NYSDEC Part 360 Permitted Landfill. In addition, shallow overburden groundwater in the source areas will be removed as necessary. Aggressive dewatering will be conducted as part of the IRMs to remove as much contaminant mass from the Site as possible.

The IRMs are designed to reduce the toxicity and mobility of contamination found at the Site, be protective of human health and the environment, and reduce potential exposure to future users of the Site. The following scope-of-work will be undertaken to accomplish the project objectives.

This section describes the general objective and scope of work to be implemented for each of the following areas:

1.) AOC #5 IRM

This task consists of an area of petroleum impacted soil and shallow groundwater associated with the former loading station at the Site (AOC #5). Based on the results of the RI, this is the largest discrete volume of petroleum impacted soil at the Site. Design phase soil borings (TP-9-SB-1 through TP-9-SB-14) were advanced in and around AOC #5 to fully delineate the nature and extent of these petroleum impacts observed in test pits TP-9 and TP-10 completed during the RI. The extent of petroleum impacts appears to be well defined to the south and east of AOC #5 and somewhat well defined to the west. However, due to the presence of a large and thick (i.e., greater than 1.5' in thickness) concrete slab immediately north of test pit TP-9, the extent of petroleum impacts north of TP-9 were not able to be evaluated during the RI. As such, the full nature and extent of petroleum impacts in and around AOC #5 will need to be determined during the remedial excavation through removal of excavation of impacted soils in this area. Impacted soils will be excavated until the bottom of the excavation as well as each sidewall of the excavation no longer exhibit evidence of impairment.

Based on the cumulative results of the RI completed at the Site, it is estimated that approximately 2,945 cubic yards (approximately 5,301 tons) of petroleum impacted soil will require excavation for off-site disposal from this area.

2.) AOC #7 IRM

This task consists of an area of petroleum impacted soil associated with the location of a historic spill reported at the location of test pit TP-22. Although the location of test pit TP-22 is within the location of the former USEPA bio-cell, the laboratory analytical results from soil collected from TP-22 indicated the presence of VOCs at concentrations found to exceed the SCGs. Additionally, no design phase soil borings have been completed to date at this location to attempt to characterize the nature and extent of these petroleum impacts in and around test pit TP-22. As such, the proposed remedial excavation is designed to remove as much petroleum impacted soil to the extent practicable as well as to vertically and horizontally define the nature and extent of petroleum impacts.

3.) AOC #3 IRM

This task consists of excavating and removing a large concrete slab located approximately 1.5' bgs at the location of test pit TP-3. The soil beneath this concrete slab was unable to be observed during the RI due to the slab obstructing this area. The proposed remedial excavation will remove this slab in order to allow the soil within AOC #3 to be evaluated for evidence of impairment.

A representative soil sample was unable to be collected during the RI at this location. As such, a soil sample will be collected from this location in accordance with Section 5.0 Remedial Investigation Work, Subsection 5.1 Field Activities Plan, Task 2 Test Pitting Evaluation of the RI Work Plan. This sample will be submitted for laboratory analysis of the 'full-suite' of analytical parameters. The 'full-suite' of analytical parameters includes:

- TCL plus NYSDEC STARS-list VOCs including up to 10 TICs using USEPA Method 8260B
- TCL plus NYSDEC STARS-list SVOCs including up to 20 TICs using USEPA Method 8270C
- Pesticides using USEPA Method 8081
- PCBs using USEPA Method 8082
- TAL Metals using USEPA Methods 6010 and 7471
- Total Cyanide using USEPA Method 9012A

If impacts are observed beneath the large concrete slab, the impacted area will be over-excavated and disposed of off-Site.

4.) LNAPL in MW-7 IRM

This task consists of excavating soil around the location of monitoring well MW-7. The presence of LNAPL within MW-7 has created a need to define the nature and extent of LNAPL on groundwater at this location. It is proposed that a remedial excavation be completed to remove this monitoring well (in accordance with Section 5.5 of this IRM Work Plan) and to remove any soil and groundwater observed to be impacted by LNAPL or any other soil observed to display evidence of impairment.

Based on the cumulative results of the RI completed at the Site, it is estimated that approximately 42 cubic yards (approximately 75 tons) of petroleum impacted soil will require excavation for off-site disposal from this area.

If items such as piping and/or underground storage tanks (USTs) associated with the historical infrastructure of the Site are observed within the remedial excavations and are found to contain petroleum constituents the following actions will be taken. Initially, the residual liquids existing within the structures and any associated piping will either be pumped out via vacuum truck and disposed at an approved off-site facility or containerized into 55-gallon drums. Once the piping and/or USTs are deemed free of residual liquids, the piping and/or USTs will be staged on polyethylene sheeting and covered pending disposal at an approved off-site landfill.

Impacted soils and liquid materials associated with historical infrastructure shall be containerized, characterized, and disposed of off-site and in accordance with applicable local, state, and federal regulations.

Note: All equipment to be utilized on-site for the IRM field activities shall arrive on-site fully decontaminated. Proper decontamination off-site is required before equipment is allowed on-site.

5.1 Health and Safety Plan and Community Air Monitoring Plan

Health and Safety Plan (HASP)

The Health and Safety Plan (HASP) for the site is included as Appendix 1 of this IRM Work Plan. Additionally, pertinent aspects of OSHA regulations will generally be adhered to during the implementation of the IRMs at the Site.

Community Air Monitoring Plan (CAMP)

A site-specific Community Air Monitoring Plan (CAMP) has been developed for the Site in accordance with Appendices 1A and 1B of NYSDEC Draft DER-10, November 2009. The CAMP is included as Appendix 2 of this IRM Work Plan.

5.2 Environmental Management Plan to Guide Remedial Excavations

The Environmental Management Plan (EMP) is intended to guide the source removal, disposal, and management of impacted soil, NAPL, and impaired groundwater that may be generated during the IRMs.

The EMP details the approach and the classification system that will be used to field screen and segregate excavated soil during the IRMs.

During the implementation of the IRMs, soils from the remedial excavations will be continuously assessed for visible impairment, olfactory indications of impairment, and detectable concentrations of VOCs with a PID, collectively referred to as "evidence of impairment".

Based on the cumulative results of the subsurface investigations completed at the Site, it is proposed that a PID headspace reading of 5 ppm be utilized as the cut-off level for impacted soils that will require excavation and off-site disposal. It is expected that soils exhibiting a PID reading of greater than 5 ppm will not meet 6 NYCRR Part 375-6 Restricted Use Soil Cleanup Objectives for the Protection of Public Health - Residential Use and NYCRR Subpart 375-6 RPSCOs for the Protection of Groundwater. As noted previously, this correlation may be subject to modification, pending NYSDEC approval.

Dewatering will be performed as necessary from within the remedial excavations. Dewatering will consist of using a 'trash pump' to remove excess groundwater from within the bottom of the remedial excavations and will containerized into a frac tank pending waste characterization and subsequent disposal.

Four (4) classes of soil and materials are expected to be generated by the activities associated with the proposed IRMs. Each of these four (4) classes of material will be managed and handled in a manner dictated by the evidence of environmental impairment or the existing analytical data. These four (4) classes of material are described in the Table 2 below:

**Table 2
Excavated Material Classifications**

Class of Material	Physical Description	Screening Parameter	Management/ Re-use of Material
Class 1	Soil not exhibiting evidence of impairment	No discernable odor; PID readings less than 5 ppm and no staining.	Sampled, and if laboratory results indicate soil is below 6 NYCRR Part 375-6 Restricted Use SCOs, then use on-site for non structural fill or grading in areas where buildings will not be cited.
Class 2	Soils, concrete, and/or asphalt with evidence of impairment or which contain constituents of concern that exceed SCOs.	PID meter reading greater than 5 ppm.	<u>Confirmed Non-Hazardous Waste</u> based on characterization sampling. Off-site disposal at NYS part 360 permitted landfill.
Class 3	NAPLs, Sludges, Rinse Water, and all other liquids	Representative Laboratory Waste Characterization Sampling	At a minimum, off-site disposal/recycling at NYS Permitted Treatment/Disposal Facility as a Non-Hazardous Waste based on Characterization Sampling.
Class 4	Uncontaminated Concrete and/or Asphalt.	No evidence of impairment.	Taken off-site as clean recyclable material.

Soils that are encountered at the site that demonstrate evidence of impairment will be screened with a PID. Soils that exhibit a PID reading of less than 5 ppm will be considered clean Class I material.

Class 1: Will be staged on and covered with a minimum of double 6-mil polyethylene sheeting, sampled, and if determined to be below 6 NYCRR Part 375-6 Restricted Use Soil Cleanup Objectives for the Protection of Public Health - Residential Use, will be used later as non structural fill or cover material. If laboratory analytical results indicate concentrations above 6 NYCRR Part 375-6 Restricted Use Soil Cleanup Objectives for the Protection of Public Health - Residential Use, then soils will be considered Class 2 materials. To be considered for staging as Class 1 material, each bucket load of soil excavated during the IRMs will be visually observed for evidence of impairment (PID readings must be equal to or less than 5 ppm).

Class 1 materials will be submitted for laboratory analytical analysis of the full suite of analytical parameters including:

- TCL plus NYSDEC STARS-list VOCs including up to 10 TICs using USEPA Method 8260B
- TCL plus NYSDEC STARS-list SVOCs including up to 20 TICs using USEPA Method 8270C
- Pesticides using USEPA Method 8081

- PCBs using USEPA Method 8082
- TAL Metals using USEPA Methods 6010 and 7471
- Total Cyanide using USEPA Method 9012A

Sample locations should be grab/discrete samples and biased toward areas exhibiting the highest PID readings. Sample frequency will be consistent with Table 2 on the following page:

Table 2

Contaminant	VOCs		SVOCs, Inorganics, & PCBs/Pesticides	
	Soil Quantity (yd ³)	Discrete Samples	Composite	Discrete Samples/Composite
0-50	1	1	3-5 discrete samples from different locations in the fill being provided will comprise a composite for analysis	
50-100	2	1		
100-200	3	1		
200-300	4	1		
300-400	4	2		
400-500	5	2		
500-800	6	2		
800-1,000	7	2		
>1,000	Add an Additional 2 VOC and 1 composite for each additional 1,000 cubic yards or consult with DER			

The laboratory analytical results for Class 1 material being considered for re-use will be presented to the NYSDEC for review prior to the material being used as backfill at the Site. If the laboratory analytical results do not meet the 6 NYCRR Part 375-6 Restricted Use SCOs, the material will be treated as Class 2 material.

Class 2: In general will be excavated, staged, and covered with a minimum of double 6-mil polyethylene sheeting. In accordance with NYSDEC solid waste regulations, Class 2 Materials will be transported from the site for final disposal within 60 days of staging.

Class 3: NAPLs, sludges, rinse water, and all other liquids will be containerized and characterized prior to off-site disposal. Based on the results of the waste characterization sampling all Class 3 Material will be removed from the site within 60 days (non-hazardous waste) or 90 days (hazardous waste).

Class 4: Will be stockpiled and taken off-site as clean recyclable material.

All materials removed from the Site will be disposed of in accordance with all applicable state and federal regulations.

5.3 Construction of Staging, Loading, and Backfill Areas

The staging, loading, and backfilling of materials will be completed based on Table 3 below:

Table 3

Class of Material	Physical Description	Staging Criteria
Class 1	Soil, fill materials, and visually identifiable non-contaminated solid waste (e.g. Brick, concrete, rock).	On and covered with a minimum of double 6-mil polyethylene sheeting.
Class 2	Soil, concrete, and/or asphalt exhibiting evidence of impairment.	On and covered with a minimum of double 6-mil polyethylene sheeting.
Class 3	NAPLs, sludges, rinse water, and all other liquids	Discrete containment vessels based on source of origin and volume.
Class 4	Uncontaminated concrete and/or asphalt	No containment system required.

All waste streams will be staged separately. It will be required to cover the Class 2, Class 3, and Class 4 Materials during non-working hours with a minimum of two layers of 6-mil polyethylene sheeting. The covers will be anchored or weighted at the edges to prevent stormwater and wind borne erosion.

5.4 Monroe County Pure Waters Temporary Discharge Permit

Any effluent generated from excavation dewatering during the IRMs will be containerized into a frac tank staged on-site (see Figure 2). This liquid material will be sampled initially to determine if the effluent meets the Monroe County Pure Waters (MCPW) discharge limits. If treatment is necessary, the NYSDEC will be notified first for evaluation and approval of the proposed treatment system. The NYSDEC will also be provided with a copy of the discharge permit issued by MCPW prior to discharge. The revised IRM Work Plan will reflect these requirements.

The following steps will be taken to receive permission from MCPW to discharge the accumulated groundwater to the public sewer system:

- Written notification to MCPW of intent to discharge to their sewer system
- Completion of a Permit Application for the discharge of accumulated groundwater
- If required by MCPW (based on laboratory data), treatment of groundwater by activated carbon adsorption or other methods
- Following approval by MCPW, conduct a site visit with a MCPW representative and select a sewer manhole for discharge of accumulated groundwater
- Discharge of accumulated groundwater to the selected MCPW manhole

5.5 Decommissioning Select Monitoring Wells within the Remedial Excavation Area

Any overburden groundwater monitoring wells that fall entirely within the limits of the source removal excavations will be removed by excavation. The protective casings, concrete surface seals, and the PVC casings will be disposed of off-site at a NYSDEC Part 360 Landfill and in accordance with all applicable state and federal regulations.

Groundwater monitoring wells not located within the limits of the source removal excavations will remain on-site for decommissioning at a later date.

5.6 Temporary Controls

Water mist and other suitable methods to limit the spread of dust, dirt and vapors/odors shall be used as deemed necessary by the guidelines provided in the CAMP (Appendix 2). The methods to control fugitive dust, dirt, and vapors/ odors will generally consist of the following:

- Apply water to haul roads;
- Wetting equipment and excavation faces;
- Spraying water on buckets during excavation and dumping;
- Reducing excavation sizes;
- Reducing vehicle speeds to 10 mph; and,
- Immediately placing any investigation derived waste in drums and/or covering with plastic sheeting.

See the Site-Specific CAMP (Appendix 2) for additional information on air monitoring, action levels, and engineering controls to address fugitive dust and/or vapors. Additionally, the IRMs will consist of safely delineating and containing the project work area, maintaining traffic and access to the Site as needed to ensure public safety.

5.6.1 Site Safety

In order to protect pedestrians as well as Site workers from the hazards associated with completing the IRMs, appropriate precautionary measures will be taken to provide adequate safety measures. These safety measures will include:

- metal fencing equipped with a locking gate is currently in place near the front of the Site (near Monroe Avenue, see Figure 2);
- appropriate signage indicating that unauthorized entrance to the Site is prohibited will be installed near the locking gate;
- placing orange fencing around any excavation required to be left open overnight;
- backfilling existing excavations to grade prior to commencing additional excavation work;
- donning high visibility vests, hard hats, and safety glasses on-site during IRM activities; and,
- adherence to the Site-specific Health & Safety Plan included in Appendix 1 of this IRM Work Plan.

5.6.2 Traffic Control Devices

The Site is located along a relatively busy portion of road. Additionally, the bridge over the Erie Canal creates a blind spot for vehicles entering and leaving the Site. As such, it may be necessary to implement traffic control devices for vehicles entering and leaving the Site as part of the IRMs.

Traffic control devices will include:

- a competent flag person for both east bound and west bound traffic lanes. The flag persons will be required to wear high-visibility vests, hard hats, and use a high visibility flag;
- construction work ahead (or equivalent) signs posted on both east bound and west bound traffic lanes approximately 100-feet from the Site; and,
- a NYSDEC approved project sign will be created and posted at the entrance of the Site.

5.6.3 Decontamination Pad

The portions of the Site that dump trucks will be staged on for loading of soils will be limited to only paved portions of the Site. This will help to prevent gross accumulation of site soil onto the tires of the dump trucks. Additionally, a decontamination pad will be constructed near the fence/gated area of the Site (see Figure 2). Vehicles and equipment which come into contact with Class 2 materials will be visually inspected for gross quantities of soil adhering to the vehicles/equipment. If gross quantities of Class 2 materials are observed on the vehicles/equipment, then the vehicles/equipment will be placed onto the decontamination pad for decontamination. The decontamination pad will consist of:

- a layer 2-inch stone laid on top of two layers of a minimum of 6-mil polyethylene sheeting at a minimum of 20-feet in length by 10-feet wide;
- a pressure washer available to rinse of the dump trucks from a potable water source provided by the Applicant; and,
- brooms, brushes, etc.

Water will be containerized from the decontamination pad into 55-gallon drums using a drum vacuum. This water will be sampled for waste characterization purposes and will be disposed off-site in accordance with applicable state and federal regulations.

The landfill that will be the destination of impacted soils removed from the Site is:

High Acres Landfill
425 Perinton Parkway
Fairport, New York 14450-9104

Directions to High Acres Landfill are provided below:



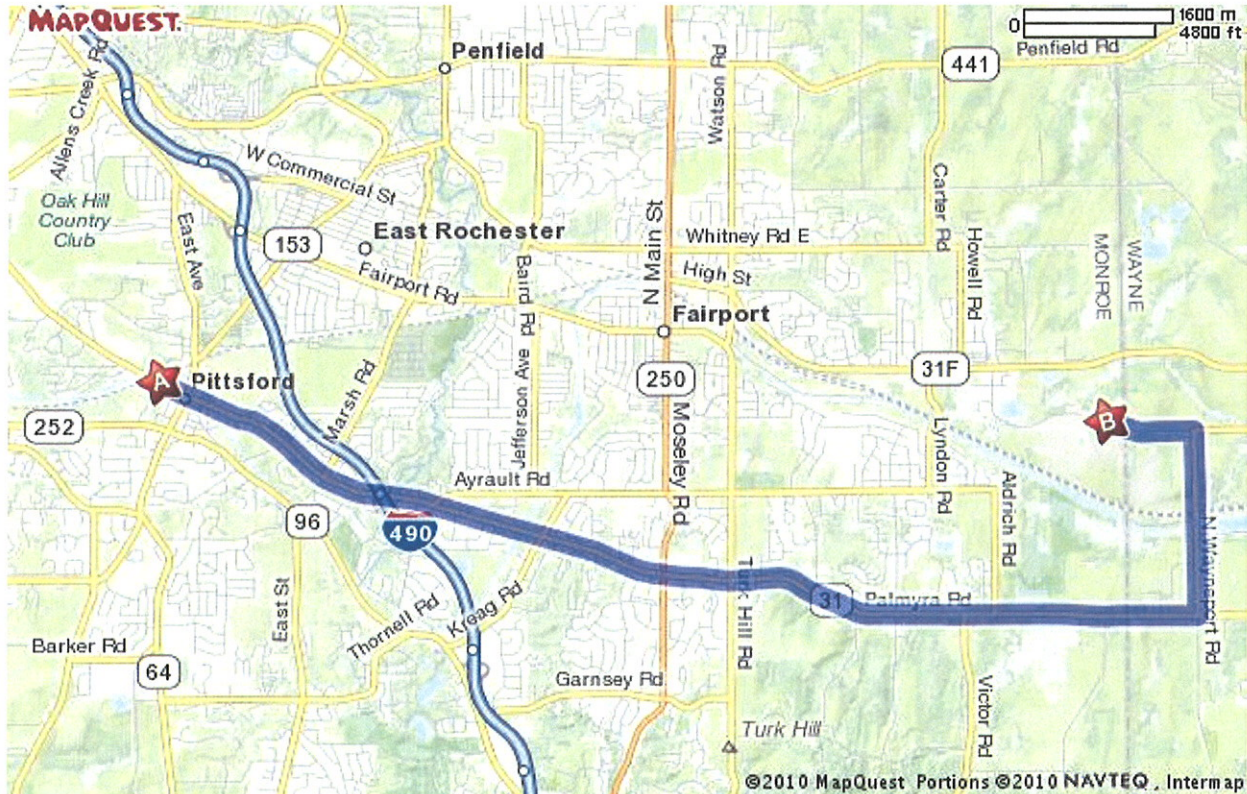
75 Monroe Ave, Pittsford, NY 14534-1323

1. Start out going east on Monroe Avenue / NY-31 toward Sutherland Street. Continue to follow NY-31. (8.5 miles)
2. Turn left onto North Wayneport Road / CR-306. (1.5 miles)

3. Turn left onto Quaker Road / CR-206. (0.5 miles)
4. Quaker Road / CR-206 becomes Perinton Parkway. (0.2 miles)

END

425 Perinton Parkway, Fairport, NY 14450-9104



6.0 Segregation, Staging, Characterization, and Off-site Disposal of Source Area Soils in Accordance with the EMP

Following the staging of impacted soils, waste characterization samples will be collected as required by the receiving landfill from the stockpile of Class 2 and Class 3 materials. Waste characterization samples will be collected from the staged stockpiles of Class 2 and Class 3 materials which consist of materials found to not meet the SCGs for the Site. Sampling will be completed in accordance with the accepting landfill's policy.

After the analytical characterization results are received, they will be forwarded for landfill acceptance. Following landfill acceptance, the soils staged for off-site disposal will be loaded, transported, and disposed off soils at a NYSDEC Part 360 permitted landfill. Weight tickets and waste manifests/bills of lading will be retained. A valid Part 364 permit will be required for any vehicle utilized to transport waste off-site. Loading and transport of waste will take place Monday through Friday, during normal business hours, generally prior to 3:00 p.m.

6.1 Confirmation Sampling

Excavation closure sampling will be conducted in accordance with NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation, November 2009.

All observable grossly contaminated soils will be removed from each of the proposed IRM excavations to the extent practicable. Soil confirmatory samples will not be collected until evidence of impairment is no longer observable from the excavation sidewalls and bottom. This includes PID readings less than or equal to 5 ppm. Additionally, due to safety reasons and because it would be impractical to leave an excavation open any longer than absolutely necessary, it is highly recommended that excavations are backfilled as quickly as possible following removal of all soils, to the extent practicable, that are considered Class 2 materials via the Environmental Management Plan (EMP) section of the IRM Work Plan. The Applicant will collaborate with the NYSDEC representative on-site during the implementation of the IRM Work Plan to ensure that the IRM excavations are completed to an extent that is both effective and practical.

Confirmation sample locations and depth will be biased toward the areas and depths of highest contamination identified during previous sampling episodes unless field indicators such as field instrument measurements or visual contamination identified during the remedial action indicate that other locations and depths may be more heavily contaminated, and toward locations and depths of the highest expected contamination.

Because the exact dimensions of the proposed excavations included in the IRM Work Plan will not be known until the excavations are completed, a specific quantity of samples cannot be determined at this time. Instead, the following sub-sections provide guidance based on DER-10, Section 5.4 in order to determine the exact number of confirmatory soil samples that will need to be determined in the field at the time of completion of each soil excavation.

Confirmation samples will be collected from each excavation once evidence of impairment is no longer observed on each sidewall and bottom of each excavation. The quantity of confirmation samples to be collected from each excavation will vary. However, the sampling guide below should be used based upon the final dimensions of the excavation:

- less than 20 feet in perimeter:
 - one bottom sample
 - one sidewall sample biased toward the area of the excavation showing the greatest impacts, if any

- for an excavation of 20 to 300 feet in perimeter:
 - one sample from the bottom of each sidewall for every 30 linear feet of sidewall
 - one sample from the excavation bottom for every 900 square feet of bottom area
- For excavations greater than 300 feet in perimeter, the confirmatory sampling frequency should be completed in consultation with the NYSDEC

Bottom samples should be taken from the zero to six-inch interval at the excavation floor. If the excavation bottom extends to bedrock, a bottom sample may not be collected.

6.2 Confirmation Sampling Analysis

Excavation closure samples will be collected and submitted to a NYSDOH ELAP certified laboratory. In accordance with Section 6.1, the final size of each excavation will determine the exact number of sidewall and bottom samples required. Each confirmation sample will be collected and analyzed for:

- TCL plus NYSDEC STARS-list VOCs including up to 10 TICs using USEPA Method 8260B
- TCL plus NYSDEC STARS-list SVOCs including up to 20 TICs using USEPA Method 8270C
- Pesticides using USEPA Method 8081
- PCBs using USEPA Method 8082
- TAL Metals using USEPA Methods 6010 and 7471
- Total Cyanide using USEPA Method 9012A

Laboratory analytical data packages will be provided as ASP Category B deliverable packages. A data usability summary report (DUSR) will be provided for each laboratory analytical data package.

The locations of the confirmatory soil samples and the extent of the excavation area will be documented using GPS technology.

6.3 Waste Stream Tracking and Verification in Accordance with the EMP

This documentation may include correspondence from the facility accepting the waste stream, manifests, bills of lading, and weight tickets.

The tracking information will be provided in the IRM Construction Completion Report.

6.4 Site Restoration

Following completion of each IRM excavation, each excavation will be backfilled to pre-existing grade.

Class 1 soil deemed to be within the SCOs for the Site, based upon analytical data results, may be utilized as backfill at the Site in areas both inside and outside of the footprints of future buildings.

Imported backfill will be required to complete site restoration. Documentation regarding the source of backfill will be provided for each source once they are selected. Additionally, each new source of imported fill will be sampled and submitted for laboratory analysis in accordance with the table below or as negotiated with the Department:

Contaminant Soil Quantity (yd ³)	STARS SVOCs		STARS VOCs		TAL Metals		PCBs & Pesticides	
	Grab	Composite	Grab	Composite	Grab	Composite	Grab	Composite
0-50	1	1	1	NA	1	1	1	1
50-100	1	2	2	NA	1	2	1	2
100-200	1	3	3	NA	1	3	1	3
200-300	1	4	4	NA	1	4	1	4
300-400	2	4	4	NA	2	4	2	4
400-500	2	5	5	NA	2	5	2	5
500-800	2	6	6	NA	2	6	2	6
800-1,000	2	7	7	NA	2	7	2	7
>1,000	Need to Submit Proposed Sampling Plan to NYSDEC							

Notes:
NA – Denotes Not Allowed

The laboratory analytical data results for each new source of fill must meet the established SCGs for the Site as described in Section 1.2 of this IRM Work Plan and must receive approval by the NYSDEC.

Prior to performing backfilling activities, all equipment that has come into contact with impacted soils will be decontaminated on the decontamination pad (refer to Section 5.6.3 Decontamination Pad). Each excavation must be completed to an elevation consistent with pre-IRM site conditions.

6.5 Excavation Dewatering, Water Treatment, and Sewer Discharge

Due to the relatively deep nature of the proposed excavations (i.e. 16 feet BGS) and the apparent depth to groundwater of approximately 6.0 to 17.7-feet BGS, it is considered likely that groundwater will infiltrate and enter the excavations. Groundwater recovered from the excavations shall be characterized in accordance with MCPW guidelines and if acceptable discharged to the MCPW system. If the wastewater is not acceptable for discharge to the MCPW system then the wastewater must be treated and re-sampled or shipped off-site for disposal.

The following steps will be taken to receive permission to discharge the batched groundwater to the public sewer system:

- Written notification to MCPW and/or local municipality of intent to discharge to their sewer system
- Completion of a Permit Application for the discharge of accumulated groundwater
- Sampling and analysis of accumulated groundwater, as required and specified by site-specific permit requirements
- If required, treatment of groundwater by activated carbon adsorption or other methods

- Following approval, selection of a sewer manhole for discharge of accumulated groundwater
- Discharge of accumulated groundwater to the selected manhole in accordance with the site-specific sewer discharge permit

[Note: In the event that a municipal sanitary sewer is not in proximity to the Site and/or contaminant concentrations in the waters are above discharge criteria, then the water will be disposed of off-site at an approved facility.]

- If LNAPL is encountered during excavation, it will be separately removed from the groundwater surface (e.g. with a vac truck) to the extent feasible and properly disposed

6.6 Post-Source Removal Groundwater Monitoring

6.6.1 Installation of the Post-IRM Groundwater Monitoring Well Network

Subsequent to the completion of the remedial excavations, four (4) overburden groundwater monitoring wells will be installed to evaluate groundwater conditions post-IRMs. The groundwater monitoring wells be advanced at the downgradient (based on groundwater flow direction to be toward the Erie Canal) edge of each the remedial excavations completed at the Site (see Figure 2).

The overburden wells will be set to intersect the top of the shallow groundwater table. Each well will be completed with 5 to 10 feet of 1-inch Schedule 40, 0.010-slot well screen connected to an appropriate length of schedule 40 PVC well riser to complete the well. The annulus will be sand packed with quartz sand to approximately 1 to 2 feet above the screened section. The remaining annulus will be bentonite sealed to near the ground surface, and each well will be completed with a protective, flush-mount well cover.

Soils from the borings will be continuously assessed in the field by an Environmental Geologist for evidence of impairment. Each well will be developed upon completion to insure a good hydraulic connection with the surrounding soils and groundwater table. Well development will include removing at least three (3) well volumes, or until dry. Following development, each well will be sampled for constituents of concern.

6.6.2 Sampling of the Post-IRM Groundwater Monitoring Well Network

Subsequent to installation and development, three (3) rounds of groundwater samples will be collected. The first event will occur three (3) months after source removal, the second sampling event at six (6) months, and the third sampling event at nine (9) months [i.e., a total three (3) sampling events].

Each groundwater sample will be collected and submitted to a NYSDOH ELAP certified laboratory. In accordance with Section 6.1, the final size of each excavation be determined in the field based on evidence of impairment. Each groundwater sample will be collected and analyzed for:

- TCL plus NYSDEC STARS-list VOCs including up to 10 TICs using USEPA Method 8260B
- TCL plus NYSDEC STARS-list SVOCs including up to 20 TICs using USEPA Method 8270C
- Pesticides using USEPA Method 8081

- PCBs using USEPA Method 8082
- TAL Metals using USEPA Methods 6010 and 7471
- Total Cyanide using USEPA Method 9012A

Laboratory analytical data packages will be provided as ASP Category B deliverable packages. A data usability summary report (DUSR) will be provided for each laboratory analytical data package.

The locations of the confirmatory soil samples and the extent of the excavation area will be documented using GPS technology.

Purge water and excess sample water will be containerized. This water will be sampled for waste characterization purposes and will be disposed off-site in accordance with applicable state and federal regulations.

7.0 IRM Reporting – Deliverables

The information and laboratory analytical data obtained during the IRMs will be included IRM Construction Completion Report for NYSDEC BCP Site #C828137.

Implementation of the IRM Work Plan is scheduled to begin shortly after NYSDEC approval of this work plan and the standard three (3) day UFPO waiting period. It is anticipated that the field work will be completed in approximately one (1) to two (2) months.

Y:\MARK IV ENTERPRISES\210259\IRMS\IRM WORK PLAN\IRM WORK PLAN (REVISED 7.22.10).DOC

LaBELLA

LaBella Associates, P.C.

300 State Street

Rochester, New York 14614

Tables

Table 1
Restricted Use Soil Cleanup Objectives
6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives
(All Soil Cleanup Objectives are in mg/kg (ppm))

Contaminant	CAS No.	Restricted Residential
<u>VOLATILE ORGANIC COMPOUNDS (VOCs)</u>		
1,1,1-Trichloroethane	71-55-6	100 ^a
1,1-Dichloroethane	75-34-3	26
1,1-Dichloroethene	75-35-4	100 ^a
1,2-Dichlorobenzene	95-50-1	100 ^a
1,2-Dichloroethane	107-06-2	3.1
cis-1,2-Dichloroethene	156-59-2	100 ^a
trans-1,2-Dichloroethene	156-60-5	100 ^a
1,3-Dichlorobenzene	541-73-1	49
1,4-Dichlorobenzene	106-46-7	13
1,4-Dioxane	123-91-1	13
Acetone	67-64-1	100 ^a
Benzene	71-43-2	4.8
Butylbenzene	104-51-8	100 ^a
Carbon Tetrachloride	56-23-5	2.4
Chlorobenzene	108-90-7	100 ^a
Chloroform	67-66-3	49
Ethylbenzene	100-41-4	41
Hexachlorobenzene	118-74-1	1.2
Methyl Ethyl Ketone (MEK)	78-93-3	100 ^a
Methyl tert-Butyl Ether (MtBE)	1634-04-4	100 ^a
Methylene Chloride	75-09-2	100 ^a
n-Propylbenzene	103-65-1	100 ^a
sec-Butylbenzene	135-98-8	100 ^a
tert-Butylbenzene	98-06-6	100 ^a
Tetrachloroethene	127-18-4	19
Toluene	108-88-3	100 ^a
Trichloroethene	79-01-6	21
1,2,4-Trimethylbenzene	95-63-6	52
1,3,5-Trimethylbenzene	108-67-8	52
Vinyl Chloride	75-01-4	0.9
Xylenes (Mixed)	1330-20-7	100 ^a

Contaminant	CAS No.	Restricted Residential
<u>SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs)</u>		
Acenaphthene	83-32-9	100 ^a
Acenaphthylene	208-96-8	100 ^a
Anthracene	120-12-7	100 ^a
Benzo(a)anthracene	56-55-3	1 ^f
Benzo(a)pyrene	50-32-8	1 ^f
Benzo(b)fluoranthene	205-99-2	1 ^f
Benzo(g,h,i)perylene	191-24-2	100 ^a
Benzo(k)fluoranthene	207-08-9	3.9
Chrysene	218-01-9	3.9
Dibenz(a,h)anthracene	53-70-3	0.33 ^e
Fluoranthene	206-44-0	100 ^a
Fluorene	86-73-7	100 ^a
Indeno(1,2,3-cd)pyrene	193-39-5	0.5 ^f
m-Cresol	108-39-4	100 ^a
Naphthalene	91-20-3	100 ^a
o-Cresol	95-48-7	100 ^a
p-Cresol	106-44-5	100 ^a
Pentachlorophenol	87-86-5	6.7
Phenanthrene	85-01-8	100 ^a
Phenol	108-95-2	100 ^a
Pyrene	129-00-0	100 ^a
Phenol	108-95-2	100 ^a
Pyrene	129-00-0	100 ^a

Notes:

SCO denotes Soil Cleanup Objectives.

NS denotes Not Specified.

^a The SCOs for Restricted-Residential use were capped at a maximum of 100-mg/kg (ppm).

^d The SCOs for metals were capped at a maximum of 10,000-mg/kg (ppm).

^e For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL was used as the SCO.

^f For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the Department and the Department of

^g This SCO was derived from data on mixed isomers of BHC.

^h The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the

ⁱ The SCO is for the sum of Endosulfan I, Endosulfan II, and Endosulfan Sulfate.

^j The SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts).

Table 1
 Interim Remedial Measures Work Plan
 Restricted Residential Soil Cleanup Objectives
 Former Monoco Oil
 75 Monroe Avenue
 Pittsford, New York
 BCP# C828137

Table 1

**Restricted Use Soil Cleanup Objectives
6 NYCRR Subpart 375-6 Remedial Program Soil Cleanup Objectives
(All Soil Cleanup Objectives are in mg/kg (ppm))**

Contaminant	CAS No.	Restricted Residential
METALS		
Arsenic	7440-38-2	16 ^f
Barium	7440-39-3	400
Beryllium	7440-41-7	72
Cadmium	7440-43-9	4.3
Chromium (Hexavalet)	18540-29-9	110
Chromium (Trivalent)	16065-83-1	180
Copper	7440-50-8	270
Total Cyanide		27
Lead	7439-92-1	400
Manganese	7439-96-5	2,000 ^f
Total Mercury		0.81 ^j
Nickel	7440-02-0	310
Selenium	7782-49-2	180
Silver	7440-22-4	180
Zinc	7440-66-6	10,000 ^d

Contaminant	CAS No.	Restricted Residential
PCB & PESTICIDES		
2,4,5-TP Acid (Silvex)	93-72-1	100 ^a
4,4'-DDE	72-55-9	8.9
4,4'-DDT	50-29-3	7.9
4,4'-DDD	72-54-8	13
Aldrin	309-00-2	0.097
alpha-BHC	319-84-6	0.48
beta-BHC	319-85-7	0.36
Chlordane (alpha)	5103-71-9	4.2
delta-BHC	319-86-8	100 ^a
Dibenzofuran	132-64-9	59
Dieldrin	60-57-1	0.2
Endosulfan I	959-98-8	24 ⁱ
Endosulfan II	33213-65-9	24 ⁱ
Endosulfan Sulfate	1031-07-8	24 ⁱ
Endrin	72-20-8	11
Heptachlor	76-44-8	2.1
Lindane	58-89-9	1.3

Notes:

SCO denotes Soil Cleanup Objectives.

NS denotes Not Specified.

^a The SCOs for Restricted-Residential use were capped at a maximum of 100-mg/kg (ppm).

^d The SCOs for metals were capped at a maximum of 10,000-mg/kg (ppm).

^e For constituents where the calculated SCO was lower than the contract required quantitation limit (CRQL), the CRQL was used as the SCO.

^f For constituents where the calculated SCO was lower than the rural soil background concentration, as determined by the Department and the Department of Health rural soil survey, the rural soil background concentration is used as the Track 2 SCO value for use of the site.

^g This SCO was derived from data on mixed isomers of BHC.

^h The SCO for this specific compound (or family of compounds) is considered to be met if the analysis for the total species of this contaminant is below the specific SCO.

ⁱ The SCO is for the sum of Endosulfan I, Endosulfan II, and Endosulfan Sulfate.

^j The SCO is the lower of the values for mercury (elemental) or mercury (inorganic salts).

LaBella
LaBella Associates, P.C.
300 State Street
Rochester, New York 14614

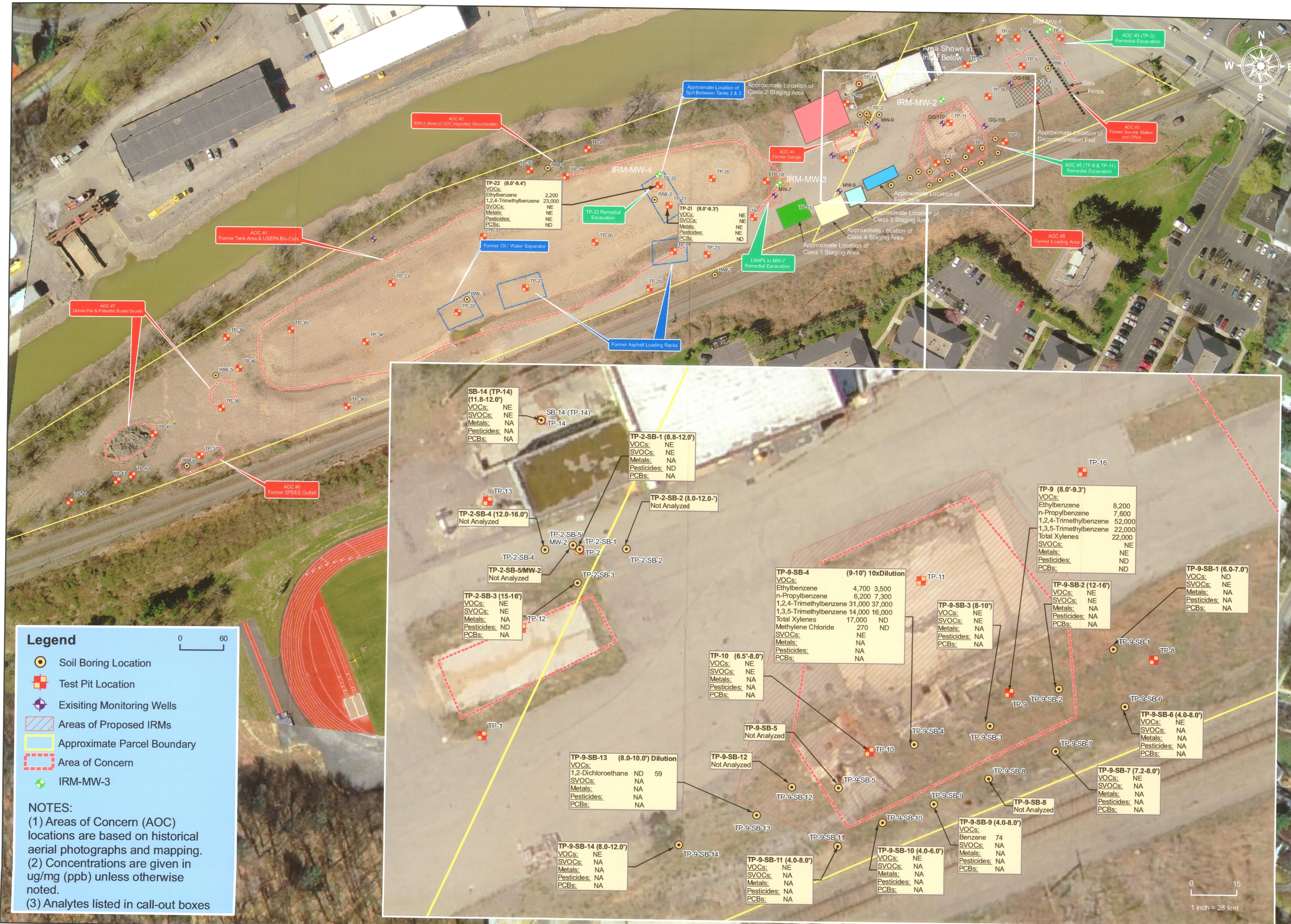
Figures



FIGURE 1
INTERIM REMEDIAL MEASURES
Former Monoco Oil
75 Monroe Avenue
Pittsford, New York
BCP #C828137

Scale: 1:10,000





Legend

- Soil Boring Location
- Test Pit Location
- Existing Monitoring Wells
- ▨ Areas of Proposed IRMs
- ▭ Approximate Parcel Boundary
- ▭ Area of Concern
- ⊕ IRM-MW-3

NOTES:
 (1) Areas of Concern (AOC) locations are based on historical aerial photographs and mapping.
 (2) Concentrations are given in ug/mg (ppb) unless otherwise noted.
 (3) Analytes listed in call-out boxes

300 STATE STREET
 ROCHESTER, NY 14614
 P: (585) 454-6110
 F: (585) 454-3066
 www.labellac.com
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Associates, P.C.

**Former Monoco Oil
 BCP Site #C828137
 Interim Remedial Measures**

75 Monroe Avenue
 Pittsford, New York

**Areas of Proposed
 Interim Remedial Measures**

ISSUED FOR:	DESIGNED BY:	RCN
FINAL	DRAWN BY:	RCN
DATE:	REVIEWED BY:	ED
APRIL 2010		

PROJECT/DRAWING NUMBER

210259

FIGURE 2

LaBELLA
LaBella Associates, P.C.
300 State Street
Rochester, New York 14614

Appendix 1

Health & Safety Plan

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LaBella Associates, P.C.

300 State Street

Rochester, New York 14614

Appendix 2

Site-Specific Community Air Monitoring Plan

Site-Specific Community Air Monitoring Plan

Location:

Former Monoco Oil
75 Monroe Avenue
Pittsford, New York

Prepared For:

Pittsford Canalside Properties, LLC
301 Exchange Boulevard
Rochester, New York 14608

LaBella Project No. 210259

April 2010

Site-Specific Community Air Monitoring Plan

Location:

Former Monoco Oil
75 Monroe Avenue
Pittsford, New York

Prepared For:

Pittsford Canalside Properties, LLC
301 Exchange Boulevard
Rochester, New York 14608

LaBella Project No. 210259

April 2010

LaBella Associates, P.C.
300 State Street
Rochester, New York 14614

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1.0 INTRODUCTION

This Site Specific Community Air Monitoring Plan (CAMP) has been prepared by LaBella Associates, P.C. (LaBella) on behalf of Pittsford Canalside Properties, LLC (PCP). This CAMP addresses potential Volatile Organic Compound (VOC) vapor and particulate emissions that may occur during excavation, backfilling, and other remedial activities at the former Monoco Oil Site located at 75 Monroe Avenue, Pittsford, New York which encompasses approximately 7.5 acres located in a Canal Waterfront Business District zoned area along the south side of the Erie Canal in the Village of Pittsford, Monroe County, New York herein after referred to as the "Site."

2.0 PURPOSE

Various levels of VOCs, semi-VOCs, and metals (collectively referred to as "constituents of concern" (COCs)) have been detected in the soil and groundwater at the Site or are suspected to be contained in the soil and/or groundwater at the Site. The presence of these COCs through disturbance of soil and groundwater at the Site can potentially result in nuisance odors or fugitive emissions to the neighborhood in the immediate vicinity of the Site. However, it should be noted that this CAMP is in-place as a precautionary measure.

This CAMP is specific to activities being conducted as part of the interim remedial measures (IRMs) at the Site. The CAMP describes the air monitoring activities to be completed in order to provide a measure of protection for any downwind receptors and occupants of neighboring properties.

This CAMP is based on the air monitoring specified in the New York State Department of Health (NYSDOH) Generic CAMP (included as Appendix 1A and 1B of the Draft DER-10 NYSDEC Technical Guidance for Site Investigation and Remediation dated November 2009).

3.0 METHODOLOGY

This CAMP has been designed for IRMs at the Site. The CAMP is arranged in the following sections:

- Section 3.1: Site Background Monitoring – This section identifies the background monitoring (VOC and fugitive dust) to be completed at the beginning of each day and periodically throughout the day when IRMs are being conducted. The background monitoring is used for comparing readings from the other monitoring locations.
- Section 3.2: Downwind Perimeter Monitoring – This section identifies the downwind perimeter work area monitoring (VOC and fugitive dust) to be completed continuously during the IRMs. Action levels are identified in this section.
- Section 3.3: Nearest Potential Receptor Monitoring – This section identifies additional VOC monitoring that will be completed during the IRMs to provide an added measure of protection at this Site that would not normally be required by NYSDEC or NYSDOH (i.e., this is above and beyond the NYSDOH Generic CAMP). Action levels are identified in this section.

It should be noted that based on the type of work, the various monitoring locations will be moved throughout the day to comply with the appropriate testing location.

In addition to the above, this CAMP also contains a Vapor Emission to Sensitive Receptors Response Plan (Section 3.0). This includes actions to be taken in the event that sustained exceedances of the specified action levels occur.

3.1 Site Background Monitoring

At the beginning of each day of field work, a wind sock or flag will be used to monitor wind direction in the work areas. Based upon daily wind conditions, a background monitoring location will be established. [Note: In the event that the wind direction changes, the background monitoring location will be moved to an appropriate upwind location.] The background monitoring location will be at least 25 feet from the work area in an upwind location. Subsequent to establishing the initial background measurements (VOC and particulate, see below), background measurements will be collected every 60 minutes throughout the duration of the IRM activities for that day. The specific background monitoring is defined below:

Background VOC Monitoring:

A photo-ionization Detector (PID) capable of data logging will be used to screen the ambient air or VOCs in the background location (i.e., upwind). The PID will be calibrated daily (in accordance with the manufacturer's specifications) prior to collecting the background readings. The background readings will be collected by a 15-minute running average which will be used for comparison to the downwind perimeter monitoring (refer to Section 3.2) and the nearest potential receptor monitoring (refer to Section 3.3). After the initial reading, periodic background readings will be collected every 60-minutes.

Background Fugitive Dust Monitoring:

A TSI DustTrak™ Model 8520 aerosol monitor or equivalent will be used for measuring particulates. The meter must be capable of measuring matter less than 10 micrometers in size (PM-10). The dust monitor will be calibrated daily (in accordance with the manufacturer's specifications) prior to collecting the background readings. The background dust monitoring will consist of collecting measurements integrated over a 15 minute period and will be used for comparison to the downwind perimeter monitoring (refer to Section 3.2). After the initial reading, periodic background readings will be collected every 60-minutes.

3.2 Downwind Perimeter Monitoring

Subsequent to collecting the initial Background Monitoring measurements, continuous monitoring of the downwind perimeter of the work area (i.e., exclusion zone) will be conducted throughout the duration of the IRMs that day. The downwind perimeter will vary depending on the work; however, in general this will be approximately 30 feet from the location of the work being completed. For example, in the event a Geoprobe boring is being completed, the downwind perimeter monitoring would be conducted approximately 30-ft. from the boring location.

Downwind Perimeter VOC Monitoring:

A MiniRae Lite PID or equivalent will be used to continuously monitor for VOCs at the downwind perimeter location. The PID will be calibrated daily (in accordance with the manufacturer's specifications) at the beginning of each day. An audible alarm will be set on the PID to sound in the event that total organic vapors exceed 5 parts per million (ppm) above the background readings. For example, if the background reading is 2 ppm, then the alarm will be set for 7 ppm.

Actions for Elevated VOC Readings

1. In the event that the action level of 5 ppm above background is exceeded, then 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.
2. If total organic vapor levels at the downwind perimeter of the work area persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions (refer to Section 4.0 Vapor Emission to Sensitive Receptors Response Plan for engineering controls), and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200-feet downwind of the work area 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 (background based on the 15-minute average).
3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown and the Vapor Emission to Sensitive Receptors Response Plan initiated, refer to Section 4.0.

All of the 15-minute readings will be recorded and will be available to NYSDEC and NYSDOH for viewing upon request. Instantaneous readings, if any, that are used for decision purposes will also be recorded.

Downwind Perimeter Fugitive Dust Monitoring:

A DustTrak™ Model 8520 aerosol monitor or equivalent will be used for measuring particulates. The dust meter must be capable of measuring matter less than 10 micrometers in size (PM-10) and be equipped with an audible alarm. The dust meter will be calibrated daily (in accordance with the manufacturer's specifications) prior to collecting readings. The dust monitoring will be conducted continuously and the measurements integrated over a 15 minute period. The results will be compared to the background monitoring (refer to Section 3.1). An audible alarm will be set on the dust meter to sound in the event that particulate levels exceed 100 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) greater than background for the 15-minute period. For example, if the background reading is $100 \mu\text{g}/\text{m}^3$, then the alarm will be set for $200 \mu\text{g}/\text{m}^3$.

Actions for Elevated Particulate Readings

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind) for the 15-minute period or if airborne dust is observed leaving the work area, then Fugitive Dust Control Techniques must be employed (see below). Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed $150 \mu\text{g}/\text{m}^3$ above the upwind level and provided that no visible dust is migrating from the work area.
2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than $150 \mu\text{g}/\text{m}^3$ above the upwind level, work must be stopped and the Fugitive Dust Control Techniques identified below will be reevaluated. In this event the NYSDEC Project Manager will be contacted immediately. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within $150 \mu\text{g}/\text{m}^3$ of the upwind level and in preventing visible dust migration.

All of the 15-minute readings will be recorded and will be available to NYSDEC and NYSDOH for viewing upon request.

Fugitive Dust Control Techniques

One or more of the following dust control measures will be implemented in the event that the above action levels are exceeded:

- Apply water to haul roads.
- Wetting equipment and excavation faces.
- Spraying water on buckets during excavation and dumping.
- Reducing excavation sizes.
- Reducing vehicle speeds to 10 mph.
- Immediately placing any investigation derived waste in drums and/or covering with plastic sheeting.

3.3 Nearest Potential Receptor Monitoring

A MiniRae Lite PID or equivalent will be used to continuously monitor for VOCs between the nearest potential receptor and the work area. Specifically, the MiniRae Lite PID or equivalent will be located half the distance between the perimeter of the work area (exclusion zone) and the nearest potential receptor, hereinafter referred to as the "Nearest Potential Receptor Monitoring Location". It should be noted that this location is not dependent on wind direction. The MiniRae Lite PID or equivalent will be calibrated daily (in accordance with the manufacturer's specifications) prior to collecting readings. The MiniRae Lite PID or equivalent will be operated in continuous mode and evaluate 15-minute running averages to account for any drift. An audible alarm will be set on the MiniRae Lite PID or equivalent to sound in the event that total organic vapors exceed 1 ppm above the background readings. For example, if the background reading is 2 ppm, then the alarm will be set for 3 ppm.

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Actions for Elevated VOC Readings

1. In the event that the action level of 1 ppm above background is exceeded, then work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 1 ppm over background at the Nearest Potential Receptor Monitoring Location work activities can resume with continued monitoring (assuming the downwind perimeter location is also below it's action level, refer to Section 3.2).
2. If total organic vapor levels at the Nearest Potential Receptor Monitoring Location persist at levels in excess of 1 ppm over background but less than 3 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions (refer to Section 4.0 for engineering controls), and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level at the Nearest Potential Receptor Monitoring Location is below 10 ppm over background (background based on the 15-minute average).
3. If the organic vapor level is above 3 ppm at the Nearest Potential Receptor Monitoring Location, activities must be shutdown and the Vapor Emission to Sensitive Receptors Response Plan initiated, refer to Section 4.0.

All of the 15-minute readings will be recorded and will be available to NYSDEC and NYSDOH for viewing upon request. Instantaneous readings, if any, that are used for decision purposes will also be recorded.

4.0 VAPOR EMISSION TO SENSITIVE RECEPTORS RESPONSE PLAN

Engineering controls to abate VOC emissions will immediately be put into effect if the action levels for VOC monitoring identified in Sections 3.2 and 3.3 are exceeded. These engineering controls may include:

- Vapor suppression utilizing polyethylene sheeting and/or water.
- Backfilling of excavations.
- Covering emission sources with stockpiled materials.

If the measures taken to abate the emission source are ineffective and the total organic vapor readings continue to be above the specified action levels for more than 15 minutes (5 ppm at the downwind perimeter monitoring location or 1 ppm at the Nearest Potential Receptor Monitoring Location), then the following actions shall be placed into effect.

- Occupants of the residential and commercial buildings will be advised to stay inside their respective structure and to close all windows.
- All personnel listed in the Emergency Contacts section of the HASP for this project will be contacted.

- The Site Safety Supervisor will immediately contact the local authorities (fire department) and advise them of the circumstances.
- Continuous air monitoring will be conducted at the Downwind Perimeter Location, the Nearest Potential Receptor Monitoring Location and within the work zone and 1 minute average measurements will be recorded every 15 minutes. Air monitoring may be halted or modified by the Site Safety Supervisor when two successive measurements are below the specified action levels.

If readings remain elevated above the specified action levels for a period of 60 minutes (5 ppm at the downwind perimeter monitoring location or 1 ppm at the Nearest Potential Receptor Monitoring Location) the Site Safety Officer will request that local authorities evacuate the occupants of the buildings.

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Site-Specific Community Air Monitoring Plan
BCP Site No. C828137
Former Monoco Oil Site, 75 Monroe Avenue, Pittsford, New York
LaBella Project No. 210259

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