ENVIRONMENTAL MANAGEMENT PLAN

14-60 CHARLOTTE STREET ROCHESTER, NEW YORK

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ATTACHMENTS

1.0 INTRODUCTION

This site-specific Environmental Management Plan (EMP) has been developed for the property located at 14-60 Charlotte Street, City of Rochester, County of Monroe, New York (Site). The general location of the Site is depicted on Figure 1 (Project Locus Map) included in Attachment A. This EMP should be implemented when work performed at the Site has the potential to disturb contaminated soil, fill or groundwater. Further details regarding the EMP are provided below.

1.1 Statement of Purpose

The purpose of this EMP is to address the handling of: (1) soil, fill and groundwater containing petroleum-type contamination, solvent/degreaser-type contamination (e.g., mineral spirits, Stoddard solvent, or paint thinner); (2) fill materials containing elevated concentrations of heavy metals; and/or (3) free petroleum product.

Specifically, this EMP addresses how to identify, characterize, handle, and dispose or re-use these media during construction or post-development activities. The EMP establishes goals, procedures, and appropriate response actions to be used by on-site personnel should contaminated material be encountered and disturbed.

1.2 Site Description

The Site consists of seven contiguous parcels currently owned by the City of Rochester (refer to Figure 2 in Attachment A) totaling approximately 1.1 acres. A two-story residential dwelling on the parcel addressed as 26 Charlotte Street and an approximately 1,800-square foot one-story commercial concrete block garage located on the parcel addressed as 42 Charlotte Street were demolished in September 2001 (refer to Figure 2 in Attachment A). The 48-60 Charlotte Street parcel is actively used as an open parking lot and the remainder of the Site is vacant or unused.

Under current City of Rochester plans, the Site will be redeveloped for residential use. It is currently anticipated that the residential redevelopment will consist of construction of a condominium or apartment complex. It is anticipated that the complex will have a parking garage on the first floor with living quarters on higher floors.

2.0 SUMMARY OF SITE CONDITIONS

Various supplemental environmental studies were performed in an effort to evaluate environmental conditions on the Site and on portions of the adjoining right-of-ways of Haags Alley and Charlotte Street. These studies included: advancement of test borings; installation of groundwater monitoring wells; field observations and PID screening on soil and groundwater samples; analytical laboratory testing of soil and groundwater samples; development of groundwater potentiometric maps; and evaluation of the data collected.

Petroleum contamination fingerprinted as consisting of kerosene, gasoline, diesel fuel, lube oil, mineral spirits or a combination of these petroleum products was detected in soil and groundwater samples at the Site and in the right-of-way of Haags Alley. The majority of VOCs and SVOCs detected in soil and groundwater samples appear to be associated with petroleum products; however, some chlorinated VOCs (e.g., vinyl chloride) that may be associated with dry cleaning solvents and degreasers (and potentially associated with biodegradation of these products) or other activities, were detected in the groundwater in several locations along the northern portion of the Site and in Haags Alley. Free petroleum product identified as diesel fuel was encountered on groundwater in one well located on the 14-16 Charlotte Street parcel. The approximate portion of the Site where known and/or suspected petroleum or other VOC contamination exists is depicted on Figure 3 included in Attachment A.

Fill material generally consisting of sand, gravel and silt with lesser amounts of clay, brick, ash, cobbles, asphalt, metal, coal, rock fragments, cinders, and organics (wood and roots) was generally encountered near the ground surface over most of the Site. Some of the fill material has been determined to contain elevated levels of the heavy metals e.g., arsenic, arsenic, mercury).

Three underground storage tanks (USTs) and the in-ground portion of one hydraulic lift were also identified on the 14-16 Charlotte Street parcel and closed (i.e., removed) in accordance with applicable regulations (refer to Figure 2 included in Attachment A).

Based upon the findings of the previous Phase II Environmental Studies, the 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 the material be handled, treated or disposed of, in accordance with applicable regulations.

3.0 ENVIRONMENTAL MANAGEMENT PLAN

This EMP assumes the Site will be re-developed with an apartment or townhouse complex that will have a parking garage on the first floor with living quarters on higher floors. Initially, a limited amount of petroleum-contaminated soil/fill will be removed and disposed of off-site in accordance with applicable regulations.

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., re-development 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 re-development, 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 EMP (e.g., petroleum soil guidance values listed in the August, 1992 NYSDEC STARS Memo #1, etc.) must be achieved.

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

As part of this EMP, the City of Rochester and appropriate regulatory authorities (i.e., NYSDEC, NYSDOH and MCDOH) must be notified at least two business days prior to performing Site activities that have the potential to disturb contaminated material.

3.1 Potentially-Contaminated Media

This section describes the types of contaminated media documented at the Site and provides information on the identification, handling, analytical laboratory testing, disposal or re-use of these materials.

3.1.1 In-Field Identification

Based on the previous studies completed at the Site, the petroleum impact identified consists primarily of mineral spirits, lube oil, diesel, kerosene and gasoline. Contaminated soil and/or fill may appear stained black and/or gray and petroleum-like odors may be detected on the material. Visual and olfactory observations will be made on excavated material for indication of petroleum-related impact or other impact. As part of the corrective action plan (CAP), a planned interim remedial measure (IRM) will be implemented to remove and dispose of known areas of near surface petroleum-contaminated soil

or fill. However, this type of impact is also located at or immediately above the groundwater table over most of the Site. This deeper contamination is likely attributable to on-site and/or off-site sources depending upon the location of the Site.

In conjunction with conducting the visual and olfactory observations, a photoionization detector (PID) and/or flame ionization detector (FID) will be used during intrusive work to assist in detecting total VOC vapors on the excavated material. The PID and FID can detect many VOCs typically present in petroleum products. If PID and/or FID readings exceed typical upwind air background measurements by 10.0 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.

Free petroleum product may: emanate petroleum-type odor; appear black, light brown, gold, or dark brown in color; and a PID or FID will likely indicate a response on ambient air above this material. The free petroleum product at this Site is a light non-aqueous phase liquid (LNAPL) that floats on water.

A layer of fill material is located from the ground surface to average depths of between 3 and 4 feet over most of the Site. The fill at the Site generally consists of sand, gravel and silt with lesser amounts of clay, brick, ash, cobbles, asphalt, metal, coal, rock fragments, cinders, organics (wood and roots), etc. Previous analytical laboratory testing indicates this fill material contains elevated concentrations of heavy metals. In addition, it is possible that fill material my be contaminated with pockets of near-surface petroleum-related contamination.

3.1.2 Handling

Materials that are excavated, disturbed, etc. and appear to be contaminated by petroleum-related compounds or other VOCs (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. If contaminated soil or fill is encountered in the unsaturated zone (i.e., above the water table) and it contains concentrations of constituents above recommended soil cleanup objectives listed in the January 24, 1994 NYSDEC TAGM 4046 as amended by the NYSDEC's Table 1 dated 1998 (copy included in Attachment C), it will be removed. The contaminated material's location, appearance, and quantity (if possible) will be documented. The appropriate regulatory authorities (e.g., NYSDEC, MCDOH) and the City of Rochester 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 Haags Alley), it is likely that removal of contaminated material to concentrations below NYSDEC TAGM 4046 recommended soil cleanup objectives may not be possible since off-site sources of contamination appear present. 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.

When fill material is disturbed, dust suppression measures will be implemented. If fill material that differs

from that identified above is encountered, it will be removed, segregated from other material, and 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 and the City of Rochester will 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.

3.1.3 Analytical Laboratory Testing

Samples of material contaminated with petroleum-related compounds or other VOCs will be tested for NYSDEC STARS-list VOCs, semi-volatile organic compounds (SVOCs) and total petroleum hydrocarbons (TPH) (refer to Table 1 included in Attachment D). The analytical laboratory test results for in-situ confirmatory soil samples will be compared to the recommended soil cleanup objectives as referenced in TAGM 4046 (refer to Table 2 included in Attachment D). The actual parameters tested for must be approved by the appropriate regulatory authorities and the City of Rochester, and these parameters 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 this type of contaminated material can be re-used on-site or require off-site disposal; and assist in characterizing the contaminated media as hazardous or non-hazardous.

In order to determine if the excavated/staged/disturbed contaminated soil/fill can be re-used on-site or requires off-site disposal, it will be required that the analytical laboratory test results for petroleum-type constituents (e.g., benzene, trimethylbenzenes, naphthalene, etc.) be compared to petroleum soil guidance values listed in the August, 1992 NYSDEC STARS Memo #1 (copy included in Attachment C) and the analytical laboratory test results for non-petroleum-type constituents (e.g., arsenic, trichloroethene, TPH, etc.) be compared to recommended soil cleanup objectives listed in the January 24, 1994 NYSDEC TAGM 4046 as amended by the NYSDEC's Table 1 dated 1998 (refer to Table 3 included in Attachment D).

3.1.4 Disposal of Contaminated Media

Contaminated soil and/or fill encountered during the re-development activities will likely require disposal off-site in accordance with applicable regulations. Depending upon field observation and monitoring and analytical laboratory test results, the fill material and contaminated soil will likely be characterized as non-hazardous petroleum-impacted waste, industrial waste or construction and demolition debris. Transporters of petroleum-contaminated media must have the appropriate NYSDEC Part 360 permits, etc. The disposal facility (e.g., landfill) for fill material or contaminated soil must be approved by the NYSDEC. This includes contaminated material that may be defined as hazardous waste and non-hazardous waste.

During the installation of new wells at the Site, it is anticipated that soil cuttings will be generated. If the soil cuttings require disposal, then they will be placed in NYSDOT-approved 55-gallon drums, or staged with other contaminated soils, and will ultimately be transported and disposed of off-site in accordance with applicable regulations. If soil cuttings are tested and are determined to not require

disposal, then they can be re-used on-site, if desired.

Decontamination water, drilling water, and water removed from wells during their development and sampling may require off-site disposal, treatment, or discharge to the public sanitary sewer system subsequent to receiving Monroe County Pure Water's approval.

3.1.5 Contingency Option for Re-Use of Contaminated Soil/Fill

As a contingency option, if the detected concentrations of constituents of concern (i.e., VOCs, SVOCs, TPH, and heavy metals) in samples of the contaminated soil/fill are below the NYSDEC STARS Memo #1 petroleum soil guidance values and/or TAGM 4046 recommended soil cleanup objectives, then the material can be deemed as "suitable" for re-use on-site with the permission of the appropriate regulatory authorities and the City of Rochester. However, media containing any detectable concentrations of VOCs, SVOCs or TPH 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 contaminated soil/fill designated as suitable for re-use may include backfill under parking lots, grading, etc. With authorization from the appropriate regulatory authorities, soil or fill material that potentially contains elevated concentrations of heavy metals, but does not contain VOCs, SVOCs or TPH, may also be acceptable for re-use in the vicinity of existing or planned residential buildings, or other subsurface structures; however, this fill material can not be re-used below the groundwater table or between 0 and 1 foot below the ground surface of the final planned grade unless covered with an impervious material (e.g., asphalt pavement). Contaminated soil/fill that is re-used on-site must be covered with a minimum one-foot layer of clean soil or impervious material and can not be re-used on-site in planters, landscaping beds or in areas that may be used as gardens. Prior to re-using contaminated soil or fill on-site, its effect on geotechnical requirements associated with the redevelopment plans for the Site must be evaluated.

3.2 Air Monitoring

During activities that have the potential to disturb contaminated media (e.g., soil, fill and groundwater), air monitoring must be conducted. This includes during IRM activities, re-development activities, and during post-development activities as they arise (e.g., repairs to buried utilities, etc.). The type of air monitoring performed will depend on the type of activity and its location on the Site.

3.2.1 Particulate Monitoring

During activities that disturb fill that is confirmed or suspected to contain elevated heavy metals, air monitoring for particulates using a real-time aerosol monitor (RTAM) will be implemented. This will ensure that respiratory protection is adequate to protect Site workers, occupants and the nearby community against potential contaminants in the fill, 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 specified in NYSDEC TAGM 4031 (copy included in Attachment 3) and also identified in the August 2001 Health and Safety Plan (HASP) for the Site. If the action level is exceeded (i.e., 150 ug/m^3 over an integrated period not to exceed 15 minutes), 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 material 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.

3.2.2 VOC Monitoring

Since it is anticipated that contamination comprised of petroleum-related compounds and other VOCs may be encountered during re-development activities, air monitoring will include 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 the corrective action levels that are specified in the HASP, which is included as part of the CAP. If action levels are exceeded, then work shall be discontinued until corrective actions are implemented and subsequent readings indicate VOC concentrations are within the acceptable range. The party conducting the air monitoring will have the authority to halt the disturbance of 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 will be recorded and available for review.

3.3 Dust Suppression

If dust suppression is required during site 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 and/or petroleum-contaminated material. Dust suppression techniques will be utilized until air monitoring indicates that particulate levels are within an acceptable range.

3.4 Site Controls

If contaminated media of unknown type is encountered, a fence will be placed around its location in order to restrict access and exposure. Fencing will also be placed around excavations into contaminated materials that are to be left open over night, the weekend, or for any other extended periods of time.

3.5 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 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 EMP, and the HASP included as part of the CAP. These documents contain information on the type and location of contaminants at the Site, and address how to handle, treat, transport and dispose of impacted materials in a manner that precludes exposure. Precautions should be implemented to minimize disturbance of soil or fill that result in air-borne release of particulates. Areas where work has been completed should be repaired (e.g., clean soil/fill re-applied, paved, etc.).

TABLE 1

RECOMMENDED ANALYTICAL PROGRAM

14-60 CHARLOTTE STREET
ROCHESTER, NEW YORK

TYPE OF MATERIAL	ANALYTICAL PARAMETERS						
	TCL and STARS VOCs EPA Method 8260 and/or STARS VOCs EPA Method 8021	**STARS MEMO #1 SVOCs EPA Method 8270**	**TPH NYSDOH Method 310.13**	**Total RCRA Metals**	**TCLP VOCs and/or Metals**	**pH, Reactivity, ignitability(1)**	**No Testing Recommended**
Soil/fill with suspect petroleum-related constituents and/or other VOCs	X	X	X		X(2)		
Free Petroleum Product	X	X	X	X		X	
Fill suspected of containing heavy metals				X	X(3)		
Unanticipated contamination of unknown type	X	X	X	X	X(3)	X	
C&D fill							X(5)
solid waste							X(5)

Footnotes:
(1) Ignitability and corrosivity for liquid wastes only.
(2) Required if previous testing results indicate total VOCs are anticipated to exceed TCLP regulatory levels, or is required by disposal facility.
(3) Required only if previous test results indicate that total metals exceed TAGM #4046 cleanup objectives or above typical background ranges for naturally occurring metals, or if required by disposal facility.
(4) Upon request by disposal facility.
(5) In accordance with Part 360, treat as uncontaminated unless suspected and proven otherwise via analytical testing. Disposal facilities may require some analytical testing.

TABLE 2

CLEANUP OBJECTIVES

14-60 CHARLOTE STREET
ROCHESTER, NEW YORK

TYPE OF SOIL/FILL MATERIAL ANALYZED	NYSDEC TAGM #4046 Soil Cleanup Objectives for VOCs and SVOCS [(1)]	NYSDEC TAGM #4046 Soil Cleanup Objectives and/or background ranges for Metals	NYSDEC Part 373 Solid Waste Criteria
Specific petroleum constituents in soil/fill	X		X
TPH, heavy metals and specific non-petroleum constituents in soil/fill	X	X	X

Footnotes: (1) Recommended soil cleanup objectives as referenced in the January 24, 1994 NYSDEC TAGM 4046 as amended by the NYSDEC's Table 1 dated 1998.

TABLE 3

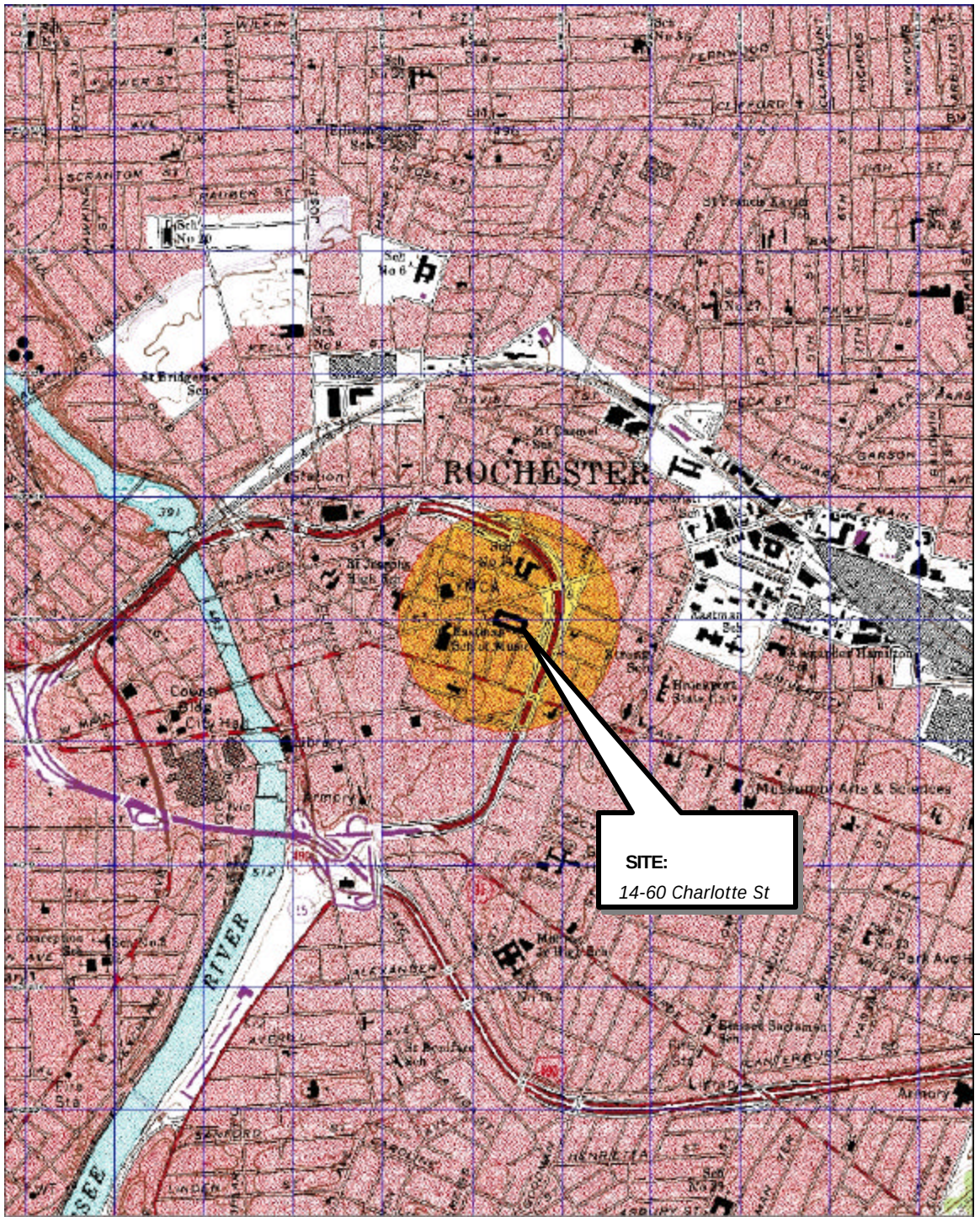
RE-USE OBJECTIVES

14-60 CHARLOTE STREET
ROCHESTER, NEW YORK

TYPE OF SOIL/FILL MATERIAL ANALYZED	STARS MEMO #1 Soil Guidance Values for VOCs and SVOCs [1]	NYSDEC TAGM #4046 Soil Cleanup Objectives for VOCs and SVOCS [2]	NYSDEC TAGM #4046 Soil Cleanup Objectives and/or background ranges for Metals [2]
Specific petroleum constituents in soil/fill	X		
TPH, heavy metals and specific non-petroleum constituents in soil/fill		X	X

Footnotes: (1) If petroleum impacted material is proposed for re-use on-site, compare to petroleum soil guidance values a referenced in the August 1992 NYSDEC STARS Memo #1

(2) If non-petroleum impacted material is proposed for re-use on-site, compare to recommended soil cleanup objectives and/or background ranges as referenced in the January 24, 1994 NYSDEC TAGM 4046 as amended by the NYSDEC's Table 1 dated 1998



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