

**BROWNFIELD CLEANUP PROGRAM
DECISION DOCUMENT**

**Cornerstone Site B-1 Site
Bronx, New York
Site No. C2-03-044
June 2009**

Statement of Purpose and Basis

This Brownfield Cleanup Program (BCP) Decision Document presents the remedy identified by the Department of Environmental Conservation (Department) for the Cornerstone Site B 1 site. The remedial program was chosen in accordance with Article 27 Title 14 of the New York State Environmental Conservation Law and the 6 NYCRR375 regulations relative to the BCP.

Description of the Site -

The Cornerstone Site B-1 property is located at the northeast corner of 3rd Avenue and E. 158th Street in the Bronx County, New York. The site is approximately 0.175 acres in size.

The main site feature includes an unoccupied one story abandoned building with basement, and two adjacent vacant lots. The adjacent vacant lots are not part of the BCP Site, but are part of the proposed redevelopment, which encompasses an area of .476 acres.

The site is currently inactive but between 1969 and 1979 a portion of the building was used as a dry cleaner. Other portions of the building housed an upholstery business, stores and an undertaker.

The surrounding parcels are currently used for a combination of residential, commercial, and manufacturing.

Prior use that appears to have led to site contaminations includes leaks and spills from dry cleaner operations.

Nature and Extent of Contamination

Contamination was identified by the Remedial Investigation of this site , which represents a significant threat to public health and the environment, requiring a remedial program for the site to address the contamination identified below. The off- site exposure assessment identified the following potential off site exposures: soil gas emanating from VOCs within the soil and groundwater could enter into the adjoining buildings as a result of any sub-basement floor or lower wall openings/cracks. The indoor air quality at adjoining properties may be susceptible to contamination from subsurface vapor intrusion attributable to VOCs emitted from the shallow contaminated groundwater beneath the site. The potential receptors would be off-site construction and commercial workers, and adult and child residents.

Nature of contamination:

The primary contaminant of concern at the site is Perchloroethylene or PCE (a VOC) in soil, groundwater and in soil vapor.

Extent of contamination

Source areas/Waste disposal - A former dry Cleaner that once operated on-site is believed to be the source.

Surface Soil - Not applicable for this site - no exposed surface soil. Site is currently covered by an existing building, which will be demolished and replaced with a new building, which will completely cover the site footprint.

Subsurface soil - PCE was detected below unrestricted (1.3 ppm) in the soil samples collected just beneath the basement floor at concentrations ranging from 3.6 to 49 µg/kg (ppb) where the Dry Cleaners was located. Some SVOCs e.g. Benzo(a)anthracene, Benzo(a)pyrene and Dibenzo(a,h)anthracene were detected in soil samples taken beneath the basement, however none exceeded 375-6.8(a) Unrestricted Use SCOs. Metals-lead, silver and mercury in the soils underneath the building exceeded the Part 375 Unrestricted Use SCOs. The extent and depth of on-site soil sampling was limited due to presence of the existing building. Additional subsurface soil samples will be taken during the pre-design investigation, which will be conducted after the existing building is demolished. The entire site footprint, depicted in Figure 2, will be excavated a minimum of 2.5 feet below the existing basement (or 12.5 feet below grade) until bedrock is reached or track 4 site specific soil action levels are achieved.

Groundwater- On-site Groundwater is believed to be contaminated by PCE, based on sampling results from a downgradient bedrock well MW-2 (7,900 ppb). No on-site wells were constructed during the RI due to constraints posed by the existing building. After the existing building is demolished, several on-site groundwater wells will be installed and sampled, as part of a pre-design investigation. As MW-2 was improperly installed, a replacement downgradient bedrock well will be installed as part of the pre-design investigation. A remedy for groundwater will be triggered if the groundwater standard for PCE is exceeded on-site.

Sediment - Not applicable for the site.

Surface water - Not applicable - no surface water body near or on the site.

Soil Vapor - PCE was detected in on-site sub slab vapor, at a maximum concentration of 5,903 µg/M³.

Description of the Remedy

Based on the results of the Alternatives Analysis and the criteria identified for evaluation of alternatives, the NYSDEC has selected a Track 4 Restricted Residential remedy for this BCP site with a Track 2 contingency. The components of the remedy set forth in the Remedial Work Plan and shown on the attached Figure #1B are as follows:

1. A Pre-Design Investigation will be conducted after the existing building has been demolished.
2. Subsequent to the pre-design investigation,
 - a) if any VOC is detected in on-site groundwater above groundwater standards, it will be added to the list of Track 4 Site Specific Soil Action levels (SSAL's), using the protection of groundwater value in Table 375-6.8b of 6NYCRR. Currently, only PCE is on the list of Track 4 SSAL's.
 - b) if on-site groundwater exceeds groundwater standards for PCE, a remedial design program for groundwater will be implemented.
 - c) if no water bearing rock fractures are encountered during installation of the replacement downgradient bedrock well, then no further action will be required with respect to groundwater located within bedrock.
 - d) if groundwater sampling analytical results for PCE comply with groundwater standards, then no further action with respect to groundwater will be required.

3. Construction of the new building above grade that would impede implementation of a potential groundwater remedy will not commence until the pre-design investigation is completed and the design for the groundwater remedy (if needed) is approved
4. Removal of 3 above ground storage tanks in accordance with applicable regulations.
5. Excavation of soil/fill to 12.5 below grade (2 feet below the existing basement), with collection of end point samples. In the event the soil at 12.5 feet below grade does not meet the Track 4 SSAL for PCE (1.3ppm), the soil excavation will continue past 12.5 feet below grade until the SSAL is achieved, or bedrock is encountered. Depending on the need for additional soil excavation, the Volunteer may achieve a Track 2 clean up (meet all Restricted Residential SCO's down to 15 feet).
6. Screening for indications of contamination (by visual means, odor and monitoring with a PID) of all excavated soil during any intrusive Site work.
7. Appropriate off-Site disposal of all material removed from the Site in accordance with all Federal, State and local rules and regulations for handling, transport, and disposal.
8. Any wells approved for abandonment will follow DEC guidance using imported sand and bentonite, and removing 2 to 3 well volumes of water.
9. All responsibilities associated with the Remedial action, including permitting requirements and pretreatment requirements, will be addressed in accordance with all applicable Federal, State and local rules and regulations.
10. The site will be covered by a paving system(building, parking lots, etc.) of at least 6 inches thick. No exposed soils will remain. The basement area will consist of a ventilated parking garage and/or unoccupied utility rooms, with a contingency for installation of a sub-slab depressurization system (SSDS) in the event the design changes to include occupied living space. If required, import of materials to be used for backfill in compliance with Section 375- 6.7(d) of 6NYCRR and all Federal, State and local rules and regulations for handling and transport of material.
11. Imposition of an institutional control in the form of an environmental easement that will require (a) limiting the use and development of the property to restricted residential use, which will also permit commercial use, (b) compliance with the approved site management plan; (c) restricting the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by NYSDOH; and (d) the property owner to complete and submit to the Department a periodic certification of institutional and engineering controls.
12. Development of a site management plan which will include the following institutional and engineering controls
(a)management of the final cover system to restrict excavation below pavement or buildings. Excavated soil will be tested, properly handled to protect the health and safety of workers and the nearby community, and will be managed in a manner acceptable to the Department; (b) monitoring of groundwater (if warranted by pre-design investigation); c) identification of use restrictions on the site; and (d) provisions for the continued monitoring and maintenance of the components of the remedy (if warranted by the pre-design investigation)
13. The property owner will provide a periodic certification of institutional and engineering controls, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department notifies the property owner in writing that this certification is no longer needed. This submittal will:

- (a) contain certification that the institutional controls and engineering controls put in place are still in place and are either unchanged from the previous certification or are compliant with Department-approved modifications;
- (b) allow the Department access to the site; and
- (c) state that nothing has occurred that will impair the ability of the control to protect public health or the environment, or constitute a violation or failure to comply with the site management plan unless otherwise approved by the Department.

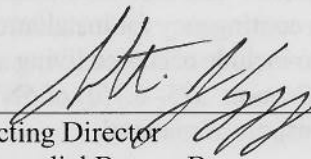
- 14. The operation of the components of the remedy (if warranted by the pre-design investigation) will continue until the remedial objectives have been achieved, or until the Department determines that continued operation is technically impracticable or not feasible.
- 15. A long-term monitoring program will be instituted, if the pre-design investigation indicates a groundwater remedy is warranted. This includes the monitoring of overburden and/or bedrock wells. This program will allow the effectiveness of the ground water treatment/containment system to be monitored and will be a component of the long-term management for the site.

Declaration

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action and will allow for the identified use of the site. This remedy utilizes permanent solutions and alternative treatment to the maximum extent practicable, and satisfies the preference for remedies that reduce remove or otherwise treat or contain sources of contamination and protection of groundwater.

6/15/09

Date


Acting Director
Remedial Bureau B
Division of Environmental Remediation



LEGEND

- Floor Drain
- Square Shaped Concrete Vault with Wooden Cover



Graphic Scale In Feet



CA RICH CONSULTANTS, INC.		DATE	4/22/09
Certified Ground-Water and Environmental Specialists 17 Dupont Street, Plimville, New York 11803		SCALE	1"=30'
TITLE	SITE PLAN	DRAWN BY	J.T.C.
PROJECT	CORNERSTONE B1 3100 3rd AVENUE THE BRONX, NEW YORK	CHECKED BY	E.A.W.
DRAWING NO.	2007-10		



STATE OF NEW YORK DEPARTMENT OF HEALTH

Flanigan Square 547 River Street Troy, New York 12180-2216

Richard F. Daines, M.D.
Commissioner

Wendy E. Saunders
Chief of Staff

June 10, 2009

Mr. Dale Desnoyers, Director
Division of Environmental Remediation
NYS Dept. of Environmental Conservation
625 Broadway, 12th Floor
Albany, NY 12233-7011

Re: Remedial Action Workplan
Cornerstone Site B-1
Site #C203044
Bronx, Bronx County

Dear Mr. Desnoyers:

Staff reviewed the May 2009 Remedial Action Workplan (RAWP) for the Cornerstone B-1 site. Based on that review, I understand that on-site groundwater and soil vapor are contaminated with chlorinated volatile organic compounds (CVOC) from the historical site operation as a dry cleaning facility. Prior to redevelopment, the entire site will be excavated to a depth of 15 feet below ground surface to meet 6NYCRR Part 375 (e(2)) restricted residential use criteria.

To address on-site groundwater contamination a remedial treatment system will be utilized to reduce the concentrations of site related contaminants of concern until NYSDEC Class GA standards are achieved. Potential exposures to the occupants due to the soil vapor intrusion in the new building will be mitigated with the installation of a vapor barrier and the ventilated sub-surface parking garage which is incorporated into the design of the structure.

Institutional controls in the form of an environmental easement will be placed on the property to restrict the use of groundwater as a potable or process water source without the necessary treatment and require the development of a site management plan. The site management plan will include the maintenance and continuous operation of the groundwater treatment system until the achievement of NYSDEC Class GA standards.

Based on this information, I believe that these actions will be protective of public health and I concur with RAWP. If you have any questions, please call me at (518) 402-7860.

Sincerely,

Steven M. Bates, Assistant Bureau Director
Bureau of Environmental Exposure Investigation

Mr. Dale Desnoyers
Site #C203044
June 10, 2009

- ec: G.A. Carlson, Ph. D / A. Salame – Alfie, Ph. D
G. Litwin / J. Crua / File
B. Devine
N. Graber
S. Ervolina
L. Paulsen
R. Cozy
J. O'Connell
J. Roberts

C:\Documents and Settings\smb02\Local Settings\Temp\notes6030C8\Cornerstone RAWP.doc



Steven H. Linder, Assistant Secretary
Division of Environmental Health

From: "Joseph P. Crua" <jpc04@health.state.ny.us>
To: "Jack Aversa" <jaaversa@gw.dec.state.ny.us>
CC: "Sadique Ahmed" <sxahmed@gw.dec.state.ny.us>, "Steven M. Bates" <smb02@h...>
Date: 6/15/2009 10:03 AM
Subject: Re: Cornerstone RAWP DOH letter
Attachments: Remedial Action Workplan approval letter.pdf; BCP_Decis_Document_jaacomment
 s_added_rev1.wpd

Jack/Bob,
 I discussed with Steve. We are OK with the changes as the exposure concern
 is SVI which will be dealt with. Call if you need to discuss further.
 Joe.

Joseph P. Crua, MPH
 Public Health Specialist IV
 Chief, Metro Section
 Bureau of Environmental Exposure Investigation
 New York State Department of Health
 547 River Street, Room 300
 Troy, New York 12180-2216
 Phone: (518) 402-7880

"Jack Aversa"
 <jaaversa@gw.dec.
 state.ny.us>
 To
 "Joseph P. Crua"
 <jpc04@health.state.ny.us>
 06/12/2009 05:25 PM
 cc
 "Sadique Ahmed"
 <sxahmed@gw.dec.state.ny.us>
 Subject
 Re: Cornerstone RAWP DOH letter

Hi, Joe.
 Re: RAWP for Cornerstone B1

Follow up to my phone message. Are you available to discuss the following
 on Monday morning?

The Applicant wants approval of the RAWP on Monday. Before Bob Cozzy signs
 off, he'd like either an updated DOH letter, or an email from you
 confirming you are ok with the remedy bullets in the draft decision
 document(attached, minus page 5 - site plan) . Specifically, he is
 concerned with Item #s 5 and 14 of the decision document, which are
 slightly different than described in the DOH RAWP concurrence letter as
 follows

1)DOH letter states excavation down to 15 feet.

Decision document, item #5 states: Excavation will extend to 12.5 feet
 below grade , and post excavation samples taken. In the event the soil at
 12.5 feet below grade exceeds 1.3 ppm for perc, soil excavation will
 continue until 1.3 ppm is achieved or bedrock is encountered.

2)DOH letter states GW system will operate until GA stds are achieved.

Decision document , item #14 requires the GW remedy to continue until it
 meets the remedial action objectives (pre-release/pre-disposal conditions
 to the extent practicable, per page 44 of the RAWP), or until the Dept

determines that continued operation is technically impractical or not feasible.

Unfortunately, the decision document wasn't drafted when we asked Chris for the concurrence letter.

Jack
402-9803

>>> Christopher M Doroski <cmd16@health.state.ny.us> 6/11/2009 12:15 PM >>>

Sadique,

My RAWP letter stated 15 feet bgs as a final depth for excavation however, it was brought to my attention that depth was modified and the planned excavation is only 12.5 feet bgs. I understand that possibility strongly exists that the 15 feet bgs or deeper depths may be the final excavation limit depending on the data the endpoint samples yield.

Additionally, since the RAWP sign-off by Steve Bates, data from recent bedrock well installation and sampling has arrived at DEC demonstrating levels of PCE well above standards. It is my understanding that the overburden groundwater will be required to meet NYSDEC Class GA standards, but it may not be feasible to achieve those standards for bedrock groundwater. However, bedrock groundwater may only be required to reach asymptotic levels with the understanding that a significant reduction in contaminant levels is demonstrated.

In my absence this afternoon and tomorrow, please contact Joe Crua. Thanks.

Christopher M. Doroski
Public Health Specialist 2
Bureau of Environmental Exposure Investigation
518-402-7860
cmd16@health.state.ny.us

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