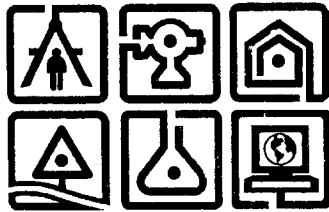


March 30, 2005



Interim Site Management Plan
Operable Unit #1

Environmental Restoration Project
Clean Water/Clean Air Bond Act of
1996

ERP Site #E-510020
Durkee Street Parking Lot
City of Plattsburgh
Clinton County, New York

Prepared for:

CITY OF PLATTSBURGH
OFFICE OF COMMUNITY DEVELOPMENT
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C.T. Male Project No: 04.9498

Analytical Summary - Morrison Tobacco

Proposed Remediation:

Surface Soil - TVOCs < 1 ppb

TSVOCs 80 ppm

Metals: Calcium, Iron, Magnesium

Subsurface Soil -

TVOCs 128 ppb

TSVOCs 39900 ppb (8-10 feet)

Compounds Exceeding TACM:

- Benzodibenzofuran
- Benzofuran
- Benzodioxane
- Chrysene
- Dibenz(a,h)anthracene

Metals Exceeding TACM: 8-10 ft

Arsenic 11 ppm

Cadmium 316 ppm

Copper 85.6 ppm

Lead 2590 ppm

Mercury 0.2 ppm

Nickel 13.2 ppm

Selenium 3.6 ppm

Groundwater:

- VOCs - 0.1% (not detected)
 - Biotin (2-ethylhexyl) phthalate 9.7 ppm
 Metals - Iron, Magnesium, Sodium and
 TAGM.

Soil Gas:

Summary sheet attached for samples
 (attached to the end of the report)
 for print.

SUMMARY TABLE OF SOIL GAS SAMPLE RESULTS
DURKEE STREET PARKING LOT (CTM PROJECT NO. 04.9498)
VALIDATED ANALYTICAL RESULTS

Parameter	DURKEE-SG1 ug/m ³	DURKEE-SG2 ug/m ³	DURKEE-SG3 ug/m ³	DUPLICATE-SG2 ug/m ³	AMBIENT ug/m ³
Dichlorodifluoromethane	2.6	2.5 U	2.7	2.7	3
Chloromethane	1.4 J	1.3 J	1.8 J	1.2 J	1.5 J
Trichlorofluoromethane	1.1 U	1.1 U	1.2	1.3	1.3
Benzene	16	17	12	11	0.99
Toluene	120	120 J	64	45 J	2.8
Ethylbenzene	11	12 J	5.6	5.2 J	0.87 U
Xylene (m,p)	43	48 J	23	19 J	1.7
Xylene (o)	12	14 J	5.6	6.1 J	0.87 U
1,3,5-Trimethylbenzene	1.6	2.1	0.98 U	1.1	0.98 U
1,2,4-Trimethylbenzene	4.8	6.9 J	2.4	3.2 J	0.98 U
1,3-Butadiene	1.1	4.2	7.5	3.5	0.44 U
Carbon Disulfide	1.7	1.6 U	1.6 U	1.6 U	1.6 U
Acetone	12	18	45	12 U	12 U
Cyclohexane	5.5	4.5	2.8	2.8	0.69 U
Methyl Ethyl Ketone	1.5 U	1.5 U	1.5 U	1.5 U	1.5
4-Ethyltoluene	5.4	7.4 J	2.9	3.5 J	0.98 U
2,2,4-Trimethylpentane	7	8.9	4.1	5.1 J	0.93 U
n-Hexane	13	11	12	7.4	0.7 U
n-Heptane	8.2	7.8 J	5.7	3.9 J	0.82 U
Xylene (total)	56	61 J	30	25 J	1.7

Notes:

Concentrations expressed in micrograms per cubic meter

U indicates that the compound was analyzed for but not detected

ENVIRONMENTAL RESTORATION PROGRAM
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FIGURES

- Figure 1: Site Location Map
- Figure 2: October 5, 2004 Boundary Survey Prepared by C.T. Male Associates, P.C. of Latham, New York
- Figure 3: Operable Unit #1 & Operable Unit #2 Boundaries and Sampling Locations

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FIGURES (CON'T)

Figure 4: December 15, 2003 Phase I Site Plan Prepared by Rabideau Architects of Burlington, Vermont

APPENDICES

Appendix A: Summary of Surface and Subsurface Soil Analytical Results

Appendix B: Summary of Groundwater Analytical Results

Appendix C: Summary of Soil Gas Analytical Results

Appendix D: NYSDOH Generic Community Air Monitoring Plan

Appendix E: NYSDEC TAGM #4031, Fugitive Dust and Particulate Monitoring Program at Inactive Hazardous Waste Sites

EXHIBITS

Exhibit 1: NYSDEC Interim Site Management Plan Approval Letter

1.0 INTRODUCTION

1.1 Background

Durkee Street Parking Lot, which is the subject of New York State Environmental Restoration Project (ERP), consists of ± 4.38 acres. Durkee Street Parking Lot is located on Durkee Street in the City of Plattsburgh, Clinton County, New York, and is bounded by Durkee Street to the west, Saranac River to the east, Bridge Street to the north, and Broad Street to the south. The entire parking lot is in the process of being environmentally characterized through completion of subsurface investigations as described in a New York State Department Environmental Conservation (NYSDEC) approved December 2004 "Draft Site Investigation Work Plan" and the February 10, 2005 "Response to February 4, 2005 NYSDOH/DEC Comment Letter" both prepared by C.T. Male Associates, P.C. of Latham, New York.

The user of this document should refer to the previously prepared investigation work plan and other referenced documents for more detail, as needed. The ERP site number for Durkee Street Parking Lot, as established by New York State Department of Environmental Conservation (NYSDEC) is E-510020. A site location map prepared using a New York State Department of Transportation 7.5-minute series quadrangle, depicts the site and surrounding areas, and is provided as Figure 1.

The City of Plattsburgh currently owns the Durkee Street Parking Lot. Development of the southern portion of the parking lot is expected to occur in the spring of 2005, where the balance of the site may be re-development in the future. To accommodate the construction schedule of the southern portion of the site, the parking lot was divided into two work units for the purpose of completing investigation of the site, and are referred to as Operable Unit #1 (OU#1) and Operable Unit #2 (OU#2). OU#1 encompasses ± 1.31 acres of land on the south side of the parking lot and OU#2 consists of the remaining ± 3.07 acres of land on the northern side of the parking lot. Figure 2 depicts the approximate boundaries of the OU#1 and OU#2. The segregation of the site has allowed the investigation of OU#1 to be completed first. Investigation of OU#2 will be completed at a later date.

After the completion of the field investigation and evaluation of the preliminary findings, it was proposed to NYSDEC to complete a non-emergency Interim Remedial

Measure (IRM) to address contamination within OU#1. NYSDEC denied the request for conducting an IRM based on the lack of supporting data to complete this activity. NYSDEC indicated that the construction within OU#1 can proceed following NYSDEC's approval of an Interim Site Management Plan (SMP), and the design of a sub slab vapor barrier system. Therefore, this Interim SMP applies to construction activities, as described in Section 1.2, planned within the boundaries of OU#1 only. The design of the sub slab vapor barrier system is being completed by the developer or their designee under separate cover. This Interim SMP will be re-evaluated and revised as needed after NYSDEC issues a Record of Decision for the Durkee Street Parking Lot.

Based on the results of the site investigation within OU#1, soil contamination may be encountered during construction or other subsequent site activities which disturb site surface and subsurface soils. Therefore, this Interim SMP is intended to outline standard procedures to be implemented and followed during redevelopment activities, and for management of surface cover materials and groundwater within OU#1.

1.2 Proposed Development

The future development for OU#1 consists of a 5-story office building fronting Durkee and Broad Streets and an open-air 2-story covered parking garage within the eastern portion of the site. The office building footprint is approximately 11,118 square feet and the parking garage footprint is approximately 26,015 square feet. The planned site development is depicted in Figure 3, a December 15, 2003 Phase I Site Plan prepared by Rabideau Architects of Burlington, Vermont. Construction activities for development of OU#1 are required to be performed in accordance with this Interim SMP.

The office building will be constructed on spread footings and slab on grade construction with poured in-place concrete. The estimated depth of spread footing excavation is on the order of 4 to 6 feet below existing site grade. The parking garage will likely be constructed on drilled piers, although this has not yet been finalized. The estimated depth of drilling required to install the piers is approximately 20 to 25 feet below grade.

Redevelopment plans for OU#2 have not been established at this time and site investigation has not been completed. Site management procedures and guidelines for

OU#2 will be prepared independent of OU#1, after investigation of the northern portion of the site is complete.

1.3 Purpose and Objectives

The purpose of the Interim SMP is to mitigate potential impacts to human health and the environment during site construction activities and at any time after site development when the site acceptable cover materials may be excavated or otherwise disturbed within the boundaries of OU#1. OU#1 has been investigated as part of the ERP activities in accordance with the NYSDEC and New York State Department of Health (NYSDOH) approved ERP "Draft Site Investigative Work Plan" (December 2004 as amended with the February 10, 2005 "NYSDOH/DEC Comment Letter"). In consideration of the contemplated future use of the site (commercial/industrial) the approach for addressing site soil and groundwater contamination within OU#1 will be to remove, characterize and properly handle soil/fill generated during the site construction activities, establish and maintain a barrier to contact with soils which may be contaminated above Standards, Criteria and Guidance (SCGs), restrict use of groundwater that may be contaminated above SCGs, and prevent soil gas vapor intrusion with the installation of a vapor barrier beneath habitable buildings. The Interim SMP has been established for the construction activities completed prior to the issuing of the Record of Decision.

The objective of this Interim SMP is to describe requirements for management of soil material generated during the planned redevelopment construction activity and future activities that would breach the cover system at the site. The Interim SMP also presents site specific SCGs (Section 2.0) as defined in the NYSDEC approved ERP site investigation work plan.

The Interim SMP has been reviewed and approved by NYSDEC, as shown in Exhibit 1. The Interim SMP is not intended to serve as a design document for construction activities relating to redevelopment activities. It is the developer's responsibility to prepare a design that incorporates the requirements for acceptable cover, soil and construction water management, sub slab vapor barrier system, and groundwater use restrictions, as set forth in this Interim SMP.

1.4 Site History

The overall site has been developed since at least 1884. In 1884, the majority of the site was improved with residential dwellings, except for the northern end which was commercial utilization (saw mill, lumber storage, hardware store and ice house). In the early 1900's, the dwellings within the central portion of the site were replaced with commercial structures. By 1965, none of the residential dwellings remained as they had been replaced with large buildings and paved parking. Past usages of environmental significance at the Durkee Street Parking Lot included a structure utilized for auto repair activities (1918 and 1927 map) and the Plattsburgh Steam Laundry (1918 map) located along the east side of Durkee Street and a former mill (1909 map), located on eastern portions of the site.

Other site impacts may be associated with the placement of fill soils from off-site locations. The fill soils placed on site include cinder, concrete, wood and ash which may be residually impacted as the origin of the fill is uncertain. A more detailed description of the site history is provided in the December 2004 "Draft Site Investigation Work Plan" prepared by C.T. Male Associates, P.C.

1.5 Previous Investigations

C.T. Male is currently in the process of completing a site investigation of Durkee Street Parking Lot (OU#1 and OU#2) in accordance with a NYSDEC and New York State Department of Health (NYSDOH) approved ERP "Draft Site Investigation Work Plan" dated December 2004. The findings of the field investigation and validated analytical results obtained from OU#1 were reviewed and considered in the preparation of this Interim SMP. The field activities for OU#2 have not been initiated at this time.

Another consultant has completed investigative activities at the site prior to the City's involvement with the ERP, as described in a May 12, 2004 Limited Subsurface Investigation by The Verterre Group, Inc. A copy of this report was provided as Exhibit 1 of the December 2004 "Draft Site Investigation Work Plan".

1.6 Nature and Extent of Contamination

The nature and extent of contamination was determined on the basis of the media samples collected and analyzed as part of the NYSDEC approved ERP site

investigation, which included ten exploratory test borings converted to monitoring wells, eight surface soil samples, and three soil gas probes, as shown in Figure 3. It is noted that three of the surface sampling points (SS-8, SS-9 and SS-10), and two of the test borings converted to monitoring wells (SB-10 and SB-11) were completed outside of the designated limits of OU#1 (in OU#2) as the limits of the operable units had not been established at the time of the ERP site investigation. The analytical summary tables for the soil, groundwater and soil gas samples are presented in Appendix A, B and C, respectively.

1.6.1 Surface Soils

Based on site specific sampling and analysis of surface soil/fill collected from immediately below non-paved areas or directly below asphalt or asphalt/sub-base pavement sections, there were no Target Compound List (TCL) volatile or semi-volatile organic compounds, PCBs or pesticides detected in the surface soil samples above SCGs. Of the Target Analyte List (TAL) metals analyzed, calcium, iron, magnesium, nickel and zinc were detected above SCGs at one or more locations. These metals were detected at concentrations within the typical background concentration for these metals in Eastern USA soils except for calcium and magnesium.

1.6.2 Subsurface Soil

Laboratory analysis of subsurface soil samples collected from each soil boring location were made on the basis of the sample being located above the zone of groundwater saturation and exhibiting the highest subjective indication of contamination. Subjective evaluation of contamination was based on Photo-ionization Detector (PID) meter screening results and organoleptic perception (i.e. sight and smell) of impacts.

There were no volatile organic compounds detected above SCGs in any of the ten subsurface soil samples analyzed within OU#1. Low level petroleum related volatile organic compound detections (below SCGs) were identified at soil borings SB-1 at 8 to 10' (methylene chloride), SB-5 at 0.5 to 2' (acetone), and SB-8 at 10 to 12' (acetone, isopropylbenzene and m/p xylenes).

One or more semi-volatile organic compounds were detected in the majority of the subsurface soil samples submitted for analyses. Soil samples exhibiting concentrations

of semi-volatile organic compounds above SCGs were identified at SB-4 (8 to 10') and SB-8 (10 to 12').

There were no pesticides or PCBs detected in the soil samples above the laboratory method detection limit.

Various metals were detected in each of the soil samples analyzed from the soil borings, with at least one metal within each soil sample detected at a concentration above its SCG. The soil sample from soil boring SB-4 (8-10') contains the most metals detected above SCGs. It is also the only sample which identified arsenic, barium, copper and lead at concentrations above SCGs. The other metals detected above SCGs in the remaining samples include beryllium, calcium, iron, magnesium, mercury, nickel, selenium and zinc. The concentrations of beryllium, iron, nickel, and selenium were all within the typical background concentrations for these metals in Eastern USA soils.

1.6.3 Groundwater

Based on site specific sampling and analysis of groundwater samples collected from the ten soil borings converted to monitoring wells, there were no TCL volatile organic compounds (except for a few compounds explain below), TCL semi-volatile organic compounds (except for bis(2-ethylhexyl)phthalate), PCBs or pesticides detected above SCGs in the groundwater samples.

Volatile organic compounds were detected in groundwater samples from monitoring wells MW-2, MW-9 and MW-12. Isopropylbenzene was the only compound detected at monitoring well MW-2, and the concentration was below its SCG. The volatile organic compounds detected at monitoring well MW-9 were vinyl chloride, acetone, cis-1,2-dichloroethene and trichloroethene, which are primarily chlorinated compounds. Of those detected, vinyl chloride and cis-1,2-dichloroethene were the only compounds detected at concentrations above SCGs. Acetone and cis-1,2-dichloroethene were also detected at monitoring well MW-12; however, at concentrations below their SCGs. No other volatile organic compounds were detected at monitoring well MW-12.

Bis(2-ethylhexyl)phthalate, a semi-volatile organic compound, was detected within each of the ten monitoring wells below the method detection limit but above the instrument detection limit and is therefore qualified as estimated values. The concentrations of this

compound in groundwater samples were generally less than 10 ug/l and only slightly above its SCG of 5 ug/l.

Several metals were detected in the groundwater samples above SCGs. These were: iron, lead, magnesium, manganese and sodium. All groundwater samples were collected without filtering and were analyzed on a "totals" basis.

1.6.4 Soil Gas

Based on site specific sampling and laboratory analysis of soil gas samples collected using temporary sampling points, volatile organic vapors were detected in soil. The soil gas samples were collected within the foot print of the proposed office building. Field screening of soil samples collected from the soil borings (outside the footprint of the proposed office building) also detected volatile organic vapors. Although there are no current SCGs for the compounds detected by laboratory analysis, the NYSDOH has verbally indicated that the soil gas concentrations detected would require a sub slab vapor barrier system be constructed and maintained beneath site structures.

1.7 Contemplated Use and Institutional/Engineering Controls

The contemplated use of the subject site under the ERP is Commercial/Industrial. Commercial use means use of the site for the primary purpose of buying, selling or trading of merchandise or services. Industrial use means of the site for the primary purpose of conducting manufacturing, production and assembling processes and ancillary activities. Use of a property designated as commercial/industrial will not include that for worker residences; public playgrounds; and raising feed for livestock, or produce, grain or livestock for consumption by humans.

1.8 Summary of the Remedy

The selected remedy for the site is pending, as the Record of Decision has not been issued for the site. This Interim SMP may need to be revised or amended after the final remedy is selected by NYSDEC as documented in the site's Record of Decision.

1.9 Interim Site Management Program Responsibility

The developer and future property owners will be responsible for implementing and monitoring the requirements of the NYSDEC approved Interim SMP. The developer

and owner will not authorize their employees, agents, or assigns to disturb site soils, except in accordance with the NYSDEC approved Interim SMP. The developer or property owner will be responsible for proper notification and reporting to regulatory agencies (i.e., NYSEC Region 5) prior to and following site development as described in Section 4.1.

C.T. Male Associates, P.C. will provide full-time construction oversight and monitoring during site redevelopment activities to document conformance to this Interim SMP. NYSDEC may provide periodic construction oversight and monitoring during site redevelopment activities to document that the requirements of this Interim SMP are followed.

2.0 STANDARDS, CRITERIA AND GUIDANCE

In order to identify which site soils require special handling and management standards, criteria and guidance (SCGs) need to be determined for the site. SCGs are promulgated requirements and non-promulgated guidance that govern site activities. Based on the contemplated use of commercial/industrial, discussions with NYSDEC and NYSDOH, the site specific SCGs to be used for this project are NYSDEC TAGM #4046 Recommended Soil Cleanup Objective values (January 24, 1994).

Soils which exist on-site at levels with contaminants of concern (COCs) equal to or below site SCGs will generally not require special handling or management. Soils which exist on-site at levels with COCs above site SCGs must be handled, excavated and/or disposed of in accordance with this Interim SMP.

3.0 SURFACE COVER SYSTEM

3.1 Purpose

The purpose of the surface cover system is to mitigate the potential for human contact with site soils and mitigate the potential for contaminated runoff from the property. Soils will be managed at the subject site by removal and off-site disposal of impacted soils that are encountered during construction activities, and by placing acceptable surface cover materials (as described in Section 3.2) over remaining site soils.

Upon completion of redevelopment activities, areas of the site which contain a surface cover system over soils with concentrations exceeding site SCGs must be protected and maintained in accordance with this Interim SMP.

3.2 Acceptable Surface Cover Materials

In general, OU#1 or portions thereof will be put to its contemplated use once an effective surface cover or cap is placed over soils containing COCs at concentrations above site SCGs.

The acceptable surface cover will consist of one of the following types of material.

- Soil: Twelve inches of vegetated soil cover. The soil must be below the site SCGs or Eastern USA Background for COCs on a total basis. A demarcation layer will underlie the soil as an indicator of surface cover breakdown in designated soil encapsulation areas. A demarcation layer will consist of a material or materials, which upon observation or excavation, readily demarcate the acceptable surface cover from underlying soils.
- Asphalt: a minimum of six inches of material (asphalt and subbase) in areas that will become roads, sidewalks, and parking lots. Type and thickness of the asphalt and subbase material will be designed based on the intended use of the area.
- Concrete: a minimum of six inches of material (concrete and subbase) in areas that will become slab-on-grade structures or for roads, sidewalks, and parking lots in lieu of asphalt. Type and thickness of the concrete and subbase material will be designed based on the intended use of the area.

The topsoil used for final soil cover shall be capable of sustaining plant growth, and free of extraneous material harmful to plant growth. Grassed areas will be seeded with a sustainable perennial mixture with appropriate erosion control measures taken until the perennial grasses are established.

To reduce the disturbance of soil cover material, clean soil berms will be constructed in areas where shallow-rooted trees and shrubs will be planted. The berms will be of sufficient thickness to allow the excavation of only clean fill deep enough to plant the tree or shrub root ball. The berm material will contain sufficient organic material to allow tree and/or shrub growth, and will be of sufficient strength to support trees and/or shrubs at their maximum height.

4.0 SUB-SLAB VAPOR BARRIER SYSTEM

4.1 General

As required by NYSDEC and NYSDOH, a mitigation system will be designed and constructed beneath the concrete slab of habitable structures within OU#1 (i.e. office building) to prevent soil vapors from entering site structures. Mitigation systems must be designed and installed by a professional engineer or environmental professional acceptable to the State. The design and installation of the mitigation system will be documented and reported to NYSDEC and NYSDOH. As applicable, an information package on the mitigation system's operation, maintenance and monitoring will be given to the appropriate personnel (i.e., building owner, building tenant, etc.).

A soil vapor mitigation system will not be installed beneath the parking garage structure, as this structure is not an occupied building. Furthermore, soil vapors would not tend to accumulate in this structure as each floor is open to outside ambient air.

4.2 Design/Installation Requirements

The goal of the mitigation systems is to minimize and possibly eliminate the infiltration of subsurface organic vapors into the office building. Mitigation systems should be designed and installed in accordance with the following:

- NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, February 2005 (Public Comment Draft)
- USEPA Radon Mitigation Standards, EPA 402-R-93-078, Revised April 1994
- USEPA Model Standards and Techniques for Control of Radon in New Residential Buildings EPA 402-R-94-009, March 1994

5.0 MANAGEMENT OF SOILS BELOW SURFACE COVER SYSTEM

The purpose of this section is to provide environmental guidelines for management of site soils before, during and after installation of the surface cover system. The repair/replacement of the surface cover system during future intrusive site work should also follow these guidelines.

5.1 General Guidelines

The following are general guidelines for management of surface and subsurface soils at the site containing COCs above site SCGs.

- Any breach of the site's surface cover system, including for the purposes of construction or utilities work, must be replaced or repaired in accordance with the approved Interim SMP.
- Control surface erosion and run-off of the entire property at all times, including during construction activities (refer to Section 4.7). This includes proper maintenance of the vegetative cover established on the property.
- Site soils excavated may be reused as backfill material or relocated on-site provided it contains no visual or olfactory evidence of contamination and it is placed beneath an acceptable surface cover material that meets the definition as described in Section 3.2. Soils defined as "hazardous" on the basis of appropriate analytical testing will not be allowed to be placed on-site, but will be required to be disposed off-site at a permitted waste disposal facility.
- Site soils should not be reused as acceptable surface cover material unless analytical testing is performed to determine the contaminants are equal to or below site SCGs.
- Site soils that are excavated and intended for removal from the property must be characterized, managed and properly disposed of in accordance with NYSDEC regulations and directives.
- Prior to construction activities, workers are to be notified of the site conditions with respect to the COCs. The scope of work to be implemented must be reviewed and approved by the Owner or its designated representative. Invasive work must be

performed in accordance with all applicable local, state and federal regulations to protect worker health and safety. The work must also be performed in conformance with the requirements of the NYSDEC approved Interim SMP.

5.2 Excavation and Grading Prior to Placement of Surface Cover

As part of site development plans, the site may require grading prior to placement of acceptable surface cover. The site soils and any soil piles generated during intrusive activities will be graded to the surface required for redevelopment. Trees, shrubs, roots brush, masonry, rubbish, scrap, debris, pavement, curbs, fences, etc., if present, will be removed and properly disposed off-site or temporarily stockpiled in accordance with applicable solid waste regulations. Efforts will be made to remove excess soil from tree roots, brush or fence posts, as applicable, prior to off-site disposal or stockpiling. Only exempt materials as defined in 6NYCRR Part 360-7.1(b)(1) such as recognizable uncontaminated concrete and concrete products (including steel or fiberglass reinforcing rods that are embedded in the concrete), asphalt pavement, brick, glass, rock, trees and stumps are allowed for stockpiling. Prior to placement or replacement of surface cover, protruding materials will be removed from the ground surface.

5.3 Potentially Contaminated Soil

The extent of soil contamination by VOCs above SCGs is limited based on the available data generated by the ERP site investigation. However, as it is not economically practicable to investigate all portions of the site, it is possible that soils with VOCs above SCGs exist within the site at locations between the existing sampling points. Therefore, excavated soils during construction activity will be field screened with a photo-ionization detector (PID) and segregated on the basis of PID screening results and organoleptic perception (sight and smell).

Soils which exhibit a PID reading greater than 5 ppm above ambient air background levels will be identified as impacted by VOCs and subject to segregation from other excavated soils. Soil/fill which is excavated that does not exhibit subjective evidence of petroleum/solvent contamination, but may contain other COCs above SCGs will be managed on-site or as industrial solid waste pursuant to NYCRR Part 360 regulations. Soil that exhibits elevated PID readings containing one or more constituents in excess of site SCGs for volatile and semi-volatile organic compounds or metals will be

transported off-site to a permitted waste management facility. It is anticipated that both of these soil/fill waste streams will need to be profiled analytically if they are not to be reused on-site. The following table was prepared to generally outline the expected segregation method for materials encountered during site redevelopment.

Reference Table for Soil and Fill Handling, Sampling and Segregation				
Type of Material	Soil		Fill Material	
Supplemental Classification	No deleterious materials	No deleterious materials	Containing rock, cinder, ash, etc.	C&D Debris (concrete, wood and asphalt)
PID Screening Results	Less than 5 ppm above background	Greater than 5 ppm above background	Less than 5 ppm above background	Less than 5 ppm above background
Analytical Testing Requirement	None provided soil is reused below surface cover system	Analyze to determine reuse below surface cover system or off-site disposal	Analyze only for those parameters required for proper off-site disposal	No analytical testing unless required by accepting facility

The property owner will be providing a qualified consultant to observe excavation activities, field screen soil samples to determine level of excavation required to remove observed contamination, and as necessary, collect soil samples for laboratory analysis. The potentially contaminated soil will be stockpiled on 12-mil or greater polyethylene sheeting. The stockpiled, potentially contaminated soil will also be completely covered using polyethylene sheeting to reduce the infiltration of precipitation and the migration of dust. Sampling and analysis will be completed in accordance with applicable NYSDEC guidance documents for reuse, treatment, or disposal determination.

5.4 Underground Storage Tanks and Buried Drums

Buried drums and underground storage tanks have not been identified nor are expected to be present at the subject site. If buried drums or tanks are encountered during construction, excavation activities must cease and the property owner and NYSDEC will be notified. The drums and tanks will be handled, removed and cleaned by

appropriately trained personnel in accordance with all applicable federal, state and local regulations. The contents of the drums and/or tanks will be characterized and properly disposed off-site. Soils surrounding the tanks and drums will be assessed for impacts in accordance with applicable guidance documents (i.e., Petroleum Bulk Storage (PBS) regulations, NYSDEC Technical and Administrative Guidance Memorandums (TAGMs), etc.).

5.5 Excavated Soil Reuse and Disposal

Excavated soil may be used on-site below the surface cover system. Soil that is excavated as part of development that can't be used as fill below the surface cover system will be characterized prior to transportation off-site for disposal at a permitted facility. The frequency and parameters of the characterization will be based on the desired disposal facility. The soil analyses will be performed by a NYS Department of Health (DOH), Environmental Laboratory Assurance Program (ELAP) certified analytical laboratory.

Soil that exhibits elevated PID readings may also be used on-site as fill below the surface cover system if characterized and found to contain volatile and semi-volatile organic compounds less than site SCGs. This soil may not be used as acceptable surface cover material, or as backfill in landscape areas for the planting of trees and shrubs.

5.6 Imported Soils

Imported soils used to backfill excavations, increase site grades or elevations beneath the surface cover system shall meet the following criteria:

- Any site soils not exhibiting elevated PID readings.
- Off-site borrow soils that are documented as having originated from locations having no evidence of disposal or release of hazardous, toxic or radioactive substances, wastes products, chemical products or petroleum products.
- Off-site soil that does not meet the definition of solid waste in accordance with 6NYCRR Part 360-1.2(a).
- Virgin soil (i.e., derived from a natural pit) that is documented in writing to be native soil material from areas not having supported any known prior historical

industrial, commercial development, or agricultural use. Virgin soil will be subject to collection of one representative composite sample per source. The sample should be analyzed for the Target Compound List (TCL) volatile organic compounds, semi-volatile organic compounds, pesticides, PCBs, and metals (arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver and cyanide). The soil will be acceptable for use as backfill provided that all parameters are equal to or below site SCGs.

- Non-virgin soils (i.e., not derived from a natural pit) that will be analyzed at a frequency of one composite sample for every 500 cubic yards of material from each source area. If more than 1,000 cubic yards of soil are borrowed from a given off-site non-virgin soil source area and both samples for the first 1,000 cubic yards meet site SCGs, the sample collection frequency will be reduced to one composite sample for every 2,500 cubic yards of additional soils from the same source, up to 5,000 cubic yards. For borrow sources greater than 5,000 cubic yards, sampling frequency may be reduced to one sample for every 5,000 cubic yards, provided previous samples met site SCGs.

5.7 Erosion Controls

All erosion & sediment control measures and pollution prevention measures will be evaluated, designed and implemented by the contractor in compliance with the "New York Guidelines for Urban Erosion and Sediment Control" and the "New York State Stormwater Management Design Manual".

5.8 Dust Controls

Soil handling, depending on the moisture content of the soil, has the potential for generating dust or particles in which COCs, if present, may be adhered to and released into the environment. Dust suppression techniques will be employed as necessary to prevent, control and mitigate fugitive dust during remediation and post-remediation construction and redevelopment. All reasonable attempts will be made to keep visible and/or fugitive dust to a minimum. Techniques to be utilized may include one or more of the following:

- Applying water to access roads.

- Restricting construction and other vehicle speeds on-site.
- Hauling materials in tarped containers or construction vehicles.
- Spraying or misting excavations and equipment prior to and during soil disturbances.
- Tarping or applying spray type cover to subgrade areas left exposed for greater than 90 days.
- Establishing vegetative cover immediately after placement of acceptable surface soil cover.

5.9 Dust Control Monitoring

Particulate air monitoring with electronic instrumentation will be performed during site development. The property owner will be providing a qualified consultant to observe excavation activities, monitor dust monitoring instrumentation, and determine when dust levels exceed NYSDOH action levels. Particulate air monitoring will be performed along the downwind portions of the site (where bordered by residents or businesses) and an upwind station (for comparison) during disturbance activities including subgrade excavation, grading and soil handling in accordance with the applicable sections of the NYSDOH Generic Community Air Monitoring Plan (Appendix D) and NYSDEC TAGM 4031, Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites (Appendix E).

5.10 Construction Water Management

Due to the subsurface soil conditions observed during previous investigations, groundwater infiltration may be significant and will require management if excavations or drilled piers extend to depths of four to thirteen feet below grade, as these are the depths groundwater was encountered during the ERP site investigation. Water pumped from excavations or drilled piers, if any, will be managed properly in accordance with all applicable federal, state and local regulations.

If any sheens are observed on the water surface, the water will be pumped from the excavations and containerized and analyzed in general accordance with Surface Water and Groundwater Standards set forth in 6NYCRR Part 703.5 and applicable local sewer authority discharge requirements. If the water meets the water quality standards, it

may be discharged to the ground surface or publicly owned treatment works. If the water does not meet the water quality standards, the water will be discharged to the local sewer under the necessary permits, treated and discharged under proper permitting, or properly disposed off-site.

5.11 Access Controls

Access to the soil on the property will be controlled until the final cover system is in place to prevent direct contact with site soils. Excavated site soils that are stockpiled on-site, that are not within the limits of the temporary construction fencing, will be temporarily covered to limit access to the material. Types of fencing will include orange construction fencing or other means to prevent and control access to the construction areas. Fencing should be posted with "No Trespassing" signs.

5.12 Management and Long-Term Maintenance of Surface Cover System

The purpose of this section is to provide environmental guidelines for management of subsurface soils and the long-term maintenance of surface cover system during any future intrusive work which breaches the acceptable surface cover after the remedy (as described in the pending NYSDEC Record of Decision) is completed. Maintenance of the surface cover at the site will be the responsibility of the property owner, or its successors and assigns.

- Control surface erosion and run-off of the entire property at all times, including during construction activities in compliance with the "New York Guidelines for Urban Erosion and Sediment Control" and the "New York State Stormwater Management Design Manual". This includes proper maintenance of the vegetative cover established on the property which is not disturbed during development activities.
- Replace or repair any breach of the surface cover system, including the installation of utilities and construction work, using an acceptable surface cover material, as defined in Section 3.2. A certification that work required to replace or repair the surface cover system was performed in conformance with a NYSDEC approved Interim SMP will be required in the annual reporting for the year it was completed.

- Annually inspect the final surface cover system for sloughing, cracks, settlement, erosion, distressed vegetation, damage or other items that affect the integrity of surface cover system.
- Repair any deficiencies observed in the final surface cover in a timely manner.
- Prepare and submit to the Department an Annual Report by January 15th of each year. The Annual Report shall contain certification by a P.E. that the institutional controls put in place, pursuant to the NYSDEC approved Interim SMP, are still in place, have not been altered and are still effective; that the remedy and protective cover have been maintained throughout the year; and that the conditions of the site remain protective of human health and the environment.

6.0 NOTIFICATION AND REPORTING REQUIREMENTS

6.1 Notification

There shall be no construction, use or occupancy of the property that results in the disturbance or excavation of the property, which threatens the integrity of the acceptable surface cover system once established or which would result in human exposure to contaminated soils, unless prior written approval by the NYSDEC is obtained. Therefore, notification of NYSDEC at the address listed below should precede any such work by at least 60 days, to allow time for review and any necessary revisions of a work plan, if applicable.

- Mr. Russell Huyck, P.E.
NYS Department of Environmental Conservation (Region 5 Office)
Route 86, P.O. Box 296
Ray Brook, New York 12977-0296
Telephone No.: (518) 897-1242

For emergency repairs or alterations that require excavation at the site, notification and reporting will occur in a timely manner after completion of work.

Other notification requirements for this site include the following:

- NYSDEC will be immediately notified if buried drums or underground storage tanks are encountered during soil excavation activities.
- Under State Law, all petroleum and most hazardous material spills must be reported to NYSDEC Hotline (1-800-457-7362) within New York State. Petroleum spills must be reported to DEC unless they meet all of the following criteria; the spill is known to be less than 5 gallons; the spill is contained and under the control of the spiller; the spill has not and will not reach the State's water or any land; and the spill is cleaned up within 2 hours of discovery. For spills not deemed reportable, it is recommended that the facts concerning the incident be documented by the spiller and a record maintained for one year.

6.2 Reporting and Analytical Requirements

6.2.1 Progress Reports

During construction activities, written progress reports of the municipality's actions under their State Assistance Contract (#C302578) shall be submitted to the parties listed below. The progress reports will be prepared by the municipality or their designated representative to include actions during previous reporting period, actions anticipated during next reporting period, approved activity modifications, results of sampling and tests, and other pertinent information such as project schedule, quality assurance and public participation information. The reports will be generally submitted by the 10th day of each month.

- Russell Huyck, Project Manager
NYS Department of Environmental Conservation
1115 NYS Route 86
PO Box 296
Ray Brook, New York 12977
- Richard Wagner, Regional Hazardous Waste Remediation Engineer
NYS Department of Environmental Conservation
1115 NYS Route 86
PO Box 296
Ray Brook, New York 12977
- Gary Litwin
NYS Department of Health
Bureau of Environmental Exposure Investigation
Flanigan Square
547 River Street
Troy, New York 12180-2216
- Mary Von Wergers, Project Attorney
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, New York 12233-7020

6.2.2 Annual Reports

The following minimum reporting requirements shall be followed by the owner prior to and following site development, as appropriate. Annual reports will not be required until the Record of Decision has been issued for the site.

The Owner shall complete and submit to the Department an Annual Report by January 15th of each year. The Annual Report shall contain certification that the institutional controls put in place, pursuant to the NYSDEC approved Interim SMP, are still in place, have not been altered and are still effective; that the remedy and protective cover have been maintained throughout the year; and that the conditions of the site remain protective of human health and the environment.

If the surface cover system has been breached during the year covered by that Annual Report, the Owner of the property shall include the following in such Annual Report:

- A certification that work was performed in conformance to the NYSDEC approved Interim SMP.
- Plans showing areas and depth of fill removal.
- Copies of daily observation reports for soil related issues.
- Description of erosion and or dust control measures.
- A text narrative describing the excavation activities performed, health and safety monitoring performed, quantities and locations of soil/fill excavated and disposed on-site, sampling locations and results, if any, description of problems encountered, location and acceptability of test results for backfill sources, if any, and other pertinent information necessary to document that the site activities were properly performed.

6.3 Analytical Data

6.3.1 Post Excavation Confirmatory Sampling

If, during construction excavation of impacted soil is required, analysis of post excavation confirmatory samples or delineation samples will be conducted in

accordance with the most recent NYSDEC Analytical Services Protocol (ASP) and in part consistent with Section 2 of Draft DER-10 Technical Guidance for Site Investigation and Remediation. This includes preparation of an ASP Category B data deliverables which will be subjected to third party data validation in accordance with NYSDEC Guidance for the Preparation of Data Usability Summary Reports (DUSR). The laboratory utilized for laboratory analyses will be certified through the NYSDOH Environmental Laboratory Approval Program (ELAP) to perform Contract Laboratory Program (CLP) analysis and Solid Waste and Hazardous Waste Analytical testing for the media to be sampled. The laboratory will maintain these certifications for the duration of the project.

Confirmatory soil samples will be analyzed for the Target Compound List (TCL) volatile organic compounds and semi-volatile organic compounds (base-neutral) by EPA Methods 8260 and 8270, respectively. The main purpose of the confirmatory sampling is to document the effectiveness of the organic impacted soil removal remedial action. If groundwater infiltration is significant a groundwater sample from the open excavation may replace excavation floor samples. The following sampling guidelines will be followed:

- For excavations less than 20 feet in perimeter, at least one bottom sample and one sidewall sample biased in the direction of surface runoff.
- For excavations 20 to 300 feet in perimeter, one sample from the bottom of each sidewall for every 30 linear feet of sidewall and one sample from the excavation bottom for every 900 square feet of bottom area.
- For excavations larger than 300 feet in perimeter, the sampling frequency will be reduced based on consultation with NYSDEC.

Procedures for chain of custody, laboratory instrumentation calibration, laboratory analyses, reporting of data, internal quality control, and corrective actions shall be followed as per NYSDEC ASP and as per the laboratory's Quality Assurance Plan. Where appropriate, trip blanks, field blanks, field duplicates, and matrix spike/matrix spike duplicate shall be performed at a rate of 5% (1 per up to 20 samples) and will be used to assess the quality of the data. The laboratory's in-house quality

assurance/quality control limits will be utilized whenever they are more stringent than those suggested by the EPA methods.

6.3.2 Waste Disposal Characterization

Construction derived waste, including impacted soil or groundwater that needs off-site disposal, will require proper characterization through lab analysis by a NYSDOH ELAP certified laboratory. The laboratory utilized will be certified by NYSDOH ELAP and maintain current certifications. However, Category B data deliverables and DUSR validation will not be required. The analytical methods will be based on the desired disposal facility's analytical requirements for accepting the waste. Trip blanks will be included, where appropriate, for volatile organic compound analysis of liquid media.

7.0 HEALTH AND SAFETY PROCEDURES

7.1 General

Invasive work at the property will be performed in accordance with applicable local, state, and federal regulations and each Contractor will be responsible for protection of their workers' health and safety. Contractors performing redevelopment or maintenance activities will be required to prepare and follow a site specific, activity specific, Health and Safety Plan (HASP). The HASP will also include provisions for protection of the community (i.e., Community Air Monitoring Plan). The HASP will be prepared in accordance with the regulations contained in OSHA 29CFR 1910.120 and inclusive of the components of the NYSDOH Generic Community Air Monitoring Plan and in part NYSDEC TAGM 4031.

7.2 Construction Personnel

Contractors engaged in subsurface construction or maintenance activities (e.g., utility workers) will be required to implement appropriate health and safety procedures for handling site soils. These procedures may involve, donning adequate personal protective equipment, performing appropriate air monitoring, and implementing other engineering controls as necessary to mitigate potential ingestion, inhalation and contact with residual constituents in the soils. Recommended health and safety procedures include, but may not be limited to, the following:

- While conducting invasive work at the Site, the Contractor shall provide safe and healthful working conditions. The Contractor shall comply with all New York State Department of Labor regulations and published recommendations and regulations promulgated under the Federal Occupational Safety and Health Act of 1970 and the Construction Safety Act of 1969, as amended, and with laws, rules, and regulations of other authorities having jurisdiction. Compliance with governmental requirements is mandated by law and considered only a minimum level of safety performance. The Contractor shall insure that all work is performed in accordance with recognized safe work practices.
- The Contractor shall be responsible for the safety of the Contractor's employees and the public. The Contractor shall be solely responsible for the adequacy and

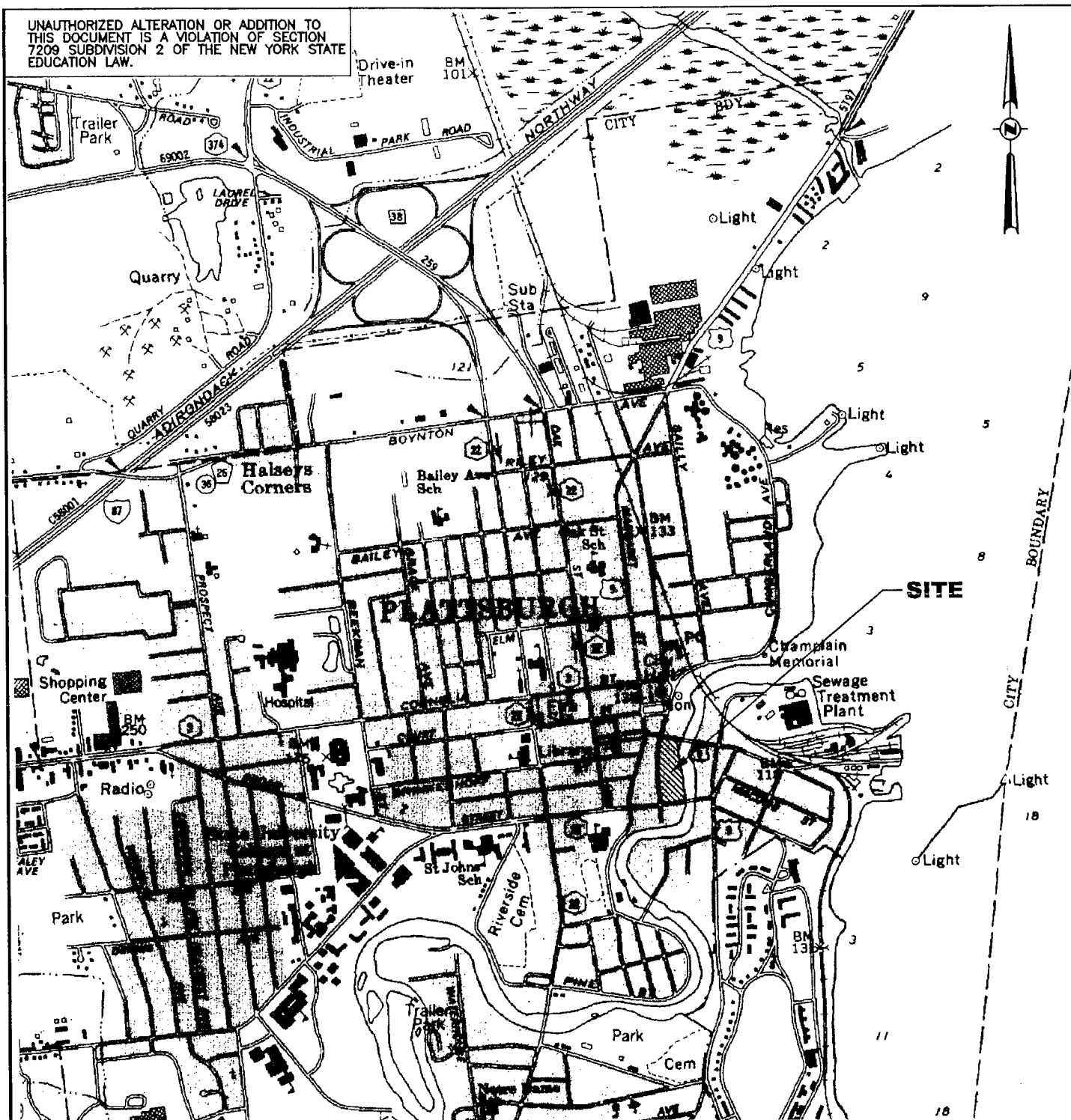
safety of all construction methods, materials, equipment and the safe prosecution of the work.

- The Contractor is responsible to ensure that all project personnel have been trained in accordance with 29 CFR 1910.120, if required.
- The Contractor shall have a site specific HASP, written in accordance with 29 CFR 1926.65, prepared, signed and sealed by a safety professional; a safety professional and/or a trained safety representative(s) active on the job whenever the work is in progress; an effective and documented safety training program; and a safety work method check list system.
- Recognition as a safety professional shall be based on a minimum of certification by the Board of Certified Safety Professionals as a Certified Safety Professional and 5 years of professional safety management experience in the types of construction and conditions expected to be encountered on the Site.
- All personnel employed by the Contractor or his subcontractors or any visitors whenever entering the job site, shall be required to wear appropriate personal protection equipment required for that area.

FIGURE 1
SITE LOCATION MAP

CAD DWG: FILE NAME: SITE LOC MAP.DWG

Drive-in Theater BM 101X



NOTES:
THE LOCATIONS AND FEATURES DEPICTED ON THIS
MAP ARE APPROXIMATE AND DO NOT REPRESENT
AN ACTUAL FIELD SURVEY.










Date	RECORD OF WORK	Appr.	<p align="center">SITE LOCATION MAP DURKEE STREET PARKING LOT</p>	
			CITY OF PLATTSBURGH	CLINTON COUNTY, NY
			<p align="center">C.T. MALE ASSOCIATES, P.C.</p> <p align="center">50 CENTURY HILL DRIVE, P.O. BOX 727, LATHAM, NY 12110 518.786.7400 * FAX 518.786.7299</p>	
			<p align="center">    </p>	
<p>Drafter: J.MARX</p>		<p>Checker: K.MOLINE</p>	<p>    </p>	
<p>Appr. by:</p>		<p>Proj. No. 04.9498</p>	<p>    </p>	
			SCALE: NOT TO SCALE	DATE: OCTOBER 2004

FIGURE 2

**OCTOBER 5, 2004 BOUNDARY SURVEY BY C.T.
MALE ASSOCIATES, P.C. OF LATHAM, NEW YORK**

FIGURE 3

**OPERABLE UNIT #1 & OPERABLE UNIT #2
BOUNDARIES AND SAMPLING LOCATIONS**

FIGURE 4

**DECEMBER 15, 2003 PHASE I SITE PLAN
PREPARED BY RABIDEAU ARCHITECTS OF
BURLINGTON, VERMONT**

APPENDIX A

SUMMARY OF SURFACE AND SUBSURFACE SOIL
ANALYTICAL RESULTS

APPENDIX B
**SUMMARY OF GROUNDWATER
ANALYTICAL RESULTS**

APPENDIX C
SUMMARY OF SOIL GAS ANALYTICAL RESULTS

SUMMARY TABLE OF SOIL GAS SAMPLE RESULTS
DURKEE STREET PARKING LOT (CTM PROJECT NO. 04.9498)
VALIDATED ANALYTICAL RESULTS

Parameter	DURKEE-SG1 ug/m ³	DURKEE-SG2 ug/m ³	DURKEE-SG3 ug/m ³	DUPLICATE-SG2 ug/m ³	AMBIENT ug/m ³
Dichlorodifluoromethane	2.6	2.5 U	2.7	2.7	3
Chloromethane	1.4 J	1.3 J	1.8 J	1.2 J	1.5 J
Trichlorofluoromethane	1.1 U	1.1 U	1.2	1.3	1.3
Benzene	16	17	12	11	0.99
Toluene	120	120 J	64	45 J	2.8
Ethylbenzene	11	12 J	5.6	5.2 J	0.87 U
Xylene (m,p)	43	48 J	23	19 J	1.7
Xylene (o)	12	14 J	5.6	6.1 J	0.87 U
1,3,5-Trimethylbenzene	1.6	2.1	0.98 U	1.1	0.98 U
1,2,4-Trimethylbenzene	4.8	6.9 J	2.4	3.2 J	0.98 U
1,3-Butadiene	1.1	4.2	7.5	3.5	0.44 U
Carbon Disulfide	1.7	1.6 U	1.6 U	1.6 U	1.6 U
Acetone	12	18	45	12 U	12 U
Cyclohexane	5.5	4.5	2.8	2.8	0.69 U
Methyl Ethyl Ketone	1.5 U	1.5 U	1.5 U	1.5 U	1.5
4-Ethyltoluene	5.4	7.4 J	2.9	3.5 J	0.98 U
2,2,4-Trimethylpentane	7	8.9	4.1	5.1 J	0.93 U
n-Hexane	13	11	12	7.4	0.7 U
n-Heptane	8.2	7.8 J	5.7	3.9 J	0.82 U
Xylene (total)	56	61 J	30	25 J	1.7

Notes:

Concentrations expressed in micrograms per cubic meter

U indicates that the compound was analyzed for but not detected

APPENDIX D
NYSDOH GENERIC COMMUNITY AIR
MONITORING PLAN

New York State Department of Health Generic Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical-specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for volatile organic compounds (VOCs) and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate NYSDEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a **continuous** basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

All 15-minute readings must be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

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

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed $150 \text{ mcg}/\text{m}^3$ above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than $150 \text{ mcg}/\text{m}^3$ above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within $150 \text{ mcg}/\text{m}^3$ of the upwind level and in preventing visible dust migration.

All readings must be recorded and be available for State (DEC and DOH) personnel to review.

June 20, 2000

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APPENDIX E

**NYSDEC TAGM #4031, FUGITIVE DUST AND
PARTICULATE MONITORING PROGRAM AT
INACTIVE HAZARDOUS WASTE SITES**



New York State Department of
Environmental Conservation

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Technical and Administrative Guidance Memorandum #4031

Fugitive Dust Suppression and Particulate Monitoring Program at Inactive Hazardous Waste Sites

More information from this division:

Division of Environmental Remediation
More TAGMs

To: Regional Hazardous Waste Remediation Engrs., Bur.
Directors & Section Chiefs

From: Michael J. O'Toole, Jr., Director, Division of Hazardous
Waste Remediation (signed)

Subject: Technical and Administrative Guidance Memorandum -
- Fugitive Dust Suppression and Particulate Monitoring
Program at Inactive Hazardous Waste Sites

Date: Oct 27, 1989

1. Introduction

Fugitive dust suppression, particulate monitoring, and subsequent action levels for such must be used and applied consistently during remedial activities at hazardous waste sites. This guidance provides a basis for developing and implementing a fugitive dust suppression and particulate monitoring program as an element of a hazardous waste site's health and safety program.

2. Background

Fugitive dust is particulate matter--a generic term for a broad class of chemically and physically diverse substances that exist as discrete particles, liquid droplets or solids, over a wide range of sizes--which becomes airborne and contributes to air quality as a nuisance and threat to human health and the environment.

On July 1, 1987, the United States Environmental Protection Agency (USEPA) revised the ambient air quality standard for particulates so as to reflect direct impact on human health by setting the standard for particulate matter less than ten microns in diameter (PM_{10}); this involves fugitive dust whether contaminated or not. Based upon an examination of air quality composition, respiratory tract deposition, and health effects, PM_{10} is considered conservative for the primary standard--that requisite to protect public health with an adequate margin of safety. The primary standards are 150 ug/m^3 over a 24-hour averaging time and 50 ug/m^3 over an annual averaging time. Both of these standards are to be averaged arithmetically.

There exists real-time monitoring equipment available to measure PM_{10} and capable of integrating over a period of six seconds to ten hours. Combined with an adequate fugitive dust suppression program, such equipment will aid in preventing the off-site migration of contaminated soil. It will also protect both on-site personnel from exposure to high levels of dust and the public around the site from any exposure to any dust. While specifically intended for the protection of on-site personnel as well as the public, this program is not meant to replace long-term monitoring which may be required given the contaminants inherent to the site and its air quality.

3. Guidance

A program for suppressing fugitive dust and monitoring particulate matter at hazardous waste sites can be developed without placing an undue burden on remedial activities while still being protective of health and environment. Since the responsibility for implementing this program ultimately will fall on the party performing the work, these procedures must be incorporated into appropriate work plans. The following fugitive dust suppression and particulate monitoring program will be employed at hazardous waste sites during construction and other activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.
2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Such activities shall also include the excavation,

grading, or placement of clean fill, and control measures therefore should be considered.

3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM_{10}) with the following minimum performance standards:

Object to be measured: Dust, Mists, Aerosols

Size range: <0.1 to 10 microns

Sensitivity: 0.001 mg/m^3

Range: $0.001 \text{ to } 10 \text{ mg/m}^3$

Overall Accuracy: $\pm 10\%$ as compared to gravimetric analysis of stearic acid or reference dust

Operating Conditions:

Temperature: 0 to 40°C

Humidity: 10 to 99% Relative Humidity

Power: Battery operated with a minimum capacity of eight hours continuous operation

Automatic alarms are suggested.

Particulate levels will be monitored immediately downwind at the working site and integrated over a period not to exceed 15 minutes. Consequently, instrumentation shall require necessary averaging hardware to accomplish this task; the P-5 Digital Dust Indicator as manufactured by MDA Scientific, Inc. or similar is appropriate.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the entity operating the equipment to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.
5. The action level will be established at 150 ug/m^3 over the integrated period not to exceed 15 minutes. While conservative, this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m^3 , the upwind background level must be measured immediately using the same portable monitor. If the working

site particulate measurement is greater than 100 ug/m^3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see Paragraph 7). Should the action level of 150 ug/m^3 be exceeded, the Division of Air Resources must be notified in writing within five working days; the notification shall include a description of the control measures implemented to prevent further exceedences.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM_{10} at or above the action level. Since this situation has the potential to migrate contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.
7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:
 1. Applying water on haul roads.
 2. Wetting equipment and excavation faces.
 3. Spraying water on buckets during excavation and dumping.
 4. Hauling materials in properly tarped or watertight containers.
 5. Restricting vehicle speeds to 10 mph.
 6. Covering excavated areas and material after excavation activity ceases.
 7. Reducing the excavation size and/or number of excavations.

Experience has shown that utilizing the above-mentioned dust suppression techniques, within reason as not to create excess water which would result in unacceptable wet

conditions, the chance of exceeding the 150 ug/m³ action level at hazardous waste site remediations is remote. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. If the dust suppression techniques being utilized at the site do not lower particulates to an acceptable level (that is, below 150 ug/m³ and no visible dust), work must be suspended until appropriate corrective measures are approved to remedy the situation. Also, the evaluation of weather conditions will be necessary for proper fugitive dust control--when extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended.

There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require appropriate toxics monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.

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EXHIBIT 1

NYSDEC INTERIM SMP APPROVAL LETTER

SUMMARY TABLE OF SURFACE SOIL SAMPLE RESULTS
DURKEE STREET PARKING LOT (CTM PROJECT NO. 04.9498)
VALIDATED ANALYTICAL RESULTS

COMPOUND & METHOD	NYSDEC TAGM RSCO (1)	NYSDEC TAGM Bkgrd (2)	SDURKEE-SS1	SDURKEE-SS2	SDURKEE-SS3	FIELD DUPLICATE (SS3)	SDURKEE-SS4	SDURKEE-SS5	SDURKEE-SS6	SDURKEE-SS7	SDURKEE-SS8	SDURKEE-SS9	SDURKEE-SS10	EQUIPMENTBLANK
VOCs by EPA Method 8260 (mg/kg)														
Methylene Chloride	0.1	Not Applicable	0.0071 J	0.0007 UJ	0.00071 UJ	0.00071 UJ	0.00071 UJ	0.0007 UJ	0.00071 UJ	0.00072 UJ	0.00075 UJ	0.00072 UJ	0.00071 UJ	0.005 U
Tetrachloroethene	1.4	Not Applicable	0.00067 U	0.00065 U	0.00066 U	0.0061	0.00066 U	0.00065 U	0.00066 U	0.00067 U	0.0007 U	0.00067 U	0.00066 U	0.00033 U
SVOCs by EPA Method 8260 (mg/kg)														
Fluoranthene	50	Not Applicable	0.019 U	0.0094 U	0.038 J	0.0048 U	0.0095 U	0.0094 U	0.047 U	0.048 U	0.005 U	0.0048 U	0.019 U	0.00021 U
Pyrene	50	Not Applicable	0.025 U	0.012 UJ	0.094 J	0.0061 U	0.012 UJ	0.012 U	0.061 UJ	0.062 UJ	0.0064 U	0.0061 U	0.025 U	0.00025 U
bis(2-Ethylhexyl)phthalate	50	Not Applicable	0.032 U	0.016 UJ	0.13 UJ	0.1 J	0.016 UJ	0.016 U	0.078 UJ	0.08 UJ	0.0082 U	0.0079 U	0.032 U	0.00034 U
PCBs by EPA Method 8081														
None Detected														
Pesticide by EPA Method 8082														
None Detected														
Metals by Standard Methods (mg/kg)														
Aluminum	SB	33000	3340	2260	3200	2530	2480	2310	2230	3070	4310	3080	4610	180 U
Antimony	SB	NA	0.591 U	0.582 U	0.583 U	0.588 U	0.584 U	0.581 U	0.58 U	0.591 U	0.618 U	0.587 U	0.587 U	6.600 U
Arsenic	7.5 or SB	3-12	2.980	1.420 U	1.250 U	1.980 U	1.560 U	2.080 U	1.300 U	1.550 U	4.250	3.640	4.320	4.840 U
Barium	300 or SB	150-600	16.7 J	14.1 J	29.0	20.7 J	17.0 J	15.9 J	19.3 J	17.9 J	23.7	22.4	25.6	11.0 U
Beryllium	0.16 or SB	0-1.75	0.299 U	0.240 U	0.287 U	0.319 U	0.282 U	0.323 U	0.296 U	0.325 U	0.355 U	0.293 U	0.386 J	1.380 U
Cadmium	10* or SB	0.1-1	1.490	0.250 U	0.514 J	0.556	0.441 J	0.497 J	0.463 J	0.670	1.340	0.942	1.450	0.994 U
Calcium	SB	130-35,000	201000	13700	12600	8660	10700	9540	51900	85000	229000	266000	200000	1740 U
Chromium	50** or SB	1.5-40	8.300	3.230	5.260	4.220	3.740	3.700	3.300	4.870	10.4	7.300	11.4	1.220 U
Cobalt	30 or SB	2.5-60	5.690	1.920 J	3.160 J	2.930 J	2.420 J	2.880 J	2.150 J	3.390 J	7.300	5.670	8.210	2.380 U
Copper	25 or SB	1-50	10.9	4.690	6.620	6.370	5.570	5.400	5.730	5.700	12.1	9.460	12.3	0.739 U
Iron	2,000 or SB	2,000-550,000	11900	4940	6290	6360	5010	5810	4320	6110	10500	8110	12200	29.0 U
Lead	SB	NA***	6.810	6.410	14.8	13.5	4.460	5.120	8.850	10.2	8.030	7.080	9.850	1.790 U
Magnesium	SB	100-5,000	44200	5080	4220	3040	3650	3120	3980	5880	9700	12100	11700	254 U
Manganese	SB	50-5,000	896	196	259	240	215	340	231	308	367	365	367	0.195 U
Mercury	0.1	0.001-0.2	0.01 U	0.01 J	0.01	0.01	0.01 J	0.01 U	0.01	0.01	0.01 U	0.01 U	0.01 U	0.03 U
Nickel	13 or SB	0.5-25	12.9	4.320	5.880	5.050	4.720	5.010	4.370	6.760	16.3	12.0	18.2	5.550 U
Potassium	SB	8,500-43,000	1750	406 J	574	436 J	427 J	359 J	517	810	2180	1770	2220	51.0 U
Selenium	2 or SB	0.1-3.9	0.328 U	0.478 J	0.651 J	0.516 J	0.686 J	0.525 J	0.549 J	0.508 J	0.344 U	0.326 U	0.326 U	5.240 U
Silver	SB	NA	0.110 U	0.109 U	0.109 U	0.110 U	0.153 J	0.108 U	0.108 U	0.110 U	0.115 U	0.109 U	0.109 U	3.380 U
Sodium	SB	6,000-8,000	258 J	65.5 J	342 J	271 J	189 J	410 J	302 J	428 J	622	506 J	629	189 U
Thallium	SB	NA	0.346 U	0.341 U	0.342 U	0.344 U	0.342 U	0.341 U	0.340 U	0.347 U	0.362 U	0.344 U	0.344 U	5.780 U
Vanadium	150 or SB	1-300	5.820	5.230	8.650	7.020	6.430	6.200	5.660	6.530	6.140	4.750 J	6.580	1.860 U
Zinc	20 or SB	9-50	29.0	14.0	20.1	18.2	12.7	12.1	13.5	21.4	31.5	23.3	36.1	8.110 U

(1) NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 Determination of Soil Cleanup Objectives, Recommended Soil Cleanup Objectives, Dated Jan. 24, 1994.
(2) NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 Determination of Soil Cleanup Objectives, Eastern USA or NYS Background, Dated Jan. 24, 1994.
Concentrations denoted in mg/kg or parts per million (ppm) and mg/l (ppm) for the Equipment Blank
U indicates that the compound was analyzed for but not detected
J indicates an estimated value
NA indicates Not Applicable
* TAGM 4046 lists 1 ppm as the SCG for cadmium, however, recent DEC RODs specify 10 ppm as the SCG
** TAGM 4046 lists 10 ppm as the SCG for chromium, however, recent DEC RODS specify 50 ppm as the SCG.
*** Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4 to 61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200 to 500 ppm.

SUMMARY TABLE OF SUBSURFACE SOIL SAMPLE RESULTS
DURKEE STREET PARKING LOT (CTM PROJECT NO. 04.9498)
VALIDATED ANALYTICAL RESULTS

COMPOUND	NYSDEC TAGM RSCO ⁽¹⁾	NYSDEC TAGM Bkgrd ⁽²⁾	SDURKEE SB1 (8-10')	SDURKEE SB2 (13-15')	SDURKEE SB3 (2-4')	SDURKEE SB4 (8-10')	SDURKEE SB5 (0.5-2')	SDURKEE SB6 (0.5-2')	SDURKEE SB7 (0.5-2')	SDURKEE SB8 (10-12')	SDURKEE SB9 (12-14')	SDURKEE SB10 (8-10')	DUPLICATE SB-10 (14-16')	SDURKEE SB10 (14-16')	SDURKEE SB11 (.5-2')	SDURKEE SB12 (2-4')	EQUIPMENT BLANK
VOCs by EPA Method 8260 (mg/kg)																	
Acetone	0.2	Not Applicable	0.009 UJ	0.09 UJ	0.0079 UJ	0.012 UJ	0.015 J	0.0078 UJ	0.0082 UJ	0.028 J	0.0086 UJ	0.009 U	0.0081 UJ	0.0082 UJ	0.0079 UJ	0.0089 UJ	0.0033 U
cis-1,2-Dichloroethene	NS	Not Applicable	0.00042 U	0.0042 U	0.00037 U	0.00055 U	0.00037 U	0.00037 U	0.00039 U	0.00046 U	0.0004 U	0.00042 U	0.0055	0.016	0.00037 U	0.00042 U	0.00077 U
Isopropylbenzene	NS	Not Applicable	0.00045 U	0.0045 U	0.00039 U	0.00058 U	0.00039 U	0.00039 U	0.00041 U	0.11	0.00043 U	0.00045 U	0.0004 U	0.00041 U	0.00039 U	0.00044 U	0.00033 U
Methylene Chloride	0.1	Not Applicable	0.0012 J	0.0082 UJ	0.00072 UJ	0.0011 UJ	0.00072 UJ	0.00071 UJ	0.00075 UJ	0.00089 UJ	0.00078 UJ	0.00082 UJ	0.00074 UJ	0.00075 UJ	0.00072 UJ	0.00081 UJ	0.01
m/p-Xylenes	1.2	Not Applicable	0.00062 U	0.0062 U	0.00054 U	0.0008 U	0.00054 U	0.00054 U	0.00056 U	0.018	0.00059 U	0.00062 U	0.00056 U	0.00056 U	0.00054 U	0.00061 U	0.00096 U
Tetrachloroethene	1.4	Not Applicable	0.00077 U	0.0077 U	0.00067 U	0.00099 U	0.00067 U	0.00066 U	0.0007 U	0.00084 U	0.00073 U	0.0026 J	0.00069 U	0.0007 U	0.00067 U	0.00076 U	0.00033 U
trans-1,2-Dichloroethene	0.3	Not Applicable	0.00045 U	0.0045 U	0.00039 U	0.00058 U	0.00039 U	0.00039 U	0.00041 U	0.00049 U	0.00043 U	0.00045 U	0.0004 U	0.0042 J	0.00039 U	0.00044 U	0.00051 U
SVOCs by EPA Method 8270 (mg/kg)																	
Acenaphthene	50	Not Applicable	0.0088 U	0.0087 U	0.015 U	0.23 J	0.015 U	0.38 UJ	0.079 U	0.019 U	0.0083 U	0.0087 U	0.0079 U	0.0079 U	0.015 U	0.0086 U	0.00024 U
Acenaphthylene	41	Not Applicable	0.012 U	0.012 U	0.021 U	0.27 J	0.021 U	0.51 UJ	0.11 U	0.026 U	0.011 U	0.012 U	0.011 U	0.011 U	0.021 U	0.012 U	0.00043 U
Anthracene	50	Not Applicable	0.0095 U	0.0094 U	0.016 U	0.85 J	0.016 U	0.41 UJ	0.086 U	0.021 U	0.009 U	0.0094 U	0.0085 U	0.0086 U	0.017 U	0.0093 U	0.00016 U
Benzo(a)anthracene	0.224 or MDL	Not Applicable	0.006 U	0.006 U	0.01 U	2.9	0.01 U	0.37 UJ	0.078 U	0.65 J	0.0082 U	0.0085 UJ	0.0077 UJ	0.0078 U	0.015 U	0.0085 U	0.00027 U
Benzo(a)pyrene	0.061 or MDL	Not Applicable	0.0068 U	0.0068 U	0.012 U	2.4	0.012 U	0.3 UJ	0.062 U	0.097 J	0.0065 U	0.0068 UJ	0.0061 UJ	0.0062 U	0.012 U	0.0067 U	0.0005 U
Benzo(b)fluoranthene	1.1	Not Applicable	0.021 U	0.021 U	0.037 U	3.1	0.037 U	0.24 UJ	0.42 J	0.1 J	0.0052 U	0.0055 UJ	0.005 UJ	0.005 U	0.0096 U	0.086 J	0.00021 U
Benzo(k)fluoranthene	1.1	Not Applicable	0.014 U	0.014 U	0.024 U	0.92 J	0.024 U	0.59 UJ	0.12 U	0.03 U	0.013 U	0.013 UJ	0.012 UJ	0.012 U	0.024 U	0.013 U	0.00038 U
Benzo(g,h,i)perylene	50	Not Applicable	0.017 UJ	0.017 U	0.03 U	0.75 J	0.03 U	0.75 UJ	0.16 U	0.038 U	0.016 U	0.017 UJ	0.015 UJ	0.016 U	0.03 U	0.017 UJ	0.00042 U
bis(2-Ethylhexyl)phthalate	50	Not Applicable	0.0091 U	0.0091 U	0.084 J	0.023 U	0.093 J	0.26 UJ	0.054 J	0.013 U	0.0057 U	0.0059 UJ	0.0054 U	0.0054 U	0.01 U	0.053 J	0.01 U
Carbazole	NS	Not Applicable	0.0088 U	0.0087 U	0.015 U	0.56 J	0.015 U	0.38 UJ	0.079 U	0.019 U	0.0083 U	0.0087 U	0.0079 U	0.0079 U	0.015 U	0.0086 U	0.00031 U
Chrysene	0.4	Not Applicable	0.054 J	0.013 U	0.022 U	4	0.022 U	0.54 UJ	0.11 U	0.028 U	0.012 U	0.012 UJ	0.011 UJ	0.011 U	0.022 U	0.064 J	0.00038 U
Dibenz(a,h)anthracene	0.014 or MDL	Not Applicable	0.012 U	0.012 U	0.02 U	0.11 J	0.02 U	0.5 UJ	0.11 U	0.026 U	0.011 U	0.012 UJ	0.01 UJ	0.011 U	0.02 U	0.011 UJ	0.00029 U
Dibenzofuran	6.2	Not Applicable	0.013 U	0.013 U	0.023 U	0.25 J	0.023 U	0.56 UJ	0.12 U	0.029 U	0.012 U	0.013 U	0.012 U	0.012 U	0.023 U	0.013 U	0.00031 U
Fluoranthene	50	Not Applicable	0.044 J	0.0055 U	0.0096 U	7.5	0.0096 U	0.91 UJ	0.19 U	0.046 U	0.02 U	0.021 U	0.019 U	0.019 U	0.037 U	0.085 J	0.00023 U
Fluorene	50	Not Applicable	0.011 U	0.011 U	0.02 U	0.42 J	0.02 U	0.49 UJ	0.1 U	0.025 U	0.011 U	0.011 U	0.01 U	0.01 U	0.02 U	0.011 U	0.00017 U
Indeno(1,2,3-cd)pyrene	3.2	Not Applicable	0.0096 U	0.0096 U	0.017 U	1.1	0.017 U	0.41 UJ	0.087 U	0.021 U	0.0091 U	0.0095 UJ	0.0086 UJ	0.0087 U	0.017 U	0.0094 UJ	0.00029 U
2-Methylnaphthalene	36.4	Not Applicable	0.0068 U	0.0068 U	0.012 U	0.018 U	0.012 U	0.39 UJ	0.73 JB	0.02 U	0.0086 U	0.009 U	0.29 J	0.0082 U	0.016 U	0.0089 U	0.0035 JB
Naphthalene	13	Not Applicable	0.0086 U	0.08 J	0.015 U	0.14 J	0.015 U	0.3 UJ	0.062 U	0.015 U	0.0065 U	0.0068 U	0.0061 U	0.0062 U	0.012 U	0.07 J	0.00045 U
Phenanthrene	50	Not Applicable	0.042 J	0.0089 U	0.015 U	6.9	0.015 U	0.38 UJ	0.08 U	0.019 U	0.0084 U	0.0088 U	0.008 U	0.008 U	0.016 U	0.0087 U	0.00027 U
Pyrene	50	Not Applicable	0.064 J	0.0071 U	0.012 U	7.5	0.012 U	0.31 UJ	0.51 J	0.11 J	0.0067 U	0.051 J	0.0063 UJ	0.0063 U	0.0063 U	0.0063 U	0.00025 U
PCBs by EPA Method 8081 (mg/kg)																	
Aroclor-1254	10	Not Applicable	0.0016 U	0.0016 U	0.0014 U	0.0021 U	0.0014 U	0.0014 U	0.0015 U	0.0017 U	0.0015 U	0.0016 U	0.0015 U	0.0015 U	0.21 J	0.0016 U	0.00003 U
Pesticides by EPA Method 8082 (mg/kg)																	
None Detected																	
Metals by Standard Methods (mg/kg)																	
Aluminum	SB	33000	1990	3160	2280	4000	3100	2530	4160	6090	4020	3560	2740	3090	4010	5040	0.180 U
Antimony	SB	NA	0.676 U	0.676 U	0.594 U	90.3	0.595 UJ	0.587 UJ	0.611 UJ	0.739 UJ	0.639 UJ	0.679 UJ	0.615 UJ	0.616 UJ	0.586 UJ	0.822 J	0.0066 U
Arsenic	7.5 or SB	3-12	0.771 J	0.927 J	1.020 J	11.1	0.634 J	1.330	1.720	3.710	0.791 J	0.905 J	1.080 J	1.300	1.050	2.550	0.00484 U
Barium	300 or SB	150-600	24.2	22.0 J	13.3 J	318	21.8	28.2	63.2	299	26.1	63.7	28.4	32.4	19.8 J	102	0.011 U
Beryllium	0.16 or SB	0-1.75	0.215 J	0.241 J	0.157 J	0.367 J	0.415 U	0.418 U	0.498 U	0.436 J	0.299 J	0.213 U	0.178 U	0.203 U	0.235 U	0.326 J	0.00106 U
Cadmium	10* or SB	0.1-1	0.267 J	0.652	0.408 J	4.940	0.049 U	0.131 J	0.050 U	0.919	0.052 U	0.055 U	0.338 J	0.147 J	0.191 J	0.434 J	0.000994 U
Calcium	SB	130-35,000	12300	15900	20500	6100	15100	55300	44800	8180 J	8980 J	38100 J	41500 J	38200 J	117000 J	42400 J	1.74 U

SUMMARY TABLE OF SUBSURFACE SOIL SAMPLE RESULTS
DURKEE STREET PARKING LOT (CTM PROJECT NO. 04.9498)
VALIDATED ANALYTICAL RESULTS

COMPOUND	NYSDEC TAGM RSCO ⁽¹⁾	NYSDEC TAGM Bkgrd ⁽²⁾	SDURKEE SB1 (8-10')	SDURKEE SB2 (13-15')	SDURKEE SB3 (2-4')	SDURKEE SB4 (8-10')	SDURKEE SB5 (0.5-2')	SDURKEE SB6 (0.5-2')	SDURKEE SB7 (0.5-2')	SDURKEE SB8 (10-12')	SDURKEE SB9 (12-14')	SDURKEE SB10 (8-10')	DUPLICATE SB-10 (14-16')	SDURKEE SB10 (14-16')	SDURKEE SB11 (.5-2')	SDURKEE SB12 (2-4')	EQUIPMENT BLANK
Chromium	50** or SB	1.5-40	6.330	5.890	4.050	14.2	4.810	8.660	6.760	11.8	7.780	4.970	5.700	6.480	8.250	13.6	0.00122 U
Cobalt	30 or SB	2.5-60	1.600 J	3.050 J	1.890 J	8.460	2.900 J	2.430 J	3.690 J	8.680 J	4.410 J	2.420 J	3.060 J	3.330 J	4.840 J	5.340 J	0.00238 U
Copper	25 or SB	1-50	5.380	3.800	4.510	82.6	4.400 J	22.8 J	13.9 J	20.6	8.580	10.2	7.180	7.500	8.450	21.8	0.000739 U
Iron	2,000 or SB	2,000-550,000	3890	7460	4750	36700	5710	4750	6790	12000	7780	5560	6330	7420	8840	15800	0.029 U
Lead	SB	NA***	24.3	6.900	6.740	2590	6.670	40.5	83.1	218	5.440	25.9	4.440	4.770	5.560	96.6	0.00179 U
Magnesium	SB	100-5,000	1440	2400	4080	1460	3120	5940	4660	3110	3880	6610	15500	11100	6340	6820	0.254 U
Manganese	SB	50-5,000	65.7	179	196	197	211	188	221	623	119	176	217	240	242	366	0.00138 J
Mercury	0.1	0.001-0.2	0.04	0.01 J	0.01 J	0.20	0.01 U	0.04 J	0.19 J	0.05 J	0.02 J	0.10 J	0.01 J	0.01 UJ	0.01 J	0.38 J	0.00003 U
Nickel	13 or SB	0.5-25	3.57 J	4.500 J	4.180 J	13.2	5.980 J	13.4 J	7.140 J	13.8	9.790	4.580 J	5.010	5.950	11.1	9.700	0.00555 U
Potassium	SB	8,500-43,000	433 J	404 J	458 J	956	564 J	678 J	1160 J	990 J	892 J	781 J	1320 J	1390 J	2040 J	1320 J	0.051 U
Selenium	2 or SB	0.1-3.9	0.748 J	0.492 J	0.580 J	3.580	0.331 U	0.326 U	0.339 U	2.060	0.646 J	0.593 J	0.618 J	0.749 J	0.751 J	1.610	0.00524 U
Silver	SB	NA	0.130 J	0.126 U	0.111 U	2.270	0.111 U	0.109 U	0.114 U	0.138 U	0.119 U	0.127 U	0.115 U	0.115 U	0.109 U	0.200 J	0.00338 U
Sodium	SB	6,000-8,000	285 J	218 J	156 J	2630	224 J	171 J	330 J	637 J	393 J	711	291 J	279 J	470 J	777	0.189 U
Thallium	SB	NA	0.396 U	0.396 U	0.348 U	0.514 U	0.348 U	0.344 U	0.358 U	0.433 U	0.375 U	0.393 U	0.361 U	0.361 U	0.344 U	0.395 U	0.00578 U
Vanadium	150 or SB	1-300	6.480	9.400	6.510	15.1	8.070	13.3	11.4	16.7	11.8	7.640	9.690	10.4	7.340	16.4	0.00186 U
Zinc	20 or SB	9-50	46.5	35.7	10.5	703	15.7	70.5	71.5	258 J	32.4 J	43.2 J	78.8 J	19.7 J	21.0 J	91.3 J	0.00811 U

Notes:
(1) NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 Determination of Soil Cleanup Objectives, Recommended Soil Cleanup Objectives, Dated Jan. 24, 1994.
(2) NYSDEC Technical and Administrative Guidance Memorandum (TAGM) #4046 Determination of Soil Cleanup Objectives, Eastern USA or NYS Background, Dated Jan. 24, 1994.
Concentrations expressed in mg/kg or parts per million (ppm) and mg/l (ppm) for the Equipment Blank
U indicates that the compound was analyzed for but not detected
J indicates an estimated value
B indicates that the analyte was found in the sample and its associated laboratory blank
SB indicates Eastern USA Background
NS indicates no standard
NA indicates Not Applicable
* TAGM 4046 lists 1 ppm as the SCG for cadmium, however, recent DEC RODs specify 10 ppm as the SCG
** TAGM 4046 lists 10 ppm as the SCG for chromium, however, recent DEC RODS specify 50 ppm as the SCG.
*** Background levels for lead vary widely. Average levels in undeveloped, rural areas may range from 4 to 61 ppm. Average background levels in metropolitan or suburban areas or near highways are much higher and typically range from 200 to 500 ppm.

SUMMARY TABLE OF GROUNDWATER SAMPLE RESULTS
DURKEE STREET PARKING LOT (CTM PROJECT NO. 04.9498)
VALIDATED ANALYTICAL RESULTS

COMPOUND & METHOD	NYSDEC Groundwater Standard or Guidance Value	SDURKEE-MW1	SDURKEE-MW2	SDURKEE-MW3	DUPLICATE (MW3)	SDURKEE-MW4	SDURKEE-MW-5	SDURKEE-MW-6	SDURKEE-MW-7	SDURKEE-MW8	SDURKEE-MW9	SDURKEE-MW10	SDURKEE-MW11	SDURKEE-MW12	EQUIPMENTBLANK
VOCs by EPA Method 8260 (ug/L)															
Vinyl Chloride	2	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	0.27 U	16 J	170	1.5 J	0.27 U	0.27 U
1,1-Dichloroethene	5	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 U	0.32 UJ	6.0	0.32 U	0.32 U	0.32 U
Acetone	50 (GV)	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	3.3 U	19 J	3.3 U	9.6 J	12 J	3.3 U
trans-1,2-Dichloroethene	5	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 U	0.51 UJ	410 E	0.51 U	0.51 U	0.51 U
cis-1,2-Dichloroethene	5	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	0.77 U	75 J	680 E	1.7 J	1.3 J	0.77 U
Trichloroethene	5	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	0.67 U	3.8 J	99	0.67 U	0.67 U	0.67 U
Isopropylbenzene	5	0.33 U	4.3 J	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U	0.33 UJ	0.33 U	0.33 U	0.33 UJ	0.33 U
Methyl tert-butyl Ether	10 (GV)	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 U	0.36 UJ	0.36 U	1.0 J	0.36 U	0.36 U
SVOCs by EPA Method 8270 (ug/L)															
Di-n-butylphthalate	50	0.099 UJ	1.1 J	1.1 J	0.100 U	2.4 J	0.098 U	0.098 U	1.6 J	0.099 U	0.098 U	0.098 U	1.1 J	0.099 U	0.099 U
Di-(2-Ethylhexyl)phthalate	5	4.0 J	7.3 J	6.3 J	4.0 J	9.7 J	5.2 J	3.5 J	5.1 J	5.1 J	7.1 J	5.3 J	2.3 J	1.6 J	1.2 J
PCBs by EPA Method 8081															
None Detected															
Pesticide by EPA Method 8082															
None Detected															
Metals by Standard Methods (ug/L)															
Aluminum	No Standard	180 U	943	236	209	1130	180 U	785	5510	896	1560	3200	2440	19700	180 U
Antimony	3	6.600 U	6.600 U	6.600 U	6.600 U	6.600 U	6.600 U	6.600 U	6.600 U	6.600 U	6.600 U	6.600 U	6.600 U	6.600 U	6.600 U
Arsenic	25	6.520 J	4.840 U	4.840 U	4.840 U	4.840 U	4.840 U	4.840 U	4.840 U	4.840 U	4.840 U	4.840 U	4.840 U	7.800 J	4.840 U
Barium	1000	399	489	611	576	358	339	202	261	281	316	699	252	722	11.0 U
Beryllium	3 (GV)	1.060 U	1.060 U	1.060 U	1.060 U	1.060 U	1.440 U	1.540 U	1.700 U	1.060 U	1.060 U	1.060 U	1.060 U	1.060 U	1.060 U
Cadmium	5	1.720 J	2.290 J	2.920 J	2.080 J	0.994 U	0.994 U	0.994 U	0.994 U	0.994 U	0.994 U	1.040 J	0.994 U	1.880 J	0.994 U
Calcium	No Standard	380000 J	248000 J	290000 J	293000 J	168000 J	272000	144000	238000	146000 J	157000 J	115000 J	265000	254000	1740 U
Chromium	50	1.620 J	2.180 J	1.220 U	1.220 U	2.680 J	1.220 U	1.220 U	9.440 J	2.700 J	7.000 J	9.300 J	5.560 J	40.9	1.220 U
Cobalt	No Standard	2.380 U	2.800 J	2.380 U	2.980 J	5.550 J	2.380 U	2.380 U	7.280 J	2.380 U	5.520 J	5.360 J	2.380 U	16.9 J	2.380 U
Copper	200	6.620 J	6.380 J	4.730 J	3.490 J	8.490 J	0.805 J	3.320 J	14.6 J	7.120 J	9.680 J	10.3 J	10.2 J	56.1	3.480 J
Cron	300	3800	16100	22700	23700	3650	3480	1470	10200	2580	3650	6330	4840	34100	82.0 J
Lead	25	1.790 U	1.790 U	2.350 J	4.140 J	3.820 J	1.790 U	2.100 J	33.9	9.000	3.600 J	3.260 J	1.790 U	47.1	1.790 U
Magnesium	35,000 (GV)	106000 J	61000 J	68100 J	65000 J	69700 J	78300	55300	37400	101000 J	89300 J	128000 J	97600	131000	357 J
Manganese	300	640 J	783 J	1250 J	1250 J	264 J	673	279	4790	157 J	370 J	309 J	713	1280	0.490 U
Mercury	0.7	0.03 U	0.09 J	0.09 J	0.03 U	0.07 J	0.14 J	0.12 J	0.19 J	0.08 J	0.10 J	0.15 J	0.10 J	0.14 J	0.03 U
Nickel	100	5.550 U	5.550 U	5.550 U	5.550 U	5.550 U	5.550 U	5.550 U	10.4 J	5.550 U	8.340 J	9.440 J	9.820 J	41.1	5.550 U
Potassium	No Standard	144000 J	52800 J	62000 J	56800 J	37000 J	113000	26500	26200	22700 J	62900 J	123000 J	147000	56200	74.4 J
Selenium	10	5.240 U	5.240 U	5.240 U	5.240 U	5.240 U	5.240 U	5.240 U	5.240 U	5.240 U	6.780 J	5.240 U	5.240 U	5.240 U	5.240 U
Silver	50	3.380 U	3.380 U	3.380 U	3.380 U	3.380 U	3.380 U	3.380 U	3.380 U	3.380 U	3.380 U	3.380 U	3.380 U	3.380 U	3.380 U
Sodium	20000	2150000 J	1210000 J	1550000 J	1430000 J	368000 J	1910000	393000	490000	194000 J	441000 J	224000 J	1790000	1540000	569 J
Thallium	0.5 (GV)	11.1 U	6.120 U	15.0 U	5.780 U	5.780 U	5.780 U	5.780 U	5.780 U	5.780 U	23.1 U	6.140 U	5.780 U	5.880 U	5.780 U
Vanadium	No Standard	2.300 J	2.420 J	1.860 U	1.860 U	3.180 J	1.860 U	1.860 U	10.2 J	2.300 J	5.040 J	7.860 J	5.400 J	32.3 J	1.860 U
Zinc	2,000 (GV)	29.8 J	42.5 J	22.4 J	34.6 J	38.1 J	17.1 J	33.5	48.5	34.0 J	38.3 J	37.6 J	29.9 U	120	16.1 J

Qualifiers

TOGS 1.1.1, Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, New York State Department of Environmental Conservation, June 1998 and Addendum, April 2000.

SVOCs analyzed using EPA Method 8270

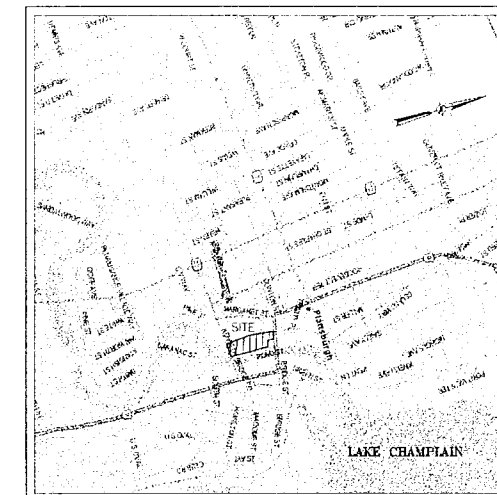
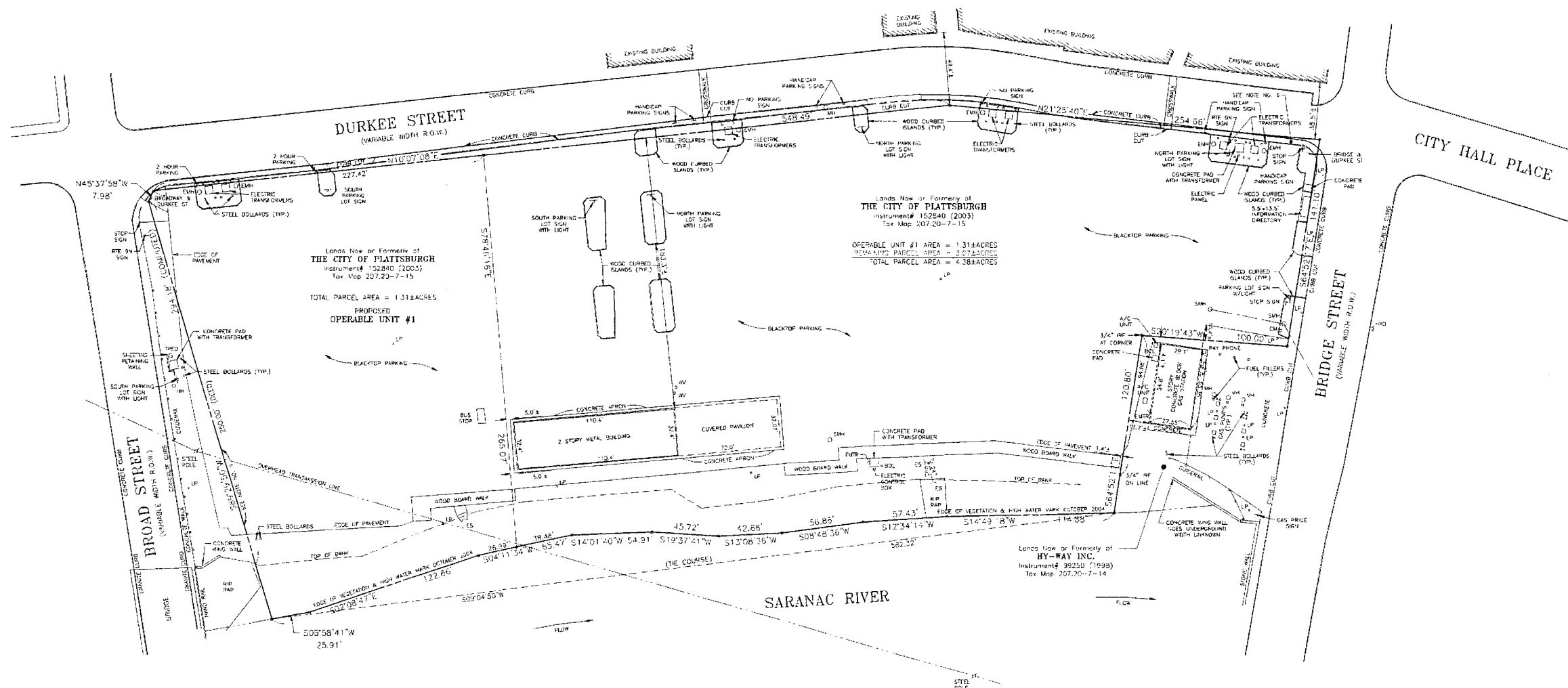
Concentrations expressed in ug/l or parts per billion (ppb)

indicates that the compound was analyzed for but not detected

J indicates an estimated value

E indicates compounds whose concentrations exceed the calibration range of the instrument for the specific analysis.

GV denotes a Guidance Value



SITE LOCATION MAP
(NOT TO SCALE)

MAP NOTES

- Boundary information shown hereon was compiled from an actual field survey conducted during the month of October, 2004.
- North orientation and bearing base used instrument number 152840 (2003).
- No attempt was made to locate any underground utilities.
- This survey was prepared without the benefit of an up to date abstract of title or title report and is therefore subject to any easements, covenants, restrictions or any statement of fact that such documents may disclose.
- Northerly right-of-way of lands acquired by the City of Plattsburgh by Supreme Court Order for the construction of the "Kennedy Bridge" on Broad Street.
- This portion of surveyed parcel may be subject to any right, title or interest the City of Plattsburgh may have for street purposes.

MAP REFERENCES

- "Topographic Survey of Downtown Municipal Parking Lot and Vicinity for the City of Plattsburgh," City of Plattsburgh, Clinton County N.Y., Dated May 5, 1987, by Jolly & Russo Land Surveyors.

REDUCED

BOUNDARY SURVEY PORTION OF LANDS OF THE CITY OF PLATTSBURGH DURKEE STREET PARKING LOT

CITY OF PLATTSBURGH CLINTON COUNTY, NEW YORK

C.T. MALE ASSOCIATES, P.C.

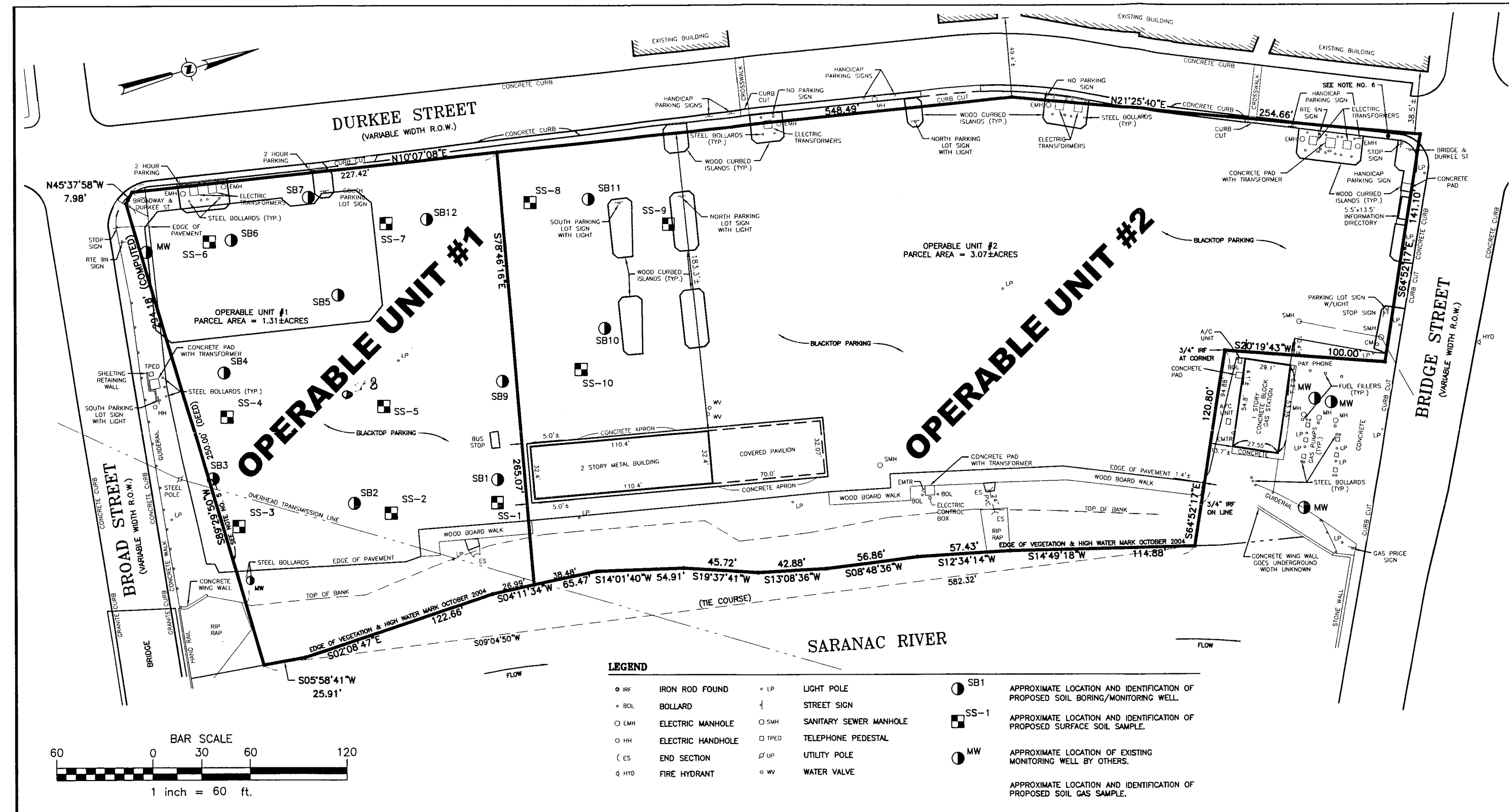
30 CENTURY HILL DRIVE, P.O. BOX 727, LATHAM, NY 12110
518.786.7400 • FAX 518.786.7299

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SHEET 1 OF 1
DWG. NO. 04-670

DATE	REVISIONS RECORD/DESCRIPTION	DRAWN	CHECK	APPR.
11/30/04	ADDITIONAL MAP NOTES ADDED	TCB	JFC	WJM



NOTE:
1. THE LOCATIONS AND FEATURES DEPICTED ON THIS MAP ARE APPROXIMATE AND DO NOT REPRESENT AN ACTUAL FIELD SURVEY.

MAP REFERENCE:
1. SHEET SP-1, PREPARED BY RABIDEAU ARCHITECTS OF BURLINGTON, VT, DATED 12/15/03, LAST REVISED 3/17/04.

2. BOUNDARY SURVEY, PORTION OF LANDS OF CITY OF PLATTSBURGH DURKEE STREET PARKING LOT, PREPARED BY C.T. MALE ASSOCIATES, P.C., DWG NO. 04-0670, DATED OCTOBER 5, 2004, REVISED 11/30/04.

DATE	REVISIONS RECORD/DESCRIPTION	DRAFTED	CHECK	APPR.
1				
2				
3				
4				
5				
6				
7				
8				
9				

FIGURE 3

OPERABLE UNIT #1 & OPERABLE UNIT #2

BOUNDARIES AND SAMPLING LOCATIONS

PLATTSBURGH GATEWAY PROJECT

DURKEE STREET PARKING LOT

CITY OF PLATTSBURGH

CLINTON COUNTY, NY

C.T. MALE ASSOCIATES, P.C.

50 CENTURY HILL DRIVE, P.O. BOX 727, LATHAM, NY 12110
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DESIGNED :

DRAFTED : J.MARX

CHECKED : SB

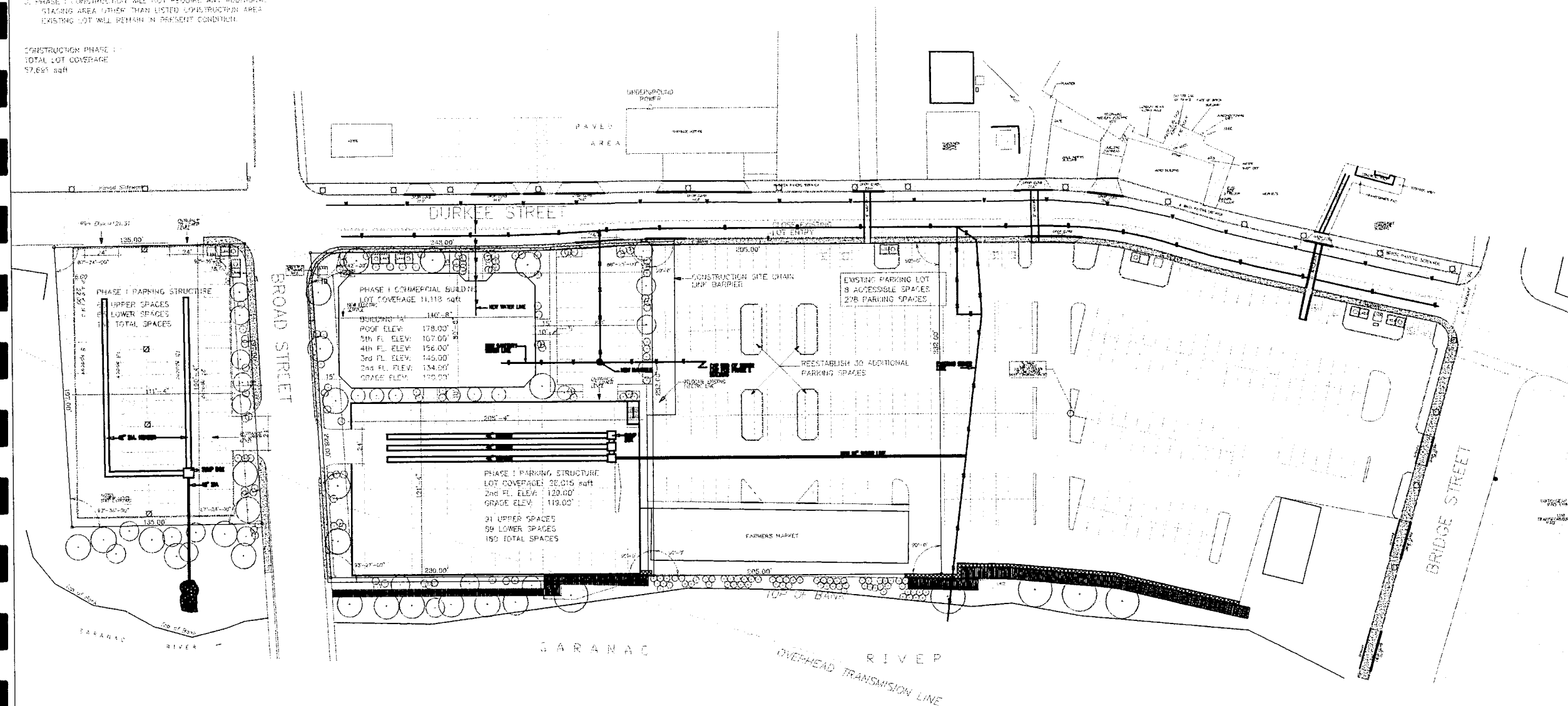
PROJ. NO: 04.9498

SCALE : ±1"=60'

DATE : MARCH 2005

CONSTRUCTION PHASE I
SPECIAL NOTES:
A. TOTAL LOT COVERAGE OF NEW PHASE ONE BUILDING AND PARKING
STRUCTURE (TOTALS ARE):
B. (157) PARKING SPACES WILL BE DEMOLISHED DURING
PHASE I CONSTRUCTION PERIOD.
C. ZONING REQUIREMENT OF 1 SPACE PER 1000 SQ. FT. OF GROSS USE
(PHASE I PARKING BUILDING @ 15,500 SQ. FT. = 15.5 SPACES)
D. PHASE I PARKING STRUCTURE = 150 NEW SPACES
E. TOTAL LOT COVERAGE REQUIRED DURING PHASE I CONSTRUCTION
= 57,691 SQ. FT.
F. THE CONSTRUCTION AREA WILL BE ENCLOSED WITH A
CHAIN LINK FENCE.
G. PHASE I CONSTRUCTION WILL NOT REQUIRE ANY ADDITIONAL
STAGING AREA OTHER THAN LISTED CONSTRUCTION AREA.
EXISTING LOT WILL REMAIN IN PRESENT CONDITION.

CONSTRUCTION PHASE I
TOTAL LOT COVERAGE
57,691 sqft



SITE PLAN

PLATTSBURGH GATEWAY

RABIDEAU ARCHITECTS

299 College Street ph 802.863.0222
Burlington, VT 05401 802.863.6407

ICV

INVESTORS CORPORATION OF VERMONT
30 MAIN STREET
SUITE 401
BURLINGTON, VERMONT

RETAIL OFFICE BUILDING

DATE: 10/1/07
DRAWN BY: J. RABIDEAU
CHECKED BY: J. RABIDEAU
SCALE: 1/8" = 1'-0"

PHASE I
SITE
PLAN

SP-1