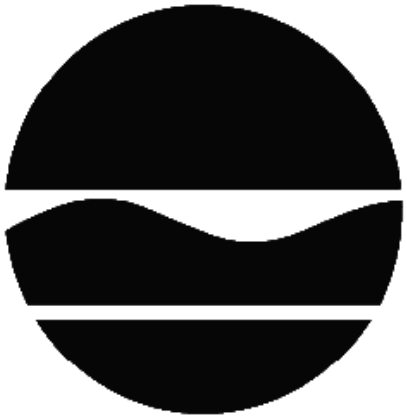
PROPOSED REMEDIAL ACTION PLAN

Former Albany Laboratories
State Superfund Project
Albany, Albany County
Site No. 401061
February 2014



Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

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SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing a remedy for the above referenced site. The disposal of hazardous wastes at the site has resulted in threats to public health and the environment that would be addressed by the remedy proposed by this Proposed Remedial Action Plan (PRAP). The disposal of hazardous wastes at this site, as more fully described in Section 6 of this document, has contaminated various environmental media. The proposed remedy is intended to attain the remedial action objectives identified for this site for the protection of public health and the environment. This PRAP identifies the preferred remedy, summarizes the other alternatives considered, and discusses the reasons for the preferred remedy.

The New York State Inactive Hazardous Waste Disposal Site Remedial Program (also known as the State Superfund Program) is an enforcement program, the mission of which is to identify and characterize suspected inactive hazardous waste disposal sites and to investigate and remediate those sites found to pose a significant threat to public health and environment.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York; (6 NYCRR) Part 375. This document is a summary of the information that can be found in the site-related reports and documents in the document repository identified below.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all PRAPs. This is an opportunity for public participation in the remedy selection process. The public is encouraged to review the reports and documents, which are available at the following repository:

Albany Public Library
Main Branch
161 Washington Avenue
Albany, NY 12210
Phone: 518-427-4300

A public comment period has been set from:

2/26/2014 to 3/28/2014

A public meeting is scheduled for the following date:

3/11/2014 at 7:00 PM

Public meeting location:

NYSDEC Central Office, 625 Broadway, Albany, Room 129A

At the meeting, the findings of the remedial investigation (RI) and the feasibility study (FS) will be presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period will be held, during which verbal or written comments may be submitted on the PRAP.

Written comments may also be sent through 3/28/2014 to:

Michael MacCabe
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233
mdmaccab@gw.dec.state.ny.us

The Department may modify the proposed remedy or select another of the alternatives presented in this PRAP based on new information or public comments. Therefore, the public is encouraged to review and comment on the proposed remedy identified herein. Comments will be summarized and addressed in the responsiveness summary section of the Record of Decision (ROD). The ROD is the Department's final selection of the remedy for this site.

Receive Site Citizen Participation Information by Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Location:
The site consists of two adjacent lots at 140 State Street and the former location of the Albany Chemical Laboratories at 67 Howard Street in an urban/commercial area within the City of Albany near the State Capitol.

Site Features:
The courtyard of the 67 Howard Street parcel at the southern end of the 140 State Street parcel was previously bounded on all four sides by buildings. The 67 Howard Street building was demolished to enable access to the courtyard prior to the removal of a petroleum underground storage tank (UST) and impacted soil in October 2008. Except for the facades along State Street, all of the on-site buildings and the adjacent off-site 136, 134 and 132 State Street buildings have been demolished to make way for future development.

Current Zoning and Land Use:
The site is currently inactive and is zoned for commercial use. The immediate area is entirely commercial or government properties. The site and surrounding area is zoned C-3 Central Business District) which allows for residential dwellings greater than 600 square feet.

Past Use of the Site:
Sometime prior to 1934, the 67 Howard Street property was originally the location of a dairy farm. On a 1934 Sanborn map, 67 Howard Street was shown to have a chemical laboratory and the courtyard behind the building was shown to be used as a "Thinner storage yard in metal drums". According to city directories, the 67 Howard Street property was operated as Albany Laboratories from 1935 to 1985. The property has been vacant since 1985.

The earliest records indicate that the 140 State Street property was originally a private dwelling. Circa 1914 documents reported that the property was used as doctor's offices and apartments. At some time prior to 1934 and until at least 1979, the building was used as the Berkshire Hotel. The building was vacant thereafter until it was demolished in 2008.

Prior to the site being listed on the NYS Registry of Inactive Waste Disposal Sites in February 2011, the site was overseen as spill No. 0704683. In July 2007 a 2,000 fuel oil underground storage tank (UST) was found on the 140 State Street property and in September 2008 the UST was removed and 251.5 tons of impacted soil around the tank was excavated and disposed of off-site.

Subsequent site investigations found chlorinated volatile organic compounds (VOCs), petroleum-related semi-volatile organic compounds (SVOCs) and mercury contamination in on-site soil. SVOC and mercury contamination was likely due to the historic urban fill that was previously used at the site as these contaminants were absent in deeper samples.

Contamination was observed primarily in the location of a courtyard that formerly occupied the northern portion of the 67 Howard Street parcel and the southern end of the 140 State Street parcel. Contamination had also migrated east to the 138 State Street parcel. Contaminants of

concern (COCs) included tetrachloroethene (PCE), trichloroethene (TCE), other chlorinated VOCs, certain SVOCs and BTEX. PCE and TCE were detected in soils above the Standards, Criteria and Guidance (SCGs) at concentrations up to 150 ppm and 120 ppm, respectively.

In September and October 2008, the top three feet of soil, 385.6 tons, was removed from the former courtyard area. Post-excavation samples indicated the presence of remaining soil contamination above standards. Once the on-site buildings were demolished, further excavation of an additional 895 tons of impacted soil from the former location of the UST was conducted in the winter of 2011.

Further excavation of contaminated soil was conducted in January and February 2011. Soil was removed along the foundation wall of the building located at 142 State Street. The excavation spanned the two lots that make up the site and the adjacent lot at 138 State Street. Approximately 861 tons of petroleum-contaminated soil was excavated. A total of 34.14 tons of the soil was disposed of off-site as hazardous waste; the remaining soil was disposed of off-site as non-hazardous waste. Clean fill material brought to the site met the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

Site Geology and Hydrogeology:
Due to the steep incline toward the Hudson River (to the east), it is assumed that area groundwater flows due east to the river. A groundwater monitoring well was drilled through 50 feet of dense clay in an attempt to investigate groundwater, but no groundwater was found to a depth of 50 feet.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to restricted-residential use (which allows for commercial use and industrial use) as described in Part 375-1.8(g) are/is being evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the investigation to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is included in the Tables for the media being evaluated in Exhibit A.

SECTION 5: ENFORCEMENT STATUS

Potentially Responsible Parties (PRPs) are those who may be legally liable for contamination at a site. This may include past or present owners and operators, waste generators, and haulers.

The PRPs for the site, documented to date, include:

Columbia Eagle, LLC

The Department and Columbia Eagle, LLC entered into an order on consent on April 12, 2011 (Index No. DER-401061-02-25-11). The Order obligates the responsible party to implement a full remedial program.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A Remedial Investigation (RI) has been conducted. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during an RI:

- Research of historical information,
- Geophysical survey to determine the lateral extent of wastes,
- Test pits, soil borings, and monitoring well installations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment,
- Ecological and Human Health Exposure Assessments.

The analytical data collected on this site includes data for:

- soil
- soil vapor
- indoor air
- sub-slab vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in Exhibit A list the applicable SCGs in the footnotes. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a hazardous waste that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized in Exhibit A. Additionally, the RI Report contains a full discussion of the data. The contaminants of concern identified at this site are:

tetrachloroethene (PCE)
trichlorethene (TCE)
dichloroethene (DCE)
mercury
benzo(a)anthracene
benzo(a)pyrene
benzo(b)fluoranthene

As illustrated in Exhibit A, the contaminants of concern exceed the applicable SCGs for:

- soil
- soil vapor intrusion

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Record of Decision.

The following IRM has been initiated at this site based on conditions observed during the RI.

Off-Site Sub-Slab Depressurization System

A soil vapor intrusion investigation was conducted which indicated elevated site-related contaminant concentrations in indoor air samples and sub-slab soil vapor from beneath the building immediately west of the site. As a result, an off-site sub-slab depressurization system (SSDS) is being constructed in the adjacent building at 142 State Street also known as the Dewitt Clinton building.

The system design includes 19 extraction points to provide full capture of vapors from beneath the building footprint. Each sub-system includes a fan to induce a vacuum beneath the basement floor slab to create a pressure gradient between the sub-slab of the building and the interior space. All system exhaust termination points will be at the roof level of the building away from any intakes or openings.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water.

Based upon the resources and pathways identified and the toxicity of the contaminants of ecological concern at this site, a Fish and Wildlife Resources Impact Analysis (FWRIA) was deemed not necessary for OU 01.

Nature and Extent of Contamination:

Soil:
Prior to the soil removal conducted under the Spill Response Program, on-site soil samples were collected. Volatile organic compounds (VOCs) related to site activities were present at elevated concentrations in soil in the former courtyard area, including the solvents tetrachloroethylene (PCE) and trichloroethylene (TCE). Semivolatile organic compounds (SVOCs), including benzo(a)anthracene (up to 5.9 ppm), benzo(a)pyrene (up to 5.1 ppm), benzo(b)fluoranthene (up to 6.5 ppm), benzo(k)fluoranthene (up to 2.7 ppm), chrysene (up to 5.2 ppm), and indeno(1,2,3-cd)pyrene (up to 1.5 ppm) were also found. Mercury was detected slightly above its restricted soil cleanup objective (SCO). Certain SVOCs and metals are byproducts of the combustion of coal and other petroleum fuels and are commonly found in historic fill material. Historic fill has been observed across most the site. The spill cleanup excavations focused on removing VOCs and left certain areas of SVOCs in place.

Post-Excavation Soil:
The spill cleanup excavation was conducted to address the VOCs at the site and impacts to the adjacent 138 State Street property. As a result, the post-excavation soil samples were only analyzed for VOCs. A total of 17 soil samples, 6 bottom and 11 sidewall samples were collected during the excavation activities. Once the excavation was complete, all but one sample were found to have all VOCs below the Part 375 Unrestricted SCOs. The excavation to the west was limited at the foundation of the adjacent former Dewitt Clinton Hotel at 142 State Street due to structural concerns. VOC contamination may have migrated to an inaccessible area beneath 142 State Street.

Excavation activities have removed the bulk of the soil contamination related to site activities. However, certain SVOCs and mercury are present above SCOs in some of the historic fill that remains on-site.

Groundwater:
A planned groundwater monitoring well was drilled through 50 feet of dense clay in an attempt to investigate groundwater. However, no groundwater was found at, or above a depth of 50 feet. Considering the thick layer of dense clay and the depth to groundwater, no site related impacts to groundwater are likely.

Soil Vapor and Indoor Air:
In the summer of 2010, an investigation found elevated VOC concentrations in on-site soil vapor. TCE was detected at a concentration of 7,500 ug/m3 and PCE was detected at 680 ug/m3 in soil vapor immediately adjacent to the former Dewitt Clinton Hotel at 142 State Street.

Indoor air and sub-slab vapor sampling at the adjacent Dewitt Clinton building were conducted in February 2012. The data showed 1,1,1-trichloroethane (TCA) at concentrations up to 190 micrograms/cubic meter (ug/m3), trichloroethene (TCE) at concentrations up to 940 ug/m3 and cis-1,2-dichloroethene (DCE) at concentrations up to 510 ug/m3 in sub-slab samples. Based on these results mitigation was recommended.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

Persons who dig below the ground surface may come into contact with contaminants in subsurface soil. Volatile organic compounds in the soil may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings is referred to as soil vapor intrusion. Because there is no on-site building, contact with contaminants due to soil vapor intrusion does not represent a concern for the site in its current condition. However, the potential exists for inhalation of site-related contaminants due to soil vapor intrusion for any future on-site construction. A subslab depressurization system will be installed at one off-site adjacent building to prevent vapors beneath the slab from entering the building. Vapor intrusion concerns are limited to this one off-site building.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: SUMMARY OF THE PROPOSED REMEDY

To be selected, the remedy must be protective of human health and the environment, be cost-effective, comply with other statutory requirements, and utilize permanent solutions, alternative technologies or resource recovery technologies to the maximum extent practicable. The remedy must also attain the remedial action objectives identified for the site, which are presented in Section 6.5. Potential remedial alternatives for the Site were identified, screened and evaluated in the FS report.

A summary of the remedial alternatives that were considered for this site is presented in Exhibit B. Cost information is presented in the form of present worth, which represents the amount of money invested in the current year that would be sufficient to cover all present and future costs associated with the alternative. This enables the costs of remedial alternatives to be compared on a common basis. As a convention, a time frame of 30 years is used to evaluate present worth costs for alternatives with an indefinite duration. This does not imply that operation, maintenance, or monitoring would cease after 30 years if remediation goals are not achieved. A summary of the Remedial Alternatives Costs is included as Exhibit C.

The basis for the Department's proposed remedy is set forth at Exhibit D.

The proposed remedy is referred to as the site cover with on-site institutional and engineering controls remedy.

The estimated present worth cost to implement the remedy is $96,500. The cost to construct the remedy is estimated to be $34,000 and the estimated average annual cost is $5,000.

The elements of the proposed remedy are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals; and

- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Cover System

A site cover will be required to allow for commercial use of the 67 Howard Street parcel and restricted residential use the 140 State Street parcel.

For 67 Howard Street, Lot No. 76.33-1-13, a site cover will be required to allow for commercial use. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required, it will be a minimum of one foot of soil meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for commercial use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetative layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

For 140 State Street, Lot No. 76.33-1-15; a site cover will be required to allow for restricted residential use. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required, it will be a minimum of two feet of soil meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetative layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

3. Completion of the installation and continued operation, maintenance and monitoring of the off-site sub-slab depressurization system (SSDS) discussed in Section 6.2. The SSDS will use a fan-powered vent and piping to draw vapors from the soil beneath the buildings slab and discharge the vapors to the atmosphere. Depressurizing the area beneath the basement slab relative to indoor air pressure will create a relative vacuum which minimizes or prevents the infiltration of sub-slab vapors into the building.

4. Institutional Control

Imposition of an institutional control in the form of environmental easements for the controlled properties that:

- requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allows the use and development of the 67 Howard Street property for commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- allows the use and development of the 140 State Street property for restricted residential commercial and industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws; and
- requires compliance with the Department approved Site Management Plan.

5. Site Management Plan

A Site Management Plan is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:

Institutional Controls: The environmental easements discussed in Paragraph 4 above.
Engineering Controls: The cover system discussed in Paragraph 2 above, and the off-site sub-slab depressurization system that was completed as an IRM.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the environmental easements including any land use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any buildings developed on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- monitoring for vapor intrusion for any buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

Exhibit A

Nature and Extent of Contamination

This section describes the findings of the Remedial Investigation for all environmental media that were evaluated. As described in Section 6.1, samples were collected from various environmental media to characterize the nature and extent of contamination.

For each medium for which contamination was identified, a table summarizes the findings of the investigation. The tables present the range of contamination found at the site in the media and compares the data with the applicable SCGs for the site. The contaminants are arranged into two categories: volatile organic compounds (VOCs) and inorganics (metals and cyanide). For comparison purposes, the SCGs are provided for each medium that allows for unrestricted use. For soil, if applicable, the Restricted Use SCGs identified in Section 4 and Section 6.1.1 are also presented.

Groundwater

A planned groundwater monitoring well was drilled through 50 feet of dense clay in an attempt to investigate possible site impacts to groundwater. However, no groundwater was encountered down to a depth of 50 feet. Considering the thick layer of dense clay and the fact that there is no groundwater present to a depth of at least 50 feet below the site, no site related impacts to groundwater are likely. Therefore no site-related groundwater contamination of concern was identified during the RI and no remedial alternatives need to be evaluated for groundwater.

Soil

Soil contamination identified under Spill Response Program Spill No. 0704683 was largely addressed via soil excavations conducted in 2008 and 2011. Post excavation samples obtained during the 2011 soil excavation found that VOC contamination above unrestricted SCOs related to on-site activities had been removed. However, fill material appears to have been deposited on the site in the past. As is often the case with historic fill, SVOCs and metals were detected in the samples collected from the site fill. After the spill cleanup, historic fill remains on-site and consequently SVOCs and mercury also remain. The following SVOC and metals concentrations were present in soil that was removed as a part of the spill remediation, but is typical of the historic fill which remains at the site: benzo(a)anthracene (5.9 ppm), benzo(a)pyrene (5.1 ppm), benzo(b)fluoranthene (6.5 ppm), benzo(k)fluoranthene (2.7 ppm), chrysene (5.2 ppm), indeno(1,2,3-cd)pyrene (1.5 ppm). The corresponding SCOs for these contaminants are 1 ppm, 1 ppm, 1 ppm, 0.8 ppm, 1 ppm and 0.5 ppm for unrestricted use.

Table 1 presents the end point sample results for the VOC and metal contaminants of concern. Because VOCs were the driving force behind the spill cleanup, the end point samples were not analyzed for SVOCs.

Table 1 - Soil

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Commercial Use SCG[c] (ppm)	Frequency Exceeding Restricted SCG

Detected Constituents	Concentration Range Detected (ppm)[a]	Unrestricted SCG[b] (ppm)	Frequency Exceeding Unrestricted SCG	Restricted Commercial Use SCG[c] (ppm)	Frequency Exceeding Restricted SCG
VOCs					
acetone	ND – 0.248	0.050	1 of 15	100	0 of 15
tetrachloroethene	ND	1.30	0 of 15	150	0 of 15
trichloroethene	ND	0.4	0 of 15	200	0 of 15
cis-1,2-dichloroethene	ND	0.25	0 of 15	50	0 of 15
trans-1,2-dichloroethene	ND	0.19	0 of 15	50	0 of 15
1,2-dichloroethane	ND	.02	0 of 15	24	0 of 15
vinyl chloride	ND	0.02	0 of 15	13	0 of 15
carbon tetrachloride	ND	0.76	0 of 15	22	0 of 15
Inorganics					
mercury	ND – 0.36	0.18	1 of 15	2.8	0 of 15

a - ppm: parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;
b - SCG: Part 375-6.8(a), Unrestricted Soil Cleanup Objectives.
c - SCG: Part 375-6.8(b), Restricted Use Soil Cleanup Objectives for the Protection of Public Health for Commercial Use, unless otherwise noted.

Excavations conducted under the Spill Response Program removed the historical source of soil contamination at the site; however there may be residual levels of VOC, SVOC and metals contamination present in the surface/subsurface soil which will be addressed by the remedy selection process.

Soil Vapor

Based on the findings of the Remedial Investigation, the presence of tetrachloroethene (PCE), trichloroethene (TCE), dichloroethene (DCE) and carbon tetrachloride has resulted in the contamination of soil vapor.

The evaluation of the potential for soil vapor intrusion resulting from the presence of site related soil or groundwater contamination was evaluated by the sampling of sub-slab soil vapor under a structure adjacent to the site, and indoor air in that off-site structure. Because no buildings were present, only soil vapor was evaluated on-site. However, the 142 State Street building is immediately west of and adjacent to the on-site area where impacted soil was removed as a part of the soil excavation conducted under the Spill Response Program. Therefore, sub-slab vapor, indoor air and outdoor air samples were collected within and outside the adjacent building to evaluate whether actions are needed to address exposures related to soil vapor intrusion. Three sub-slab samples and three indoor air samples were obtained from the 142 State Street building in February and November 2012. The findings of the investigation indicated the presence of volatile organic compounds (VOCs) in sub-slab vapor beneath the eastern portion of the building at levels where mitigation was

recommended in accordance with the Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH, October 2006).

Based on the concentration detected, and in comparison with the Guidance for Evaluating Soil Vapor Intrusion in the State of New York (NYSDOH, October 2006), soil vapor contamination identified during the RI is addressed by the off-site sub-slab depressurization (SSDS) IRM described in Section 6.2 and, at a minimum, an evaluation is needed for any buildings developed on the site.

Exhibit B

Description of Remedial Alternatives

The following alternatives were considered based on the remedial action objectives (see Section 6.5) to address the contaminated media identified at the site as described in Exhibit A.

Alternative 1: No Further Action

The No Further Action Alternative recognizes the remediation of the site completed by the IRMs described in Section 6.2. This alternative leaves the site in its present condition and does not provide any additional protection of the environment.

Alternative 2: No Further Action with Site Management

The No Further Action with Site Management Alternative recognizes the remediation of the site completed by the IRM described in Section 6.2 and Site Management and institutional controls are necessary to confirm the effectiveness of the IRM. This alternative consists solely of institutional controls in the form of an environmental easement and Site Management plan necessary to protect public health and the environment from contamination remaining at the site after the IRM. This alternative will include continued operation, maintenance and monitoring of the SSDS at the adjacent structure

Present Worth: $71,500
Capital Cost:..... $9,000
Annual Costs:..... $5,000

Alternative 3: Cover System with Site Management

This alternative includes a site cover required to allow for restricted residential and commercial use of the site. The cover will consist either of structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where the upper one or two feet of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs).

For 67 Howard Street, Lot No. 76.33-1-13; a site cover will be required to allow commercial use of the site. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or clean backfill material in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the cover is required, approximately 255 cubic yards (510 tons) of clean material meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for commercial use will be imported to the site to provide a cover of a minimum of one foot. The cover material will be placed over a demarcation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

For 140 State Street, Lot No. 76.33-1-15; where the soil cover is required, approximately 1,076 cubic yards (2,152 tons) of clean material meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for restricted residential use will be imported to the site to provide a cover of a minimum of two feet. The cover will be placed over a demarcation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

As a part of this alternative an institutional control in the form of an environmental easement, along with Site Management will be required. The Site Management Plan will consist of an Institutional and Engineering Control Plan and a Monitoring Plan to include operation, maintenance and monitoring of the SSDS at the adjacent structure.

Present Worth: $96,500
Capital Cost: $15,000
Annual Costs: $9,000

Alternative 4: Restoration to Pre-Disposal or Unrestricted Conditions

This alternative achieves all of the SCGs discussed in Section 6.1.1 and Exhibit A and soil meets the unrestricted soil clean objectives listed in Part 375-6.8 (a). This alternative would include: demolition of the adjacent building to allow for complete excavation of all soil in excess of unrestricted soil cleanup objectives.

Present Worth: $2,000,000
Capital Cost: $2,000,000
Annual Costs: $0

Exhibit C

Remedial Alternative Costs

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
No Further Action	0	0	0
No Further Action with Site Management	9,000	5,000	71,500
Cover System with Site Management	34,000	5,000	96,500
Restoration to Pre-Disposal or Unrestricted Conditions	2,000,000	0	2,000,000

Exhibit D

SUMMARY OF THE PROPOSEDREMEDY

The Department is proposing Alternative 3, Cover System with Site Management as the remedy for this site. Alternative 3 would achieve the remediation goals for the site by construction of a cover system and Site Management. The elements of this remedy are described in Section 7. The proposed remedy is depicted in Figure 4.

Basis for Selection

The proposed remedy is based on the results of the RI and the evaluation of alternatives. The criteria to which potential remedial alternatives are compared are defined in 6 NYCRR Part 375. A detailed discussion of the evaluation criteria and comparative analysis is included in the FS report.

The first two evaluation criteria are termed "threshold criteria" and must be satisfied in order for an alternative to be considered for selection.

1. Protection of Human Health and the Environment. This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

The proposed remedy (Alternative 3) would satisfy this criterion by the IRM which mitigated SVI impacts to the adjacent structure sub-slab depressurization system (SSDS), preventing exposures related to SVI in any new buildings developed on-site and preventing exposure to the residual contamination in on-site soil (cover system). Alternative 4 would best protect human health by eliminating all contamination and exposure scenarios. Alternative 2 would address the SVI exposure pathway by the IRM, but would not prevent the potential for exposure to residual soil contamination. Alternative 1 would not meet this criterion.

2. Compliance with New York State Standards, Criteria, and Guidance (SCGs). Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the Department has determined to be applicable on a case-specific basis.

Alternative 1 will not meet SCGs, therefore it will not be carried forward in this analysis. Alternative 2 will not meet SCGs for on-site soil. Alternative 3 will comply with SCGs to the extent practicable by operation of the SSDS in the adjacent structure, preventing exposures related to SVI in any new buildings developed on-site and installation and maintenance of the cover system. Alternative 4 will meet all SCGs via excavation of all contaminated soil and removing the source of the soil vapor contamination.

The next six "primary balancing criteria" are used to compare the positive and negative aspects of each of the remedial strategies.

3. Long-term Effectiveness and Permanence. This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks, 2) the adequacy of the engineering and/or institutional controls intended to limit the risk, and 3) the reliability of these controls.

Alternative 4 would provide the most effectiveness and permanence by removing all of the contamination. As long as the cover system stays in place and the Site Management plan is adhered to, Alternative 3 would be effective and permanent provided the cover system is maintained. Alternative 2 will be effective relative to SVI, but will not be effective relative to residual soil contamination.

4. Reduction of Toxicity, Mobility or Volume. Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

By removing all soil contamination in excess of unrestricted SCGs, Alternative 4 would completely remove contaminated soil from the site and thus will eliminate contaminant toxicity and volume and thereby contaminant mobility. Alternative 3 will reduce contaminant mobility with the cover system and SSDS. Alternative 2 will not provide any additional reductions of toxicity, mobility or volume.

5. Short-term Impacts and Effectiveness. The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

Alternative 2 will have no short-term impacts and will require little or no time to implement. Alternative 3 could have some short-term impacts related to the importation and placement of the cover material. Alternative 3 will be simple to design and could be completed within a few weeks. Alternative 4 could have significant short-term impacts related to the building demolition, but those impacts could be mitigated through the use of engineering controls.

6. Implementability. The technical and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

Alternative 2 is the most implementable since it involves no further action. For Alternative 3 the ability to construct and the materials for the cover system are readily available. Alternative 4 is the least implementable alternative because it would include the complicated logistics of the demolition of a large structure in an urban environment.

7. Cost-Effectiveness. Capital costs and annual operation, maintenance, and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision.

Alternative 2 will have minimal costs associated with the institutional controls. Alternative 3 will have the additional cost of a cover system; but the cover system will provide protection from residual soil contamination and would allow for re-use of the site. The relatively high costs associated with Alterative 4 will provide a complete remediation of the site but is not cost-effective compared to Alternative 3.

8. Land Use. When cleanup to pre-disposal conditions is determined to be infeasible, the Department may

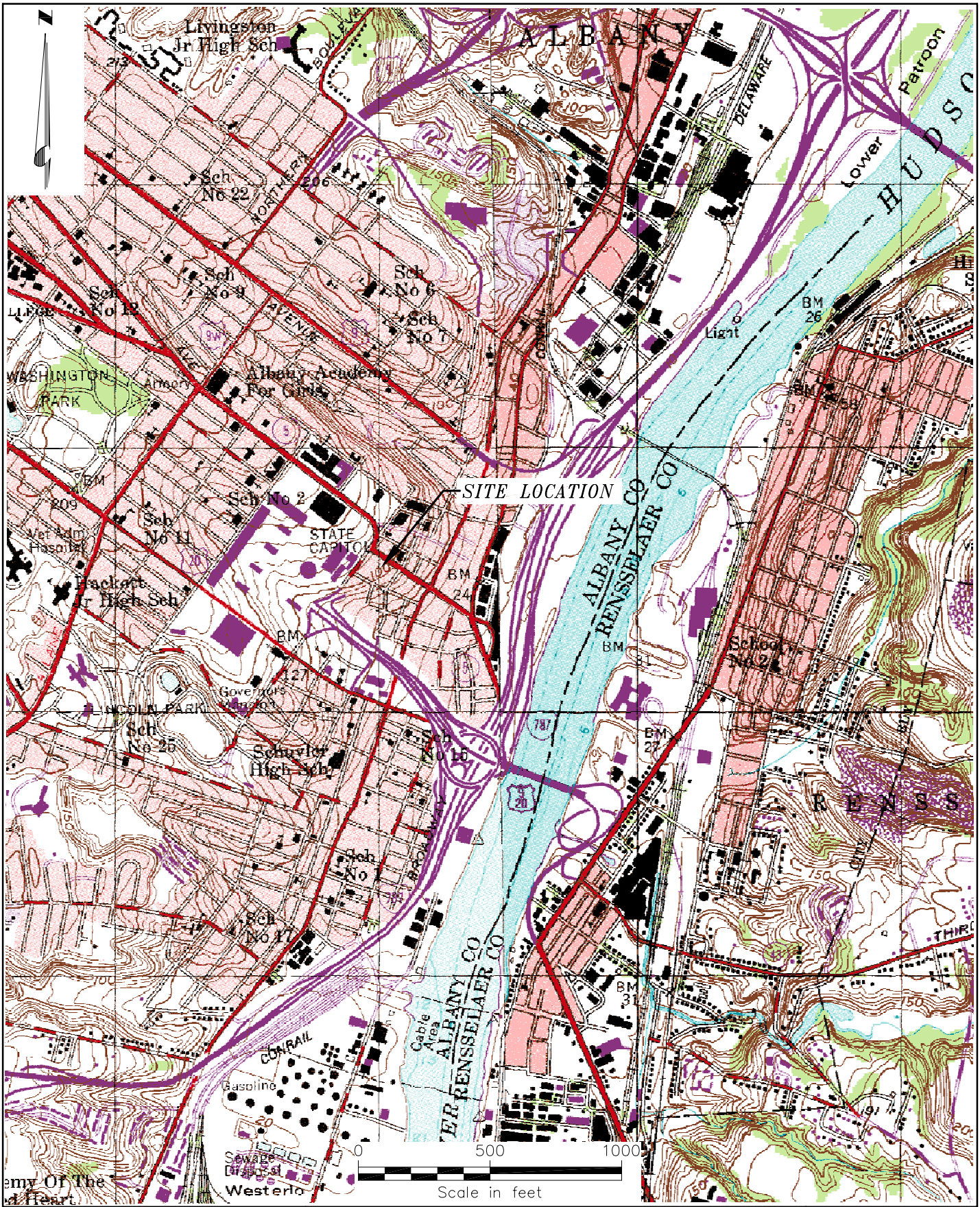
consider the current, intended, and reasonable anticipated future land use of the site and its surroundings in the selection of the soil remedy.

The site is in a commercial urban area near the State Capitol building. The site has been unused for many years, but re-use of the site as a commercial property is planned for the near future. Alternative 2 will not allow for re-use of the site. Alternatives 3 will allow for restricted-residential, commercial or industrial use of the site. Alternative 4 will allow the site to be used for any purpose.

The final criterion, Community Acceptance, is considered a "modifying criterion" and is taken into account after evaluating those above. It is evaluated after public comments on the Proposed Remedial Action Plan have been received.

9. Community Acceptance. Concerns of the community regarding the investigation, the evaluation of alternatives, and the PRAP are evaluated. A responsiveness summary will be prepared that describes public comments received and the manner in which the Department will address the concerns raised. If the selected remedy differs significantly from the proposed remedy, notices to the public will be issued describing the differences and reasons for the changes.

Alternative 3 is being proposed because, as described above, it satisfies the threshold criteria and provides the best balance of the balancing criterion.



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SITE LOCATION MAP

COURTYARD BETWEEN 67 HOWARD STREET
AND 140 STATE STREET
ALBANY, NEW YORK

PROJECT NO. 18755

DATE: 03/29/10

FIGURE 1

LEGEND

- AREA OF CONTAMINATED SOIL REMOVED UNDER IRM (CCR DRAFT DATED APRIL 8, 2011)
- IA–1 — APPROXIMATE INDOOR AIR SAMPLE LOCATION
- SSV–1 — APPROXIMATE SUB–SLAB SOIL VAPOR SAMPLING POINT
- AM–1 — APPROXIMATE AMBIENT AIR SAMPLE LOCATION

N

EAGLE STREET

HOWARD STREET

STATE STREET

142 STATE STREET

IA–1

SSV–1

IA–2

SSV–2

IA–3

SSV–3

BASEMENT CORRIDOR

BASEMENT CORRIDOR

AM–1

67 HOWARD STREET

excavation area

140 STATE STREET

138 STATE STREET

Former Albany Laboratories Site

0 20 40

Scale in feet (APPROXIMATE)

NOTE:
SUB–SLAB SOIL VAPOR AND INDOOR AIR SAMPLES COLLECTED ON 02/29/2012

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SOIL VAPOR AND INDOOR AIR SAMPLING LOCATIONS REMEDIAL INVESTIGATION
FORMER ALBANY LABORATORIES SITE
ALBANY, NEW YORK

PROJECT NO. 21645

DATE: 07/02/13

FIGURE 2

File: V:\PROJECTS\ANY\K2\21645\CADD\ACAD\FIGURES\SUBSURFACE INVESTIGATION\FIGURE 2 – SOILVPR_INDRAIR_SAMPLOCS.DWG Saved: 7/16/2013 11:05:16 AM PLotted: 7/16/2013 11:07:44 AM User: Harden, Jason

	2/29/12	11/27/12
I,I DICHLOROETHENE	ND	ND
CARBON TETRACHLORIDE	0.36	0.43
cis–1,2–DICHLOROETHENE	ND	ND
I,I,I–TRICHLOROETHANE	ND	ND
TRICHLOROETHENE	0.34	0.56
TETRACHLOROETHENE	0.5	0.88
VINYL CHLORIDE	ND	ND

	2/29/12	11/27/12
I,I DICHLOROETHENE	ND	ND
CARBON TETRACHLORIDE	0.41	0.79
cis–1,2–DICHLOROETHENE	ND	ND
I,I,I–TRICHLOROETHANE	ND	ND
TRICHLOROETHENE	0.33	0.44
TETRACHLOROETHENE	0.45	0.93
VINYL CHLORIDE	ND	ND

	2/29/12	11/27/12
I,I DICHLOROETHENE	ND	ND
CARBON TETRACHLORIDE	0.38	0.45
cis–1,2–DICHLOROETHENE	ND	ND
I,I,I–TRICHLOROETHANE	ND	ND
TRICHLOROETHENE	0.32	0.48
TETRACHLOROETHENE	0.29	1.1
VINYL CHLORIDE	ND	ND

N

EAGLE STRE

LEGEND

- AREA OF CONTAMINATED SOIL – REMOVED UNDER IRM (CCR DRAFT DATED APRIL 8, 2011)
- IA–1 – APPROXIMATE INDOOR AIR SAMPLE LOCATION
- SSV–1 – APPROXIMATE SUB–SLAB SOIL VAPOR SAMPLING POINT
- AM–1 – APPROXIMATE AMBIENT AIR SAMPLE LOCATION

STREET

HOWARD

STATE STREET

142 STATE STREET

IA–1
SSV–1
IA–2
SSV–2
IA–3
SSV–3

BASEMENT CORRIDOR

BASEMENT CORRIDOR

AM–1

67 HOWARD STREET

Former Albany Laboratory site boundary

140 STATE STREET

	2/29/12	11/27/12
I,I DICHLOROETHENE	ND	ND
CARBON TETRACHLORIDE	ND	ND
cis–1,2–DICHLOROETHENE	0.83	ND
I,I,I–TRICHLOROETHANE	2.4	ND
TRICHLOROETHENE	27	12
TETRACHLOROETHENE	6.1	5.8
VINYL CHLORIDE	ND	ND

	2/29/12	11/27/12
I,I DICHLOROETHENE	ND	ND
CARBON TETRACHLORIDE	ND	ND
cis–1,2–DICHLOROETHENE	4.2	5.6
I,I,I–TRICHLOROETHANE	ND	ND
TRICHLOROETHENE	12	16
TETRACHLOROETHENE	10	14
VINYL CHLORIDE	ND	ND

	2/29/12	11/27/12
I,I DICHLOROETHENE	ND	ND
CARBON TETRACHLORIDE	0.41	0.39
cis–1,2–DICHLOROETHENE	ND	ND
I,I,I–TRICHLOROETHANE	ND	ND
TRICHLOROETHENE	0.24	ND
TETRACHLOROETHENE	ND	ND
VINYL CHLORIDE	ND	ND

	2/29/12	11/27/12
I,I DICHLOROETHENE	ND	ND
CARBON TETRACHLORIDE	35	32
cis–1,2–DICHLOROETHENE	140	510
I,I,I–TRICHLOROETHANE	190	130
TRICHLOROETHENE	260	940
TETRACHLOROETHENE	4.1	17
VINYL CHLORIDE	ND	ND

NOTE: ALL RESULTS REPORTED IN ug/M^3

0 20 40
Scale in feet
(APPROXIMATE)

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SOIL VAPOR AND INDOOR AIR SAMPLING RESULTS REMEDIAL INVESTIGATION

FORMER ALBANY LABORATORIES SITE
ALBANY, NEW YORK

PROJECT NO. 21645

DATE: 08/20/13

Figure 3

File: V:\PROJECTS\ANY\K2\21645\CADD\ACAD\FIGURES\SUBSURFACE INVESTIGATION\SKETCH_ – SOILVPR_INDRAIR_RESULTS.DWG Saved: 8/20/2013 9:00:29 AM PLotted: 8/20/2013 9:00:55 AM User: Chlopecki, Jason

EAGLE STREET

HOWARD STREET

STATE STREET

142
STATE STREET

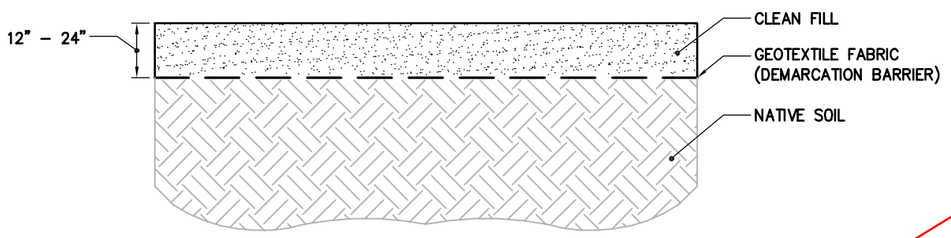
67
HOWARD STREET

140
STATE STREET

LEGEND

12" COVER AREA
(2,360± S.F.)

24" COVER AREA
(4,955± S.F.)



COVER SYSTEM DETAIL
NOT TO SCALE

N

0 20 40
Scale in feet
(APPROXIMATE)

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PROPOSED COVER SYSTEM

FORMER ALBANY LABORATORIES SITE
ALBANY, NEW YORK

PROJECT NO. 21645

DATE: 01/30/14

FIGURE 4

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