New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau C, 11th Floor
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Joe Martens
Acting Commissioner

February 3, 2011

Mehlich & Associates
8 Depot Square
Tuckahoe, NY 10707

Ossining RX Development, LLC
Attn: Sally Kraus
580 White Plains Road
Tarrytown, NY 10591

Re: Clinton Terrace Shopping Center Site (C360110)
Ossining, Westchester County
Remedial Work Plan & Decision Document

Dear Applicants,

The New York State Department of Environmental Conservation (Department) and New York State Department of Health (NYSDOH) have reviewed the August 2010 Remedial Work Plan (RWP) prepared by Jade Environmental for the above referenced site. Based on that review, the document has been revised in accordance with the Department's and NYSDOH comments. Therefore, the RWP is hereby approved. Attached is a copy of the Department's Decision Document for the site. The remedy is to be implemented in accordance with the Decision Document.

As previously discussed, in addition to the RWP, the Department is requiring the submittal of a formal remedial design. The purpose of this document is to outline the specific design specifications for the remedy. The design document must be consistent with Section 5.2(b) of the Department's guidance document, DER-10, Technical Guidance for Site Investigations and Remediation.

Please ensure the approved RWP and Decision Document are available at the document repository(ies) established for the site. If you have any questions, please contact the Department's Project Manager, John Miller, at 518-402-9564 or jymiller@gw.dec.state.ny.us.

Sincerely,

Michael J. Ryan
Director
Remedial Bureau C
Division of Environmental Remediation

Enclosure

ec *w/attachments:*

Mehlich & Associates
8 Depot Square
Tuckahoe, NY 10707
rmehlich@mehlichassoc.com

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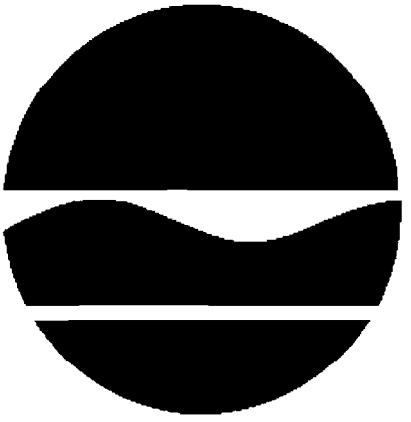
D. Desnoyers
R. Schick
M. Ryan
G. Heitzman
J. Miller
C. Bethoney
N. Walz
E. Moore

DECISION DOCUMENT

Clinton Terrace Shopping Center
Brownfield Cleanup Program
Ossining, Westchester County
Site No. C360110
February 2011



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

DECLARATION STATEMENT - DECISION DOCUMENT

Clinton Terrace Shopping Center
Brownfield Cleanup Program
Ossining, Westchester County
Site No. C360110
February 2011

Statement of Purpose and Basis

This document presents the remedy for the Clinton Terrace Shopping Center site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law, Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Clinton Terrace Shopping Center site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the selected remedy are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction and implementation of the remedial program.

2. A site cover will be installed to allow for commercial use of the site. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where exposed surface soil exceeds the commercial use 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). The soil cover will be placed over a demarcation layer. The excavation will be backfilled with soil meeting the backfill material requirements for commercial use as set forth in 6 NYCRR Part 375-6.7(d) with the upper six inches of the soil of sufficient quality to maintain a vegetative layer.

3. Excavation of source area contamination. Source area soils (ref. 6 NYCRR Part 375-1.2), will be excavated to bedrock, where feasible, and backfilled with clean soil. All contaminated soil that is excavated will be characterized and properly disposed of off-site at a permitted facility.

4. A sub-slab depressurization system will be necessary for any structures constructed on the site to prevent exposure to site related contaminants which result from soil vapor intrusion. The mitigation system will eliminate any exposures by preventing contaminated soil vapor from entering the on-site building(s). It will extract sub-slab vapors, and actively vent to the outside

air. Communication testing will be performed to verify that the radius of influence of the system provides adequate venting for all on-site structures.

5. Implementation of an on-site groundwater treatment system to manage all potentially contaminated groundwater that is generated during excavation (i.e., remedy implementation) dewatering. Dewatering will occur to lower the water table to allow for excavation of all source area soil. Groundwater will be treated and the system's effluent will be sampled to ensure it meets the requirements for discharge to the local publicly owned treatment works (POTW) or alternative approved discharge. Additional groundwater treatment will be provided as necessary to meet POTW requirements. If contaminated groundwater is unable to be treated on-site to meet POTW requirements, all groundwater will be properly contained before being sent to an off-site groundwater treatment facility.

6. Implementation of an in-situ groundwater treatment technology in the form of chemical oxidation injection or a similar technology. The treatment will be implemented as follows:

- the aquifer's geochemistry and oxidation-reduction parameters will be characterized to ensure conditions exist to promote contaminant breakdown;

- a conceptual site model for contaminant fate and transport will be developed based on an understanding of groundwater gradient and flow; and testing to determine hydraulic conductivity and soil permeability;

- the conceptual model will be used to estimate the quantity of injection compound necessary to achieve the desired radius of influence and reduce groundwater contaminant levels to meet remedial cleanup goals; and

- hydrogen peroxide, or a similar oxidizing compound, will be injected into the groundwater through wells, installed at a sufficient number and in the areas of the site necessary to achieve sufficient distribution of the chemical oxidant to accomplish the remedial program.

7. Imposition of an institutional control in form of an environmental easement that will: (a) require compliance with the approved site management plan; (b) limit the use and development of the property to commercial use; (c) restrict use of groundwater as a source of potable or process water without necessary water quality treatment as determined by the Department, NYSDOH or Westchester County Department of Health; and (d) require the property owner to complete and submit to the NYSDEC a periodic IC/EC certification.

8. Since the remedy results in contamination above unrestricted levels remaining at the site, a site management plan (SMP) will be developed and implemented. The SMP will include the institutional controls and engineering controls to: (a) address residual contaminated soils that may be excavated from the site during future redevelopment. The excavation plan will require soil characterization and, where applicable, disposal/reuse in accordance with NYSDEC regulations and the site use; (b) provide for the operation and maintenance of the components of the remedy; (c) monitor the groundwater; and (d) identify any use restrictions on site development or groundwater use.

9. The SMP will require the property owner to provide a periodic Institutional Control/Engineering Control (IC/EC) certification, prepared and submitted by a professional engineer or environmental professional acceptable to the Department, which would certify that the institutional controls and engineering controls put in place, are unchanged from the previous certification and nothing has occurred that would impair the ability of the control to protect public health or the environment or constitute a violation or failure to comply with any operation and maintenance or soil management plan.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

2/4/11
Date

Michael Ryan, Director
Remedial Bureau C

DECISION DOCUMENT

Clinton Terrace Shopping Center
Ossining, Westchester County
Site No. C360110
February 2011

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and (6 NYCRR) Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: SITE DESCRIPTION AND HISTORY

Location: The site is the Clinton Terrace Shopping Center located at 74 Croton Avenue, Ossining, Westchester County.

Site Features: The site is 1.1 acre in size. An approximately 10,000 square foot one story building occupies the site, and the balance of the site is paved.

Current Zoning/Use(s): The site is currently zoned for commercial use and is an active commercial facility. Surrounding land uses include commercial and residential.

Historical use(s) and source(s) of contamination: Chlorinated solvents have been detected in site soil and groundwater. The contamination is attributed to the operation of dry cleaning establishments during the property's history.

Site Geology/Hydrogeology: Site soils include sands, silt and clay. Fill material is also present across much of the site. Groundwater flow is generally toward the northwest. The average depth to groundwater at the site is 12 feet below grade.

A site location map is attached as Figure 1.

SECTION 3: 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 commercial use (which allows for industrial use) as described in Part 375-1.8(g) is/are 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 available in the RI Report.

SECTION 4: ENFORCEMENT STATUS

The cleanup agreement is with a Volunteer. The Volunteer does not have an obligation to address off-site contamination. The Department has determined that this site poses a significant threat to human health and the environment and there are off-site impacts that require remedial activities; accordingly, enforcement actions are necessary.

SECTION 5: SITE CONTAMINATION

5.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 5.4.

5.1.1: 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. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

5.1.2: RI Information

The analytical data collected on this site includes data for:

- groundwater
- soil
- soil vapor

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant 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 below. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

tetrachloroethylene (pce)	lead
trichloroethene (tce)	chromium
dichloroethylene	

The contaminant(s) of concern exceed the applicable standards, criteria and guidance for:

- groundwater
- soil

5.2: 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 Decision Document.

There were no IRMs performed at this site during the RI.

5.3: 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.*

Direct contact with contaminants in the soil and groundwater is unlikely because the majority of the site is covered with buildings and pavement. People are not drinking contaminated groundwater because the site is served by a public water supply that obtains water from a different source not affected by this contamination.
Volatile organic compounds in the groundwater and/or 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. The potential exists for the inhalation of site contaminants due to soil vapor intrusion for any future on-site redevelopment and occupancy. In addition, there is the potential for off-site migration of site-related contaminants in soil vapor.

5.4: 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. The RI report presents a detailed discussion of the existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination: The main contaminant of concern at the site is the volatile organic compound tetrachloroethylene (PCE). The impacted media are soil and groundwater.

SCG soil exceedances exist for PCE in multiple sample locations. The highest concentration of PCE was detected at 36 parts per million (ppm) (compared to the protection of groundwater soil cleanup objective (SCO) of 1.3 ppm), in the apparent source area, in the vicinity of the former dry cleaner. The most heavily contaminated soil is located under the on-site building.

Groundwater standards have been exceeded for PCE and trichloroethene (TCE) with maximum concentrations of 2,900 parts per billion (ppb) and 18 ppb, respectively, compared to the groundwater standards for each of these compounds of 5 ppb. The approximate areal extent of the on-site groundwater plume is 0.6 acres.

Special Resources Impacted: None on or adjacent to the site.

SECTION 6: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and evaluation of the remedial criteria are present in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Track 4: Restricted use with site-specific soil cleanup objectives remedy.

The elements of the selected remedy, as shown in Figure 2, are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction and implementation of the remedial program.

2. A site cover will be installed to allow for commercial use of the site. The cover will consist either of the structures such as buildings, pavement, sidewalks comprising the site development or a soil cover in areas where exposed surface soil exceeds the commercial use 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). The soil cover will be placed over a demarcation layer. The excavation will be backfilled with soil meeting the backfill material requirements for commercial use as set forth in 6 NYCRR Part 375-6.7(d) with the upper six inches of the soil of sufficient quality to maintain a vegetative layer.

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5. Implementation of an on-site groundwater treatment system to manage all potentially contaminated groundwater that is generated during excavation (i.e., remedy implementation) dewatering. Dewatering will occur to lower the water table to allow for excavation of all source area soil. Groundwater will be treated and the system's effluent will be sampled to ensure it meets the requirements for discharge to the local publicly owned treatment works (POTW) or alternative approved discharge. Additional groundwater treatment will be provided as necessary to meet POTW requirements. If contaminated groundwater is unable to be treated on-site to meet POTW requirements, all groundwater will be properly contained before being sent to an off-site groundwater treatment facility.

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- the aquifer's geochemistry and oxidation-reduction parameters will be characterized to ensure conditions exist to promote contaminant breakdown;

- a conceptual site model for contaminant fate and transport will be developed based on an understanding of groundwater gradient and flow; and testing to determine hydraulic conductivity and soil permeability;

• the conceptual model will be used to estimate the quantity of injection compound necessary to achieve the desired radius of influence and reduce groundwater contaminant levels to meet remedial cleanup goals; and

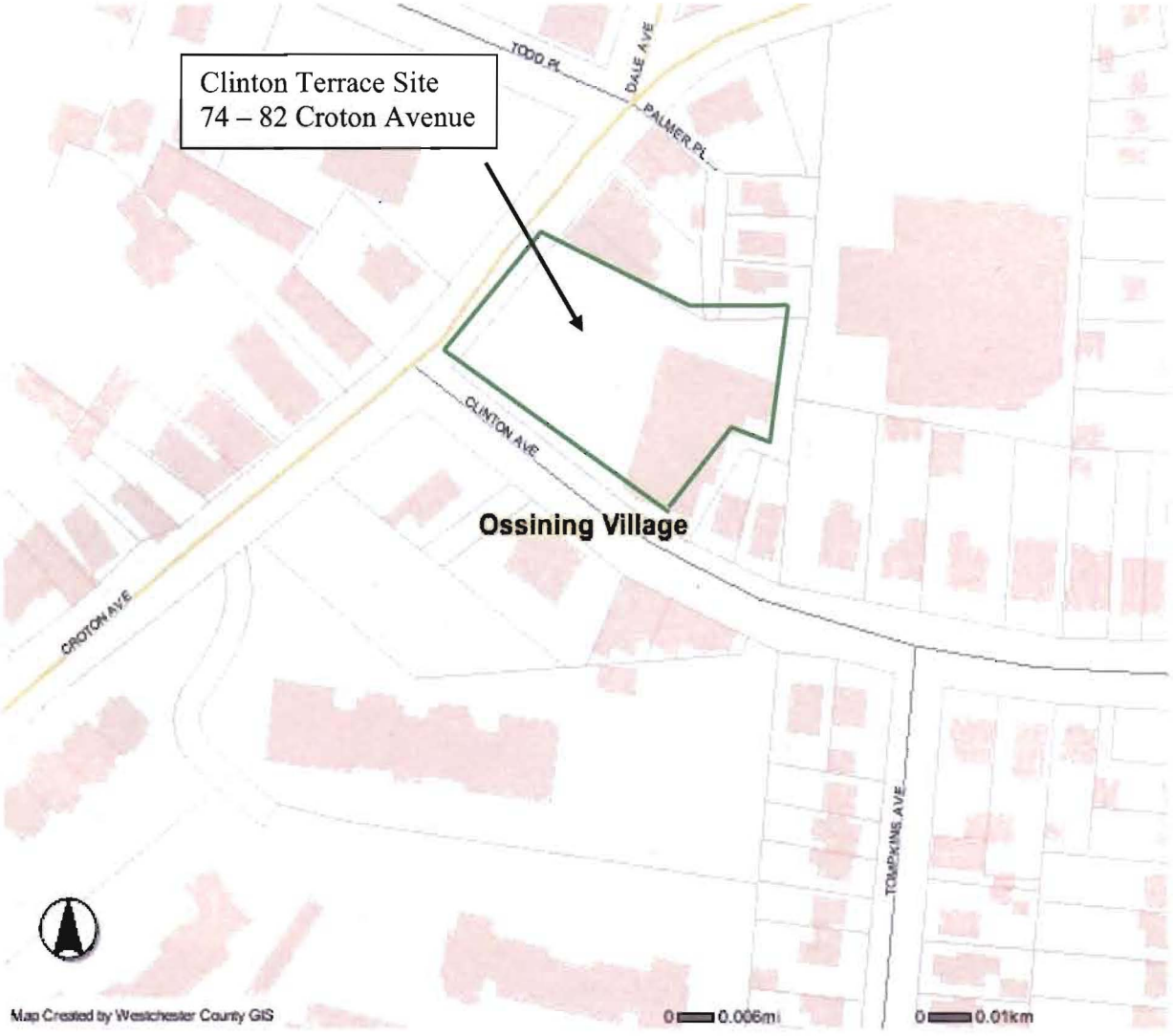
• hydrogen peroxide, or a similar oxidizing compound, will be injected into the groundwater through wells, installed at a sufficient number and in the areas of the site necessary to achieve sufficient distribution of the chemical oxidant to accomplish the remedial program.

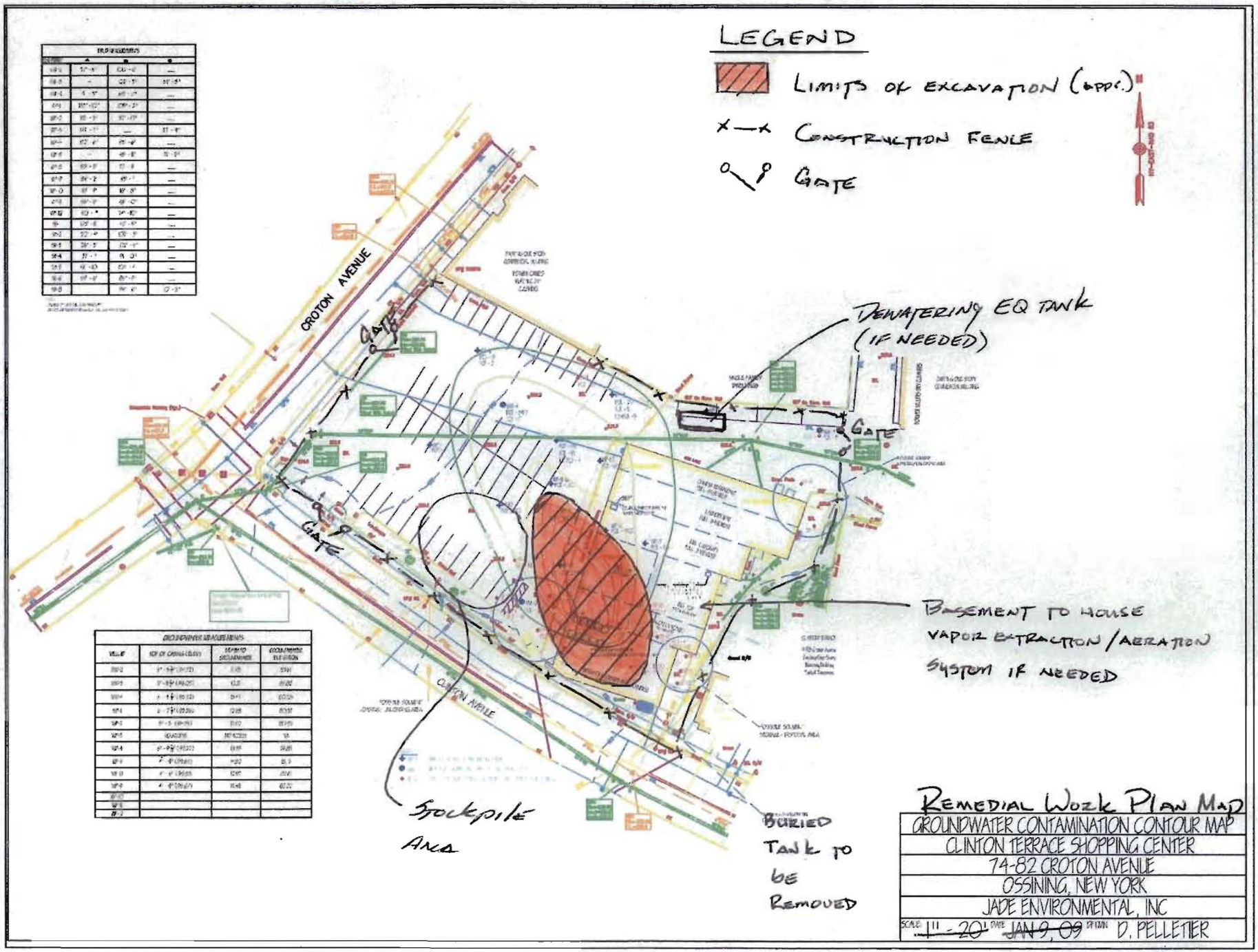
7. Imposition of an institutional control in form of an environmental easement that will: (a) require compliance with the approved site management plan; (b) limit the use and development of the property to commercial use; (c) restrict use of groundwater as a source of potable or process water without necessary water quality treatment as determined by the Department, NYSDOH or Westchester County Department of Health; and (d) require the property owner to complete and submit to the NYSDEC a periodic IC/EC certification.

8. Since the remedy results in contamination above unrestricted levels remaining at the site, a site management plan (SMP) will be developed and implemented. The SMP will include the institutional controls and engineering controls to: (a) address residual contaminated soils that may be excavated from the site during future redevelopment. The excavation plan will require soil characterization and, where applicable, disposal/reuse in accordance with NYSDEC regulations and the site use; (b) provide for the operation and maintenance of the components of the remedy; (c) monitor the groundwater; and (d) identify any use restrictions on site development or groundwater use.

9. The SMP will require the property owner to provide a periodic Institutional Control/Engineering Control (IC/EC) certification, prepared and submitted by a professional engineer or environmental professional acceptable to the Department, which would certify that the institutional controls and engineering controls put in place, are unchanged from the previous certification and nothing has occurred that would impair the ability of the control to protect public health or the environment or constitute a violation or failure to comply with any operation and maintenance or soil management plan.

Figure 1 – Site Location




LEGEND
LIMITS OF EXCAVATION (APPX.)
CONSTRUCTION FENCE
GATE
CROTON AVENUE
GATE
GATE
GATE
DEWATERING EQ TANK (IF NEEDED)
BASEMENT TO HOUSE VAPOR EXTRACTION / AERATION SYSTEM IF NEEDED
STOCKPILE AREA
BURIED TANK TO BE REMOVED
CLINTON AVENUE
REMEDIAL WORK PLAN MAP
GROUNDWATER CONTAMINATION CONTOUR MAP
CLINTON TERRACE SHOPPING CENTER
74-82 CROTON AVENUE
OSSINING, NEW YORK
JADE ENVIRONMENTAL, INC
SCALE 1" = 20' DATE JAN 9, 09 DRAWN D. PELLETIER
3-15-09