

**SOIL, FILL AND WATER MANAGEMENT  
AND CONTINGENCY PLAN**

**200 EAST AVENUE  
ROCHESTER, NEW YORK**

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ATTACHMENTS

- Attachment A Summary Flow Chart for SFWMCP
- Attachment B Tables
- Attachment C Monroe County Sewer Use Permit Documentation

## **1.0 INTRODUCTION**

This site-specific Soil, Fill, and Water Management and Contingency Plan ("SFWMCP") has been developed for the property located at 200 East Avenue, City of Rochester, County of Monroe, New York ("Site"). This SFWMCP was developed to cover remedial work performed at the Site. Further details regarding the SFWMCP are provided below.

### **1.1 Statement of Purpose**

The purpose of this SFWMCP is to address the handling of: (1) petroleum-contaminated soil and fill; (2) fill materials containing ash; and (3) free product and contaminated groundwater that may be disturbed during redevelopment of the Site.

Specifically, this SFWMCP addresses how to identify, characterize, and handle these media during the redevelopment activities. The SFWMCP establishes goals, procedures, and appropriate response actions to be used by on-site personnel should petroleum-contaminated material, fill containing ash, or free product and contaminated groundwater be encountered and disturbed during the redevelopment activities. The SFWMCP also identifies how to dispose of or reuse these materials should they be encountered and disturbed during the redevelopment activities.

### **1.2 Site Description**

The Site is located at 200 East Avenue, and is currently owned by the City of Rochester (refer to Figure 1 in Appendix A of the Remedial Work Plan). The Site is a 2.3-acre parcel that contains a 33,000-square foot, two-story building, and a large parking lot on the north side of the building that occupies the entire northern portion of the Site (refer to Figure 2 in Appendix A of the Remedial Work Plan). A smaller parking lot is located on the southeast portion of the Site. The Site is currently used for the storage of automobiles and as a parking lot. Past land uses include a gasoline station on the southeast portion of the Site, and an automobile sales and service center with associated parking lots between approximately the 1920s through the 1980s. The Site is generally bound by Gable Alley to the north, Winthrop Street to the east, East Avenue to the south, and Mathews Street to the west.

## 2.0 SUMMARY OF SITE CONDITIONS

During previous Environmental Investigations at this Site (1993 Rizzo Associates, Inc. Phase I and Phase II Environmental Studies; 1995 Day Environmental, Inc. (DAY) Phase I and Phase II Environmental Studies; and a 1996 DAY Risk Assessment), it was determined that fill material (e.g., containing ash, cinders, concrete, slag, brick fragments, coal fragments, reworked soil, some solid waste, etc.) and petroleum-contaminated media (e.g., soil, contaminated groundwater, free petroleum product, etc.) were present at the Site.

The approximate areas of petroleum-contaminated media are illustrated on Figure 3 included in Appendix A of the Remedial Work Plan and are described below. The fill listed below is not shown on Figure 3, since it was encountered across the Site.

- Fill material was generally encountered near the ground surface over the entire Site. Based on the subsurface investigative work described above, it is estimated that the average thickness of fill across the northern portion of the Site is approximately 1.5 feet thick. A maximum thickness of fill observed during the previous subsurface work was measured to be approximately 5.75 feet, and was located on the southeast portion of the northern parking lot. Approximately 15% of this fill was estimated to be unsuitable for re-use (e.g., ash, solid waste, etc.) and will probably require removal and off-site disposal in accordance with applicable regulations. Most of the unusable fill material was observed in pockets and/or layers located in the large parking lot north of the existing building. Some of the fill material (i.e., primarily consisting of ash) has been determined to contain elevated levels of the metals arsenic, cadmium, chromium, lead, and mercury.
- Petroleum-contaminated media (i.e., groundwater, soil, and bedrock) are present in the small parking lot located on the southeast portion of the Site. This contaminated media may be attributable to former petroleum underground storage tanks (USTs) and/or a former gasoline station. As part of the 1997 remedial program, one UST was removed from this area, and based on work performed to date at the Site, it is not expected that additional USTs exist in this area. The UST that was removed was reportedly used to store gasoline and/or waste oil.
- Petroleum-contaminated media (i.e., groundwater, soil, and bedrock) and free petroleum product (i.e., oil) floating on top of groundwater are present beneath a portion of the concrete floor of the service garage and beneath the southern portion of the large parking lot located north of the building. This contaminated media and free petroleum product appear attributable to oil leakage from former in-ground hydraulic lifts in the service garage and/or possible leaks from trench drains or storage tanks that were inside or nearby the service garage. A bedrock collection trench with an associated system that pumps the groundwater through an oil-water separator is being used to remediate the petroleum contamination in this area.
- Some isolated pockets of petroleum-contaminated media (e.g., soil, fill, etc.) were encountered on the northern portion of the Site (i.e., in the northern parking lot).

Underground storage tanks (USTs) and aboveground storage tanks (ASTs) were also identified at the Site and closed in accordance with applicable regulations during the remedial program conducted at the Site. Also, one or two other USTs located inside the service garage appear to have been filled in-place in the past.

Based upon the findings of the previous Phase II Environmental Studies, the fill and petroleum-contaminated media at the Site are considered non-hazardous material for the parameters tested. However, if this material is disturbed, the New York State Department of Environmental Conservation (NYSDEC) requires that material be handled, treated or disposed of, in accordance with applicable regulations.

In summary, this SFWMCP was developed to address the handling, disposal, and treatment and/or on-site re-use of the following material during the redevelopment of the Site (i.e., Figure 2 in Appendix A of the Remedial Work Plan):

1. Petroleum-contaminated soil/fill;
2. Fill material that contains ash. The ash has been determined to contain elevated levels of heavy metals; and
3. Free petroleum product and contaminated groundwater.

### 3.0 ON-GOING SITE REMEDIATION AND MONITORING

Based on the findings of the previous investigations at the Site, remedial measures and groundwater monitoring plans have been implemented at the Site.

#### 3.1 Site Remedial Measures

Three in-situ remedial systems have been installed at the Site;

- A free petroleum product recovery system has been installed north of the existing service garage building. This system will continue to be operated subsequent to the redevelopment activities;
- A passive soil venting system has been installed inside one of the former trench drains located inside the service garage area of the existing building. This system will be decommissioned during the redevelopment activities; and
- An active soil vapor extraction system (SVES) has been installed in the smaller parking lot located on the southeast portion of the Site; however, this system has never been operated. This system will be decommissioned during the redevelopment activities.

Further details regarding these systems are available for review at the City of Rochester, Department of Environmental Services, 30 Church Street, Rochester, New York. The free product recovery system can not be decommissioned, covered over, obstructed, modified, or damaged without first obtaining approval from proper regulatory authorities (e.g., NYSDEC, Monroe County Department of Health [MCDOH]), and the City of Rochester.

Also, the following corrective measures were completed at the Site:

- Four USTs were removed;
- Approximately 200 tons of petroleum-contaminated soil was removed and disposed of off-site;
- One UST and its associated sub-grade vault were closed in-place with a flowable fill and then capped with concrete;
- Trench drains inside the existing building were cleaned out, and the resulting trench drain contents were disposed of off-site. The trench drains, excluding the trench drain where a passive vent system was installed, were then filled and capped with concrete;

- Oil and liquid contents in the lift pits and oil reservoirs of nineteen former in-ground hydraulic lifts inside the existing building were removed and disposed of off-site. The in-ground hydraulic lift equipment and associated reservoir tanks were cleaned, removed, and disposed of off-site. The lift pits were then filled with clean fill and then capped with concrete.

### **3.2 Current Groundwater Monitoring System**

Currently, there are fifteen existing groundwater monitoring wells located upgradient and downgradient of the free product recovery system on the Site. The locations of these wells are shown on Figure 2 included in Appendix A of the Remedial Work Plan. As shown, two of these wells are located inside the service garage. It is presumed that these wells will be decommissioned during redevelopment of the Site. However, the monitoring wells can not be covered over, obstructed, or damaged without first obtaining approval from the appropriate regulatory authorities (e.g., NYSDEC, MCDOH), the City of Rochester, and Home Properties of New York, Inc. As an example, covering over a well would make it difficult to later locate the well for proper decommissioning.



#### 4.0 SOIL, FILL, AND WATER MANAGEMENT AND CONTINGENCY PLAN

This SFWMCP assumes redevelopment of the Site will consist of the following:

- A portion of the existing building will be redeveloped primarily for commercial purposes;
- The basement of the existing building will be renovated primarily for commercial and residential storage space;
- The remaining portion of the existing building will be demolished;
- A sub-grade parking garage will be constructed, and will be overlain by primarily residential structures; and
- The northern portion of the Site will be developed with a slab-on-grade residential building and an open paved parking lot.

This SFWMCP covers activities associated with the redevelopment of the Site where petroleum-contaminated soil/fill, fill containing ash, and free product and contaminated groundwater will be disturbed, removed, disposed of, etc.

As indicated in NYCRR Part 360, Section 360-1.15 (b)(8), non-hazardous soil, ceases to be solid waste when it is excavated as part of a construction project (e.g., redevelopment project), other than a department-approved or undertaken inactive hazardous waste disposal site remediation program, and the material is used as backfill for the same excavation or excavations containing similar contaminants at the same site. As such, non-hazardous soil/fill at the Site that is excavated during redevelopment, is not a solid waste if re-used on-site in areas where similar material already exists. However, criteria for re-use established in this SFWMCP (e.g., NYSDEC STARS memo #1 guidance values, etc.) must be achieved.

This SFWMCP provides options regarding the disposal and/or re-use of petroleum-contaminated media, fill material containing ash, and free product and contaminated groundwater. This SFWMCP also provides a protocol for preventing fugitive emissions during disturbance of these materials, and reducing future impacts associated with these materials. The SFWMCP also describes the procedures to be implemented in order to manage these materials if encountered and/or disturbed during redevelopment activities, in accordance with applicable regulations. The procedures presented are intended to reduce potential exposure to construction workers and nearby residents during redevelopment; and Site workers, Site residents, and nearby workers and residents during future operation and/or occupation of the Site. A Summary Flow Chart included in Attachment A provides a summary of recommended handling and disposal options for materials covered by this SFWMCP.

## 4.1 Petroleum-Contaminated Media

During the redevelopment of the Site, petroleum-contaminated media (e.g., fill, soil, etc.) will be encountered. This section of the report defines how to identify petroleum-contaminated media in the field, and illustrates where it has previously been encountered. It is possible that other areas of petroleum-contaminated media, not previously identified, may be encountered during the redevelopment activities.

### 4.1.1 Anticipated Areas of Contamination

Approximate areas of known and/or suspected petroleum impact are generally illustrated on Figure 3 included in Appendix A of the Remedial Work Plan.

- A large area of petroleum-contaminated soil and fill is located in the vicinity of the planned sub-grade parking garage. This area of impact appears to primarily consist of waste oil and/or hydraulic oil. As part of the remedial program at the Site, this area of contaminated soil will be removed down to the top of bedrock. The excavated material will be disposed of off-site in accordance with applicable regulations.
- An area of primarily weathered gasoline-contaminated soil and fill is located on the southeast portion of the Site. The majority of contaminated soil in this area has already been removed as part of the previous remedial program. Some residual contamination was left on or near the right-of-way for Winthrop Street, beneath the existing building located north of this area, and in the bedrock. The below-grade portion of a proposed active soil vapor extraction system (SVES) was placed in this area (refer to Section 3.1 of this SFWMCP).
- During redevelopment work on the northern portion of the Site, "pockets" of petroleum-contaminated media will likely be encountered. As part of the remedial program at the Site, contamination that exceeds NYSDEC STARS guidance values will be removed as best as practicable, and be disposed of off-site in accordance with applicable regulations. Where contamination left in-place exceeds NYSDEC STARS guidance values, engineering controls will be designed and implemented.

### 4.1.2 In-Field Characterization

Based on the previous studies completed at the Site, the petroleum impact identified at the Site consists primarily of gasoline, diesel, lube oil, engine oil, waste oil, and hydraulic oil. Contaminated soil and/or fill may appear stained black and/or gray. Diesel odors, gasoline odors, heavy oil odors, or weathered petroleum-like odors may be detected on the material. Visual and olfactory observations should be made on excavated material for indication of petroleum-related impact or other impact.

In conjunction with conducting the visual and olfactory observations, a photoionization detector (PID) and/or flame ionization detector (FID) will be used during excavation work to assist in detecting total volatile organic compound (VOC) vapors on the excavated material. The PID and FID can detect many VOCs typically present in many petroleum products. If PID and/or FID readings exceed typical upwind air background measurements by 1.0 parts per million (ppm) or more, it will be presumed that petroleum contamination is present, and that the material will require off-site disposal or treatment, unless laboratory data suggests otherwise.

#### **4.1.3 Handling**

Materials that are excavated, disturbed, etc. that appear to be contaminated by petroleum-related compounds (e.g., based on visual and olfactory assessment, PID/FID readings, etc.) will be removed, segregated from non-contaminated media, and be placed on, and covered with, plastic sheeting that is at least 10 mil thick. The contaminated material's location, appearance, and quantity (if possible) will be documented. The appropriate regulatory authorities (e.g., NYSDEC, MCDOH), the City of Rochester, and Home Properties of New York, Inc. must be notified regarding the contamination. If contaminated material is to be staged on-site, any disposal, treatment, etc. will be conducted within 60 days, unless otherwise authorized by the NYSDEC.

Along off-site street right-of-ways, etc. (e.g., specifically Winthrop Street), it may not be feasible to remove contaminated material to levels below NYSDEC STARS guidance values. However, the planned environmental engineering controls (e.g., soil venting systems, vapor barriers, etc.) will mitigate exposures to site occupants under normal use of the property.

#### **4.1.4 Analytical Laboratory Testing**

Samples of the petroleum-contaminated material will be tested for NYSDEC STARS-list VOCs and semi-volatile organic compounds (SVOCs) (refer to Table I included in Attachment B), and the analytical results will be compared to the guidance values in the STARS document (refer to Table II included in Attachment B). The actual parameters tested for must be approved by the appropriate regulatory authorities, the City of Rochester, and Home Properties of New York, Inc., and may also be dependant upon the field observations, PID/FID readings measured, and potential testing requirements of a NYSDEC-approved disposal facility (i.e., landfill). The laboratory testing will also be used to assist in determining whether the petroleum-contaminated material can be re-used on-site or require off-site disposal; and assist in characterizing the petroleum-contaminated media as hazardous or non-hazardous.

In order to determine if the petroleum-contaminated soil/fill can be re-used on-site or requires off-site disposal, it will be required that the test results must be compared to petroleum soil guidance values listed in the August, 1992 NYSDEC STARS Memo #1 (refer to Table II included in Attachment B).

#### **4.1.5 Disposal of Petroleum-Contaminated Media**

When practicable, petroleum contaminated soil and/or fill encountered during the redevelopment activities will be disposed of off-site in accordance with applicable regulations, regardless of whether the concentrations of constituents exceed, or do not exceed, NYSDEC STARS guidance values. Transporters of petroleum-contaminated media must have the appropriate NYSDEC Part 360 permits, etc. The disposal facility (i.e., landfill) must be approved by the NYSDEC. This includes petroleum-contaminated material that is defined as hazardous waste and non-hazardous waste.

During the installation of six new wells at the Site, it is anticipated that soil cuttings will be generated. If the soil cuttings are deemed to be contaminated (i.e., assumed to require disposal, or are tested and exceed STARS guidance values, or contains primarily ash fill) then they will be placed in NYSDOT-approved 55-gallon drums, or staged with other contaminated soils, and will ultimately be disposed of off-site in accordance with applicable regulations. If soil cuttings are tested and do not exceed STARS guidance values and do not contain primarily ash fill, then they can be re-used on-site, if desired.

Decontamination water, drilling water, and water removed from wells during their development and sampling will be discharged to the existing oil/water separator that is associated with the free product recovery system.

#### **4.1.6 Contingency Option for Re-use of Petroleum-Contaminated Soil/Fill**

As a contingency option, if the detected concentrations of VOCs and SVOCs in samples of the petroleum-contaminated soil/fill are below the August, 1992 NYSDEC STARS Memo #1 petroleum soil guidance values, then the material can be deemed as "suitable" for re-use on-site with the permission of the appropriate regulatory authorities, the City of Rochester, and Home Properties of New York, Inc. This includes petroleum-contaminated material that initially exceeds STARS guidance values, is later treated on-site and re-tested for STARS parameters, and ultimately does not exceed STARS guidance values. However, media containing any detectable concentrations of petroleum-related compounds can not be located in the vicinity of any existing or planned residential buildings, or other subsurface structures where the potential for human exposure, vapor accumulation, or nuisance odors could arise. Acceptable uses of petroleum-contaminated soil/fill designated as suitable for re-use may include backfill under parking lots, grading, etc. Petroleum-contaminated soil/fill that is re-used on-site must be covered with

clean soil. Petroleum-contaminated soil/fill can not be re-used on-site in planters, landscaping beds or in areas that may be used as gardens.

## **4.2 Fill Material**

During development of the Site, fill material will be encountered. Excavated and/or disturbed materials should be closely observed for evidence of this fill material. Most of these types of fill can be re-used on-site. However, previous laboratory testing indicated that "pockets" of fill primarily consisting of ash contain heavy metals at concentrations that exceed NYSDEC soil cleanup objectives and/or typical ranges of background concentrations for naturally occurring metals; thus, these fill materials require special handling.

### **4.2.1 In-Field Characterization of Ash Material**

Based on previous studies, the fill material at the Site generally consists of reworked soil containing lesser amounts of ash, coal, glass, cinders, brick, metals, gravel, piping, plaster, wood, etc. However, "pockets" of fill primarily consisting of ash have been encountered on the northern portion of the Site. Fill material primarily consisting of ash is readily discernable in the field. The ash may appear white, yellow, or gray in color, is relatively soft, and has a gritty texture.

Typically, the ash fill material is of poor geotechnical quality, and this type of material is not normally considered to be a suitable backfill material for most construction projects. Due to the ash material's poor geotechnical quality, its limited volume on the site, and its tendency to contain elevated levels of heavy metals, it will be disposed of off-site in accordance with applicable regulations.

### **4.2.2 Handling**

Ash fill material that is excavated, disturbed, etc. will be removed, segregated from other material, and be placed on, and covered with, plastic sheeting that is at least 10 mil thick. The ash fill material's location, appearance, and quantity (if possible) will be documented. The appropriate regulatory authorities, the City of Rochester, and Home Properties of New York, Inc. must be notified regarding the ash fill material. The ash fill will be disposed of off-site in accordance with applicable regulations within 60 days, unless otherwise authorized by the NYSDEC.

It is anticipated that other fill material generally consisting of reworked soil containing lesser amounts of ash, coal, glass, cinders, brick, metal, gravel, piping, plaster, wood, etc. will not require special on-site handling, segregation, etc. It is anticipated that this type of fill can be re-used on-site.

If fill material that differs from that identified above is encountered, it will be

removed, segregated from other material, and will be placed on, and covered with, plastic sheeting. The unknown fill material's location, appearance, and quantity (if possible) will be documented. The appropriate regulatory authorities, the City of Rochester, and Home Properties of New York, Inc. must be notified regarding the unknown fill material. This fill will be addressed (e.g., characterized, disposed of off-site, etc.) in accordance with applicable regulations within 60 days, unless otherwise authorized by the NYSDEC.

#### **4.2.3 Analytical Laboratory Testing**

It is anticipated that fill material generally consisting of reworked soil containing lesser amounts of ash, coal, glass, cinders, brick, metal, gravel, piping, plaster, wood, etc. will not require testing prior to re-use on-site.

It is anticipated that samples of some types of fill material may require laboratory analysis during this project. Fill of suspect concern (e.g., fill containing ash, etc.) and/or unknown fill materials that are planned to be re-used on-site or disposed of off-site, will likely require some laboratory testing. The laboratory testing can assist in the identification of unknown fill materials, and in characterizing the fill as hazardous or non-hazardous.

Recommended analytical testing for types of fill encountered at the Site are summarized in Table I included in Attachment B. It should be noted that disposal facilities might require additional testing parameters. As shown, it is recommended that analytical testing for some of the fill materials may include one or more of the following: VOCs, TCLP VOCs and/or metals; total metals, pH, reactivity, and ignitability. The actual parameters tested for must be approved by the appropriate regulatory authorities, the City of Rochester, and Home Properties of New York, Inc., and may also be dependant upon the field observations, PID readings measured, and potential testing requirements of an approved disposal facility (i.e., landfill).

In order to determine if unknown fill can be re-used on-site or requires off-site disposal, it will be required that the analytical test results be compared to available NYSDEC clean-up objective and petroleum soil guidance values, and background ranges for naturally occurring metals. Specifically, the test results must be compared to the petroleum soil guidance values listed in the August, 1992 NYSDEC STARS Memo #1, and to recommended clean-up objectives and/or background ranges for naturally occurring metals as listed in the January 24, 1994 NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 (refer to Table II included in Attachment B).

#### 4.2.4 Disposal of Fill Material

During redevelopment activities, fill material will be excavated and require off-site disposal (i.e., fill that is displaced by excavation of sub-grade parking garage, fill that does not meet construction/geotechnical requirements, fill containing unacceptable concentrations of heavy metals, etc.). The actual disposal facility able to accept the fill may be dependent upon the type of fill (i.e., fill primarily consisting of ash vs. non-ash fill). Transporters of fill material must have the appropriate NYSDEC Part 360 permits, etc. The disposal facilities (i.e., landfills) must be approved by the NYSDEC.

- Fill material that is excavated and that primarily consists of ash will be disposed of off-site in accordance with applicable regulations. Based on the test results of samples of ash fill previously analyzed, it is anticipated that the ash fill would be disposed of as a non-hazardous waste.
- It is anticipated that other types of fill excavated at the Site (i.e., fill consisting of reworked soil, construction and demolition [C&D] debris, etc.) would be disposed of off-site as a non-hazardous waste.
- Any fill material that is characterized to be a hazardous waste will be handled and disposed of off-site in accordance with applicable regulations.

#### 4.2.5 Re-use of Fill

Fill that has been adequately characterized may be re-used on-site with the permission of the appropriate regulatory authorities, the City of Rochester, and Home Properties of New York, Inc. It is noted that regulatory authorities, the City of Rochester, and Home Properties of New York, Inc. may not authorize the re-use of fill that exceeds NYSDEC cleanup objectives, NYSDEC petroleum soil guidance values, or typical background ranges for naturally occurring metals.

If excavated fill is a suitable backfill material (e.g., consists of reworked soil that meets construction/geotechnical requirements for the type of proposed use on the Site), and if it is determined by the appropriate regulatory authorities to not pose an unacceptable exposure risk to future occupants of the Site, then it can be re-used on-site in the same or similar excavations, beneath parking lots, for grading, etc. Fill can be left in-place if it is determined by the appropriate regulatory authorities to not pose an unacceptable exposure risk to future occupants of the Site.

#### 4.2.6 Unanticipated Fill Material

If unanticipated fill material or suspect/suspicious contamination is encountered that significantly differs from that described above, or if unusual odors, staining,

sheens, fumes, or vapors are encountered from excavated materials, then the construction activities where the material is being disturbed will be discontinued, and the appropriate regulatory authorities, the City of Rochester, and Home Properties of New York, Inc. will be notified. Additionally, non-essential personnel should be evacuated from the area of the unanticipated fill, and the area should be secured to prevent inadvertent exposure to any on-site personnel until the unanticipated fill is properly characterized and it has been determined how it should be handled.

The unidentified material should then be characterized in the field using visual observations and a PID and/or FID. If PID/FID readings and/or visual observations indicate the presence of unanticipated contamination, then the unanticipated fill material must be sampled and further characterized by a NYSDOH-approved analytical laboratory prior to any further site work being conducted in that area. The appropriate regulatory authorities, the City of Rochester, and Home Properties of New York, Inc, must approve the analytical program.

### **4.3 Free Product and Contaminated Groundwater**

#### **4.3.1 Anticipated Areas of Contamination**

Approximate areas of known and/or suspected free petroleum product and contaminated groundwater are generally illustrated on Figure 3 included in Appendix A of the Remedial Work Plan. As shown, the free product is generally located on the southern portion of the Site immediately south of the free product recovery system. Contaminated groundwater is also generally limited to the southern portion of the property, with smaller suspected isolated areas of groundwater with a sheen observed on the northern portion of the Site.

#### **4.3.2 In-Field Characterization**

The free product generally consists of a heavy-weight oil (e.g., waste engine oil and hydraulic oil). The free product has a weathered petroleum-like odor, floats on water, and is dark brownish black in color. VOCs can be detected with a PID and/or FID on the ambient headspace air above samples of the free product.

Groundwater contaminated with dissolved constituents has a weathered gasoline-like odor on the southeast portion of the Site, and has a weathered heavier petroleum-like odor in the area of the free product. Groundwater containing dissolved contaminants may appear clear, or may have a tint of black or gray. If the VOC concentrations are high enough, the PID and/or FID can be used to detect dissolved VOCs on the ambient air above samples of the groundwater.



### **4.3.3 Handling and Disposal**

Free product and contaminated groundwater that are encountered during the redevelopment activities will be removed from excavations using pumps and associated hoses. The material will be passed through an oil/water separator for treatment, prior to being discharged to the Monroe County Pure Waters (MCPW) combined sewer system located in Winthrop Street.

A County of Monroe sewer use permit (#783) dated July 25, 1997 exists for the property for the intended use of groundwater remediation (Copy included in Attachment C). During a March 25, 1998 telephone discussion, Mr. Harry Reiter, pretreatment Coordinator for the Monroe County Department of Environmental Services (MCDES), Division of Pure Waters (DPW), indicated that additional water from Site excavations can be treated through an oil/water separator, and then be discharged to the combined sewer system under the existing sewer use permit.

### **4.3.4 Analytical Laboratory Testing**

In accordance with the July 25, 1997 County of Monroe sewer use permit, effluent from the oil/water separator will be sampled and analyzed on a monthly basis for a period of one year, at which time the monitoring could be limited to quarterly sampling if approved by Monroe County. However, Mr. Reiter of the MCDES DPW indicated that the DPW might require more frequent monitoring (e.g., weekly sampling) during the actual site development activities when the volume of water being treated and released is significantly greater than the volume currently being discharged. The samples will be analyzed for purgeable aromatics, purgeable halocarbons, and total petroleum hydrocarbons.

As outlined in the sewer use permit, the summation of the purgeable aromatics and purgeable halocarbons shall not exceed 2.13 ppm, and total petroleum hydrocarbons shall not exceed 100 ppm.

## **4.4 Air Monitoring**

### **4.4.1 Particulate Monitoring**

During redevelopment activities that disturb fill that contains ash or petroleum-contaminated material, periodic air monitoring will include real-time monitoring for particulates using a real-time aerosol monitor (RTAM). This will ensure that respiratory protection is adequate to protect Site workers against potential contaminants in the fill containing ash or petroleum-contaminated media, and to ensure that the potential contaminants are not migrating off-site through the air. The particulate monitoring measurements will be compared to action levels that are specified in the Health and Safety Plan (HASP), which is included as part of

the Remedial Work Plan. If the action level is exceeded, or if visible dust is encountered, then work shall be discontinued until corrective actions are implemented and subsequent readings indicate particulate levels are within the acceptable range. The party conducting the air monitoring will have the authority to halt the disturbance of fill and/or contaminated media (e.g., excavation activities, etc.) until appropriate actions are taken. Corrective actions may include dust suppression, change in the way work is performed, upgrade of personal protective equipment, etc. Readings will be recorded and available for review.

#### **4.4.2 VOC Monitoring**

Since it is anticipated that petroleum-contaminated media may be encountered during redevelopment activities, periodic air monitoring will include real-time monitoring for VOCs using a real-time PID meter. This will ensure that respiratory protection is adequate to protect Site workers against potential contaminants in the fill or contaminated media, and to ensure that the potential contaminants are not migrating off-site.

The air monitoring measurements will be compared to corrective action levels that are specified in the HASP, which is included as part of the Remedial Work Plan. If action levels are exceeded, then work shall be discontinued until corrective actions are implemented and subsequent readings indicate VOC levels are within the acceptable range. The party conducting the air monitoring will have the authority to halt the disturbance of fill and/or contaminated media (e.g., excavation activities, etc.) until appropriate actions are taken. Corrective actions may include change in the way work is performed, upgrade of personal protective equipment, etc. Readings must be recorded and available for review.

#### **4.5 Dust Suppression**

If dust suppression is required during construction activities, the following techniques may be implemented: applying water to haul roads; wetting equipment and excavation faces; spraying water on buckets during excavation and dumping; covering materials that are being hauled; restricting equipment speeds; and covering excavated areas and exposed areas of fill containing ash and/or petroleum-contaminated material. Dust suppression techniques will be utilized until air monitoring indicates that dust levels are within an acceptable range.

#### **4.6 Site Controls**

If unknown fill materials and/or unknown contaminated media are encountered (e.g., fill that is different than that already characterized during previous studies), a fence will be placed around these areas in order to restrict access and exposure. Fencing will also be placed around excavations into fill materials and/or petroleum-contaminated materials that are to be left open over night, the weekend, or for any other extended periods of time.

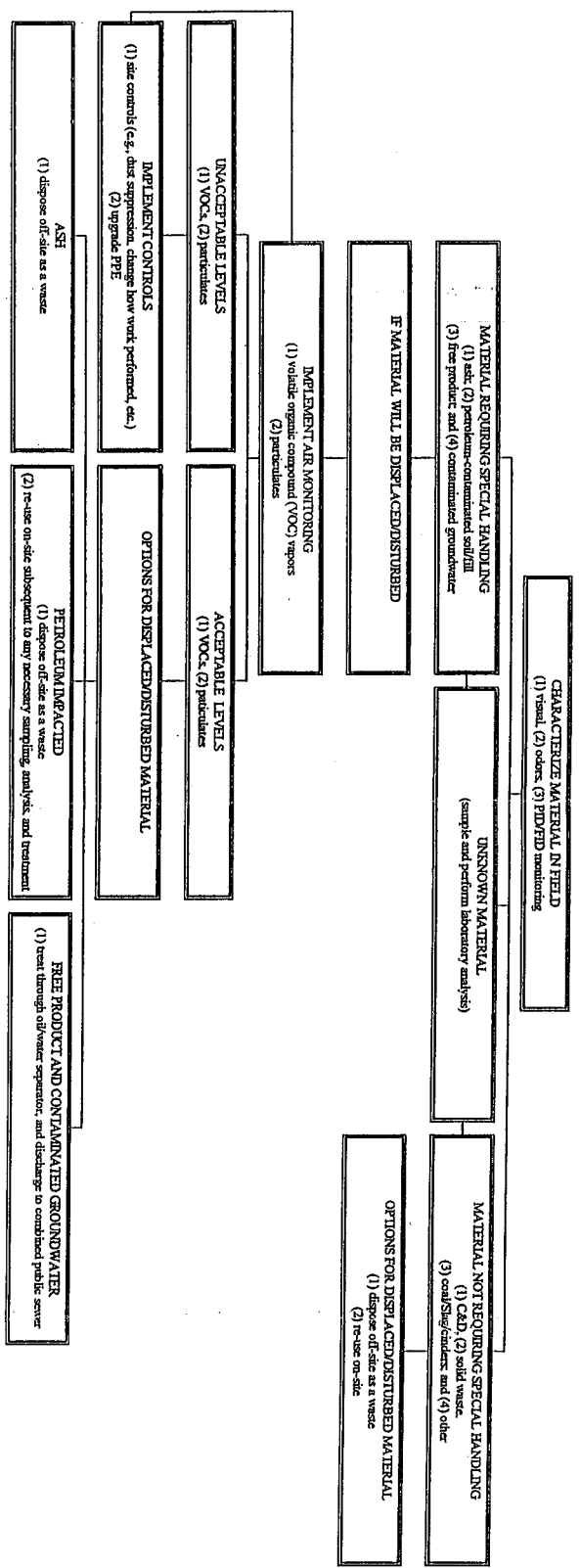
#### 4.7 Management of Potential Future Disturbances

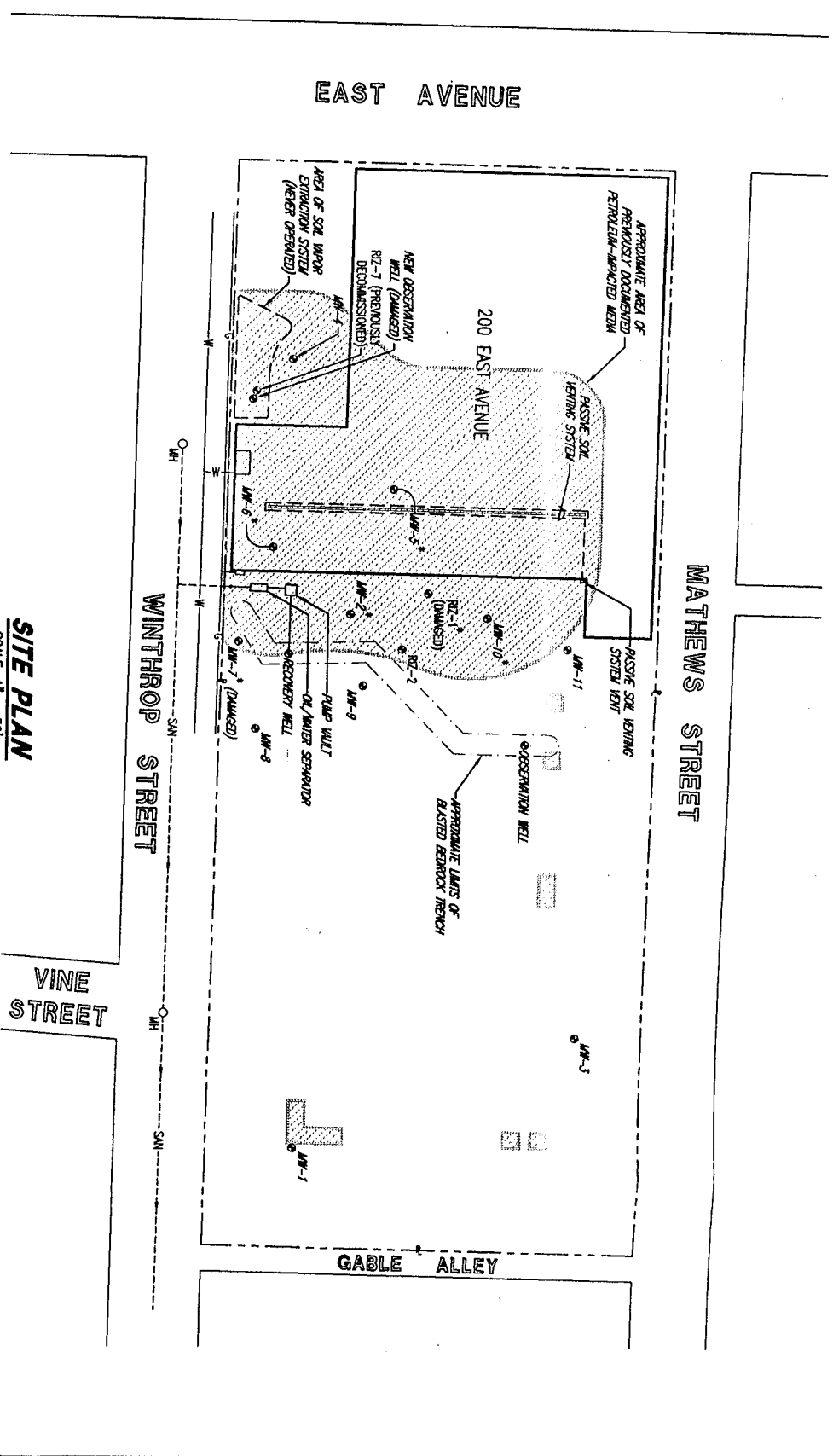
Workers involved with future on-site work (i.e., placing/repairing plantings, new installation/repair of buried utilities, etc.) that have the potential to disturb fill containing ash or petroleum-contaminated media should be made aware of the potential exposure hazards. The property manager and/or the owner of the Site will be responsible for notifying future on-site workers of potential exposure hazards. The owner will be in possession of the previous reports, this SFWMCP, and the health and safety plan included as part of the Remedial Work Plan. These documents contain information on the type and location of contaminants at the Site, and address how to handle, treat, dispose of impacted materials in a manner that precludes exposure. Precautions should be implemented to minimize fill and/or soil disturbance and air-borne release of particulates. Areas where work has been completed should be repaired (e.g., clean soil/fill re-applied, paved, etc.).

**ATTACHMENT A**

**Summary Flow Chart for SFWMCP**

SUMMARY FLOW CHART  
 SOIL, FILL AND WATER MANAGEMENT  
 AND CONTINGENCY PLAN (SFMCP)  
 200 EAST AVENUE  
 ROCHESTER, NEW YORK





- NOTES:
1. THIS DRAWING WAS PRODUCED FROM A SITE PLAN BY: RZZO ASSOCIATES, INC., ENTITLED FIGURE 2: SITE PLAN WITH MONITORING WELL LOCATIONS.
  2. LOCATIONS TAPE MEASURED FROM EXISTING SITE STRUCTURES AND SHOULD BE CONSIDERED ACCURATE TO THE DEGREE IMPLIED BY THE METHOD USED.

**SITE PLAN**  
SCALE: 1" = 50'

**LEGEND**

- PROPERTY LINE
- MW-2 BEDROCK MONITORING WELL
- RW-1 MONITORING WELL
- MW-2' MONITORING WELL WITH FREE PETROLEUM PRODUCT
- RW-2' APPROXIMATE AREA OF PREVIOUSLY DOCUMENTED PETROLEUM-IMPACTED MEDIA
- FORMER TRENCH DRAIN CONVERTED INTO PASSIVE SOIL VENT SYSTEM
- TRENCH DRAIN (FILLED IN PLACE)
- GAS MAIN
- WATER MAIN
- SANITARY SEWER, MANHOLE & FLOW DIRECTION

PROJECT TITLE <b>200 EAST AVENUE                  ROCHESTER, NEW YORK</b> REMEDIAL PROGRAM DRAWING TITLE APPROXIMATE KNOWN AREAS OF PETROLEUM-RELATED CONTAMINATION	<b>DAY ENVIRONMENTAL, INC.</b> ENVIRONMENTAL CONSULTANTS ROCHESTER, NEW YORK	
	FIELD VERIFIED BY JAD	DATE 1/30/98
PROJECT NO. 1528S-97	DRAWN BY RJM	DATE DRAWN 1/30/98
FIGURE 3 SHEET 1 OF 1	SCALE 1" = 50'	DATE ISSUED 7/28/98