PROPOSED RECORD OF DECISION AMENDMENT

Scobell Chemical - NYSDOT Site
Operable Units 1 and 2 – On-Site and Off-Site
State Superfund Project
Rochester, Monroe County
Site No. 828076
February 2013

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

PROPOSED RECORD OF DECISION AMENDMENT SCOBELL CHEMICAL - NYSDOT SITE OPERABLE UNITS 1 AND 2 – ON- AND OFF-SITE CONTAMINATION

Town of Brighton / Monroe County / Site No. 828076 February 2013

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

SECTION 1: PURPOSE AND SUMMARY OF THE PROPOSED RECORD OF DECISION AMENDMENT

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing an amendment to the Record of Decisions (ROD) 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 modification to the remedy identified by this Proposed ROD Amendment. The disposal of hazardous wastes at this site, as more fully described in the original ROD documents and Section 6 of this document, has caused the contamination of various environmental media. The proposed amendment is intended to attain the remedial action objectives identified for this site for the protection of public health and the environment. This amendment identifies the new information which has lead to this proposed amendment and discusses the reasons for the preferred remedy.

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 Environmental Remediation Programs. 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.

On March 31, 1999, the Department signed a ROD for the Scobell Chemical - NYSDOT Site, Operable Unit 1 (OU1), which selected: soil vapor extraction (SVE) for subsurface soils; extraction and treatment for overburden groundwater; excavation and off-site disposal of surface soil; and a low flow dense non-aqueous phase liquid (DNAPL) recovery system for bedrock. On March 31, 2002, the Department signed a ROD for the off-site contamination, Operable Unit 2 (OU2), which selected: in-situ thermal treatment for the off-site source area; in-situ treatment (flushing of contaminants or in-situ chemical oxidation) in the shallow bedrock under the railroad tracks; a limited downgradient groundwater extraction and treatment system (or bioremediation); and long-term monitoring. See Section 3 of this document for a description of the operable units at this site.

The selected remedial actions for the two operable units were not implemented. The primary selected remedy for OU2 (in-situ thermal) was also the selected remedy for a nearby site (Chemical Sales Facility) that required a ROD amendment due to excessive costs to implement. As a result of

this high cost, as well as the time that has passed since the original ROD documents were signed and additional information collected in a 2012 supplemental investigation, it was determined that the selected remedies needed to be reassessed. The reassessment took into consideration the current zoning, the future end use of the site and the Department's issued regulations (6 NYCRR Subpart 375-6). Those regulations define soil cleanup objectives which have been applied to inactive hazardous waste sites throughout New York State since December 14, 2006.

The Department is proposing an amendment to the site's ROD documents for OU1 and OU2. The proposed changes and the reason for the changes are summarized in section 7.3 below.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on this proposed ROD Amendment. This is an opportunity for public participation in the remedy selection process. The information here is a summary of what can be found in greater detail in reports that have been placed in the Administrative Record for the site. The public is encouraged to review the reports and documents, which are available at the following repositories:

Brighton Memorial Library
2300 Elmwood Avenue
Brighton, NY 14618
Mon - Thurs: 10:00 - 9:00
Fri: 10:00 – 6:00
Sat: 10:00 – 4:00
Sun: 1:00 – 4:00
Phone (585) 784-5300

NYSDEC Region 8 Office
6274 East Avon-Lima Road
Avon, NY 14414-9516
Contact: Mrs. Linda Vera
Phone: (585) 226-5324
(Appointment Requested)

A public comment period has been set from February 28 through March 29, 2013 to provide an opportunity for you to comment on these proposed changes. A public meeting is scheduled for March 12, 2013 at the Brighton Town Hall Auditorium, 2300 Elmwood Avenue, Brighton, NY 14189 at 7:00 PM.

At the meeting, a description of the original ROD documents and the circumstances that have led to proposed changes in this ROD will be presented. After the presentation, a question and answer period will be held, during which you can submit verbal or written comments on the proposal. We encourage you to review this summary and attend the meeting.

Written comments may also be sent to:

Jason Pelton, Project Manager
NYS Dept. of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233-7016
(888) 459-8667

Comments will be summarized and responses provided in a Responsiveness Summary. The

Department may modify the proposed ROD Amendment based on new information or public comments. Therefore, the public is encouraged to review and comment on the proposed Amendment identified herein. Comments will be summarized and addressed in the responsiveness summary section of the final version of the ROD Amendment. This ROD Amendment 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 Scobell Chemical - NYSDOT Site is located at 1 Rockwood Place in a mixed commercial, industrial, and residential area in the northern section of the Town of Brighton, immediately east of the City of Rochester boundary. The site occupies approximately 2 acres and is positioned along the north-side of New York State Highway 590. The site is approximately 1,000 feet east of the intersection of Rockwood Place and East Avenue.

Site Features: The site contains no structures, is covered with grass and scrub growth, and is surrounded by a chain link fence. A small surface water drainage ditch parallels the New York Central Railroad Line that is present immediately north of the property. The Grass Creek is located north of the site beyond the railroad line.

Current Zoning/Use(s): The site is currently undeveloped, zoned for industrial use, and is part of the right-of-way bordering the New York State Highway 590 and 490 exchanges. This site is located in an industrial zoned area. The properties west of the site along Rockwood Place are located in the City of Rochester and are also zoned industrial. The surrounding parcels are currently used for a combination of industrial, commercial, transportation, and utility right-of-ways. The nearest residential area is located along Blossom Road approximately 600 feet north of the site.

Past Uses of the Site:
The site is the location of a former chemical repackaging company that operated at this location from the 1920s until 1986. During this time, assorted chemicals were purchased by the company in bulk and repackaged into smaller containers for resale. Four above ground storage tanks were reportedly located at the site. The overall quantity and type of materials handled is unclear but significant subsurface soil and groundwater contamination has resulted from past operations. In 1988, the NYSDOT conducted a removal action which included decontamination and demolition of the structures; removal of containers, drums and above ground storage tanks; and excavation and disposal of contaminated soil and bedrock from the southeastern half of the site for the purpose of

building the Route 490 and Route 590 interchange. As part of the removal, the northwestern half of the property that was not excavated to bedrock was covered with a nominal 12 inch thick clay cap.

Operable Units:

The site is divided into two operable units. An operable unit represents a portion of a remedial program for a site that for technical or administrative reasons can be addressed separately to investigate, eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination.

OU1 consists of the on-site source area and groundwater contamination, including DNAPL present in the bedrock, and soil vapor contamination.

OU2 consists of the off-site groundwater, DNAPL, and soil vapor plumes.

OU 1 and OU 2 are the subject of this ROD Amendment document. A ROD was issued previously for OU1 in March 1999 and for OU2 in 2002. Figure 1 shows the site location and Figure 2 shows the site details.

Site Geology and Hydrogeology:
To serve as a barrier to site contamination, a nominal 12-inch clay cap was placed over the site by the NYSDOT during the highway reconstruction project. Fill material consisting of sand and silt along with various amounts of cinder, brick, and glass extend to a depth of approximately 4.5 feet beneath the clay cap. Native soil comprised of silt and clay with minor amounts of sand and gravel is present beneath the fill and extend to the top of bedrock at a depth of approximately 7 to 10.5 feet beneath the ground surface. The underlying bedrock is a porous dolostone of the Lockport Group. The bedrock becomes more competent with depth, with the exception of an approximate 4-foot wide fracture zone ranging from 15 to 25 feet beneath the ground surface. Shallow groundwater occurs at the overburden-bedrock interface at a depth of approximately 4 to 10 feet beneath the ground surface and generally flows to the south. Deeper groundwater encountered in the shallow bedrock occurs at depths of approximately 10 to 20 feet beneath the ground surface and flows to the northeast.

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 that restrict the use of the site to industrial use as described in Part 375-1.8(g) are being evaluated.

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 current owner of the site is the NYS Department of Transportation, 50 Wolf Road, Albany, NY 12232. Past owners include:

- John H. Rae, Jr.,

- Raeco Products, Incorporated, and
- James B. Scobell, Scobell Chemical Company, Incorporated.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A Remedial Investigation (RI) along with supplemental investigations have been conducted for both OU1 and OU2. The purpose of the RI was to define the nature and extent of contamination resulting from previous activities at the site. The field activities and findings of the investigation are described in the RI Reports and supplemental reports.

The following general activities are conducted during an RI:

- Research of historical information,
- 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.

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, sediment, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in the March 1999 (OU1) and March 2002 (OU2) list the applicable SCGs. This document considers changes to the SCGs since the issuance of the previous ROD documents. For a full listing of all SCGs see:
http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Information

The analytical data collected on this site includes data for:

- groundwater
- surface water
- soil
- sediment
- surface soil
- air (indoor and outdoor)

- soil vapor

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 the March 1993 OU1 ROD and March 2002 OU2 ROD which are included as Exhibit A. Additionally, the Supplemental Investigation and RI Reports contain a full discussion of the data. The primary contaminants of concern identified in the ROD documents for one or both of these Operable Units are:

1,1,1-Trichrloroethane
1,2-dichloropropene
Benzene
Chloroform
Dichloroethane
Dichloroethene
Trichloroethene (TCE)
Tetrachloroethene (PCE)
Toluene
Vinyl Chloride
xylene
Cadmium
Chromium
Endrin
Lead
Mercury
Zinc

As illustrated in the original 1999 OU1 ROD and 2002 OU2 ROD documents for this site, as well as in supplemental investigations, the contaminants of concern exceed the applicable SCGs for one or more of the following:

soil
groundwater
surface water
soil vapor

Since the issuance of the FS and ROD documents for both OU1 and OU2, new information about the site has been obtained. In particular, additional information related to changes in the nature, areal extent, and contaminant concentrations in bedrock in OU1 and OU2 suggest potential issues with the implementation and overall cost for the selected remedy. Updated Part 375 regulations (2006) also allow for soil cleanup based on site use. Institutional controls, such as environmental easements, may document the areas of soil contamination left in place where total removal is not expected to affect groundwater that is already impacted by DNAPL. The additional cost for the thermal treatment of soil and bedrock to allow for unrestricted use as specified in the 2002 OU2 ROD (i.e., steam) is prohibitive.

6.2: Interim Remedial Measures

An 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.

Following soil vapor intrusion sampling at an off-site property in January 2012, a sub-slab depressurization system was installed as part of an IRM.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site (1999 OU1 ROD and 2002 OU2 ROD, and a data gap assessment conducted in 2012).

Nature and Extent of Contamination:
Surface soil at the Site does not exceed industrial use SCOs.

Subsurface soil contamination is limited to on-site areas and is predominantly made up of volatile organic constituents. There is contamination present across the site, but the most significant concentrations are present in the central and west/northwestern sections of the site. Although these concentrations exceed the protection of groundwater SCOs, they do not exceed the SCO for industrial use.

Contaminants associated with the Site have been detected in overburden groundwater and extending vertically down to deep bedrock groundwater (to approximately 70 feet deep i.e. 370 feet above msl) downgradient of the Site. However, the primary groundwater migration path for chlorinated solvents from the Site appears to be in shallow bedrock groundwater (approximately 420 to 430 feet above msl), within horizontal water bearing fractures. TCE contamination exists in a dissolved phase in the groundwater present in bedrock fractures at the site where DNAPL is present. The presence of DNAPL within the fracture zones and within the bedrock matrix will act as a continuing source of groundwater contamination. This is evidenced by the steady state of TCE concentrations in groundwater measured between 1998 and 2012. Specifically, DNAPL and high concentrations of TCE (780,000 ppb) and PCE (13,000 ppb) were detected in groundwater collected from an off-site monitoring well located approximately 300 feet northeast of the site. Concentrations of site contaminants in groundwater remain well above the Class GA groundwater standards at the boundary of the existing monitoring wells off-site.

TCE as a DNAPL has been identified within a narrow zone of bedrock fractures at the site and approximately 300 feet downgradient of the site (see Figure 2) at approximately 420 to 430 feet above msl, with likely a narrower zone of approximately 4 feet containing the majority of the contaminant mass within a limited number of horizontal fractures. The mass of TCE (the primary contaminant) within the bedrock system is estimated to be between 412 Kilograms (Kg) and 7050 Kg kilograms (estimated volume of TCE within the bedrock is between 75 and 1275 gallons).

Shallow soil vapor samples collected approximately 500 feet off-site and adjacent to residential properties contained TCE and vinyl chloride at concentrations of 230 micrograms per cubic meter (ug/m3) and 280 ug/m3, respectively. Based on the presence of site-related contamination in soil vapor and groundwater off-site soil vapor intrusion sampling was completed at six off-site structures. Based on the results of the sampling, a sub-slab depressurization system was installed at one off-site building, continued monitoring was recommended at four structures to verify further actions to prevent exposure are not needed, and no further action was recommended at one structure.

Additional soil vapor intrusion sampling is necessary to fully understand the off-site extent of soil vapor contamination.

Surface water samples collected from the Grass Creek located north of the site contained cis-1,2-DCE and TCE at concentrations of 310 ppb and 140 ppb respectively. The TCE was detected at a concentration slightly above the surface water standard (40 ppb).

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.*

People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Access to the site is restricted, however, contact with contaminated groundwater and soil is unlikely unless people dig below the ground surface. People are not drinking the contaminated creek water because the area is served by a public water supply that obtains its water from a different source.

Volatile organic compounds in the groundwater 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. Currently, there are no occupied buildings on the site. However, the potential may exist for the inhalation of site contaminants due to soil vapor intrusion for any future on-site building development and occupancy. Sampling conducted has indicated that the potential exists for inhalation of site-related contaminants via soil vapor intrusion in off-site buildings. A sub-slab depressurization system (a system that ventilates/removes air beneath the building) has been installed at one off-site building to prevent the inhalation of site-related contamination. In addition, site contaminants were found in soil vapor beneath four off-site buildings and continued monitoring of these structures is recommended to verify further actions to prevent exposure are not needed. Additional investigations are needed to determine the full potential for exposure via soil vapor intrusion at off-site structures.

SECTION 7: SUMMARY OF ORIGINAL REMEDY AND PROPOSED AMENDMENT

7.1 Original Remedy

The components of the 1999 OU1 remedy were as follows:

- Soil vapor extraction (SVE) was selected to address subsurface soils contaminated with CVOCs;
- Groundwater extraction and treatment was selected to address overburden groundwater contaminated with CVOCs as well as enhance the overall effectiveness of the SVE system;
- Excavation and off-site disposal of approximately 100 cubic yards of metals contaminated surface soils (along the western edge of the site);

- Installation of a low-flow DNAPL recovery system was selected to recover DNAPL from the shallow bedrock;
- Deed restrictions were selected to be placed upon the property to prevent residential use of the site; and
- Long term monitoring was selected to evaluate the effectiveness of the SVE, groundwater extraction and treatment, and DNAPL recovery systems, as well as maintenance of the soil cover and the perimeter fence.

The components of the 2002 OU2 remedy were as follows:

- In-situ thermal treatment was selected to address the concentrated source area located in the bedrock and bedrock groundwater north of on-site OU1 (north of the railroad tracks); including injection wells, to introduce a heat source (e.g., steam), as well as groundwater/vapor extraction wells to remove the mobilized contamination from the bedrock;
- In-situ remediation technology (e.g., surfactant flushing or injecting chemical oxidants) was selected to address the contamination under the railroad tracks and to prevent disruption of rail service;
- Evaluation of the need for additional remedial measures and/or property use restrictions to control threats posed by any residual contamination after completion of the thermal treatment.
- Annual certifications to ensure property use restrictions are still in place and effective; and
- Installation of a downgradient groundwater extraction and treatment and/or in-situ treatment system (e.g., enhanced in-situ bioremediation) after completion of the in-situ thermal treatment of the source area to address residual groundwater contamination.
- Implement a long-term monitoring program for residual contamination remaining at the site to monitor the effectiveness of the remedial program.

7.2 New Information

Since the issuance of the FS and ROD documents, new information about the site and the chosen remedies has been obtained. In addition, new soil cleanup objectives were promulgated in 2006.

One of the primary remedies for the OU2 was in-situ steam treatment (IST) of bedrock. This was also the selected remedy for a nearby site (Chemical Sales, Site # 828086, in the Town of Gates, Monroe County). In 2004, a pilot study was planned for the Chemical Sales site, however, the cost of the project was prohibitively high (approximately $85 per cubic yard treated) and it became apparent that the cost of implementing a full-scale IST system to remediate the Chemical Sales site would be economically prohibitive. Due the similar conditions at the Scobell Chemical – NYSDOT Site (DNAPL in fractured bedrock), it was also determined that IST was likely not feasible from a cost perspective at the Scobell Chemical - NYSDOT Site (at $85 per cubic yard, treating an approximate 10 foot thick section of bedrock in the DNAPL source area is estimated to be greater than $20 million, compared to the OU2 ROD cost estimate of $3.6 million). It was also identified that IST might not be able to treat the area due to the low temperature achieved and the potential that DNAPL would be forced into inaccessible fractures.

Based on this information, it was concluded that a revised remedy that also takes into consideration the current zoning, future end use of the site, and availability of new treatment technologies should be evaluated. Therefore, a data gap investigation was performed to better understand the magnitude of contamination and a focused feasibility study was conducted to evaluate remedies for the primary source of contamination: the DNAPL present in the bedrock fractures both below and north of the site. The data gap investigation identified the primary location of the DNAPL within bedrock and updated the Conceptual Site Model (better understanding on the quantity and distribution of DNAPL), as well as calculated the potential mass of contamination diffused into the bedrock matrix. The focused feasibility study concentrated on selecting and evaluating remedial actions capable of removing contaminant mass at and downgradient of the site; while being as protective, or more protective, than the original remedy.

As a result of this new information, the Department is proposing to amend the ROD documents for OU1 and OU2 and treat the operable units as a single unit since the most significant source of contamination for both units is the TCE DNAPL source area which is located in the fractured bedrock both on- and off-site.

7.3 Proposed Changes

The primary change to the remedy, compared to the remedies selected in the OU1 March 1999 and OU2 March 2002 ROD documents, is to focus on the primary source of contamination, the TCE DNAPL source area, and use the same treatment remedy both on- and off-site. This is a fundamental change to the remedies selected in the previous ROD documents but is a more streamlined and effective approach to removing contaminant mass at and downgradient from the site. The following section describes the elements of the proposed ROD Amendment relative to the original ROD documents.

- The OU1 low-flow DNAPL recovery system, OU2 in-situ thermal treatment (steam) and associated groundwater and vapor recovery and treatment, and OU2 in-situ remediation technology (e.g., surfactant flushing or injecting chemical oxidants) under and near the railroad tracks will be replaced with in-situ chemical reduction of contaminants (pneumatic injections of zero valence iron [ZVI] used for costing purposes) throughout the DNAPL plume (see Figure 2). Under this component, an initial ZVI injection will occur along with a contingency for a targeted ZVI injection based on long-term monitoring. Combining OU1 and OU2 bedrock groundwater/DNAPL remedies is considered to be a Green Remedy (DER-31) since it does not require long-term operation (reducing energy consumption), and does not generate significant waste requiring off-site disposal and/or fugitive air emissions.

- The OU1 soil concentrations of metals and pesticides do not exceed SCOs for industrial use; therefore, soil excavation is not necessary. This component will be replaced with an institutional control (IC) requirement (environmental easement) at the site. This IC will be used to: prevent residential and commercial use, maintain the existing clay cover, and require a Site Management Plan (SMP), including a soil excavation plan.

- The OU1 subsurface soil VOC concentrations do not exceed SCOs for industrial use; therefore soil vapor extraction is no longer necessary. This component will be replaced with

requiring institutional controls at the site: environmental easement and associated SMP that requires potential future buildings constructed on the site be designed and constructed to address potential for soil vapor intrusion and demonstrate effectiveness of mitigation controls.

- OU1 and OU2 overburden groundwater remedy components will be replaced with long term monitoring, including installation of additional monitoring wells to better define the extent of contaminated overburden groundwater, to facilitate further evaluation of soil vapor intrusion off-site, and monitor the effectiveness of the DNAPL treatment alternative and monitor downgradient natural attenuation.

Institutional controls to be implemented at the site are in the form of an environmental easement for the controlled property that will:

- Require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with DER-10 and Part 375-1.8 (h)(3);

- Allow the use and development of the controlled property for industrial uses as defined by Part 375-1.8(g);

- Restrict the use of groundwater on-site as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH;

- requires any future buildings constructed at the site to have a sub-slab depressurization system, or a similar engineered system, to prevent the migration of vapors into the building from soil and groundwater; and

- Require compliance with the Department approved SMP.

Off-site contamination would be addressed and included in the SMP. Specifically, the SMP would:

- Identify contamination existing on an adjacent property;

- State that groundwater should not be use as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and

- State that an evaluation of potential exposure via soil vapor intrusion should be conducted if that land is developed.

The SMP for the site will require the following:

- an Institutional & Engineering Control (IC/EC) 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:

i) Institutional Controls: The Environmental Easement discussed above.

ii) Engineering Controls: The clay cover, the existing off-site subslab depressurization system, and potential future subslab depressurization systems.

This plan includes, but may not be limited to

(a) Excavation Plan which details the provisions for management of future excavations at the site in areas of remaining contamination;

(b) descriptions of the provisions of the environmental easement including any land use and groundwater use restrictions;

(c) provisions for the management and inspection of the identified engineering controls;

(d) maintaining site access controls and Department notification; and

(e) steps necessary for the periodic reviews and certification of the IC/ECs.

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

i) monitoring of groundwater to assess the performance and effectiveness of the remedy;

ii) monitoring of off-site groundwater to delineate the extent of contamination;

iii) a schedule of monitoring and frequency of submittals to the Department;

iv) sampling for vapor intrusion of downgradient structures (existing and future), including provisions for actions to address exposure, if needed; and

v) monitoring of surface water conditions.

- an Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy. The plan includes, but is not limited to:

i) maintaining site access controls and Department notification; and

ii) providing the Department access to the site and O&M records.

SECTION 8: EVALUATION OF PROPOSED CHANGES

8.1 Remedial Goals

Goals for the cleanup of the site were established in the original ROD documents for OU1 and OU2. The overall remedial goals of OU1 and OU2 were to meet all SCGs and be protective of human health and the environment.

This ROD Amendment combines OU1 and OU2 into one unit and in accordance with SCOs provided in 6 NYCRR Part 375-1.10, the remedial action objectives (RAO) and selected remedial actions for the site are shown in Table 1.

8.2 Evaluation Criteria

The criteria used to compare the remedial alternatives are defined in the regulation that directs the remediation of inactive hazardous waste sites in New York State (6 NYCRR Part 375). For each criterion, a brief description is provided. A detailed discussion of the evaluation criteria and comparative analysis is contained in the original Feasibility Study.

The first two evaluation criteria are called 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 ROD amendment remedy was evaluated and is protective of public health and the environment. This remedy is consistent with the anticipated future use and the current zoning for the site. In-situ chemical reduction in the source area with on-site environmental easement and long term monitoring would be equally protective of the environment compared to the original remedies identified for OU-1 and OU-2. In addition indoor air, groundwater, and surface water will be monitored on a periodic basis..

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.

An unrestricted use remedy for this site would be cost prohibited and is not achievable considering the contaminant mass that is diffused into the bedrock matrix. The proposed remedy, however, will include significant contaminant mass removal (estimated at 90% mass removal in DNAPL plume) and enhance biodegradation. Furthermore, the source removal will enable the downgradient groundwater to more readily naturally attenuate over time. The low level contaminant concentrations in soil are, for the most part, located under a clay cap and are not significantly contributing to groundwater contamination, therefore engineering controls (i.e., maintaining the cap system) and institutional controls (i.e., environmental easements) would also be imposed on the site to ensure continued long-term compliance with applicable standards, criteria and guidance.

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

3. Short-term 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.

The original remedies involved excavation of soils, installation and operation of an SVE system enhanced by an overburden groundwater treatment system, a low-flow DNAPL collection system, an in-situ thermal (steam) system, and surfactant flushing or in-situ chemical oxidation under the railroad tracks. Construction workers and operations/maintenance workers involved would have been required to wear appropriate personal protective equipment (PPE) and Health and Safety Plans (HASP) and construction work plans would be in place to keep workers and the general public safe. The original remedies indicated operational periods of 18 months for the in-situ thermal system, 3 years for the SVE system and 5 years for the groundwater and DNAPL pump and treat system. The annual operation of remedial systems under the original remedy would have required significant energy consumption.

The proposed in-situ chemical reduction remedy will only take three to four months to implement, can be implemented quite safely as it will be applied using standard construction practices, requires minimal heavy equipment, does not require post construction operations and maintenance, is less energy dependent, and more likely to be effective at destroying contaminant mass in the short term than the original remedies.

4. 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.

The proposed remedy is expected to provide better long-term effectiveness, persistence and permanence (repeat injections will not be necessary) compared to the original remedies with regards to addressing the primary source of contamination. The proposed remedy, however, does not include soil excavation and removal, therefore the contaminant concentrations remaining in soil will be addressed by placing an industrial use restriction on the site. Such restrictions would likely have been required under the original remedies as well given the quantity of DNAPL in bedrock and the contaminant mass diffused in the bedrock matrix, which makes cleanup of the site to unrestricted conditions impractical.

5. 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.

The original remedies would have provided reduction of toxicity and volume on-site by excavating soil and by soil vapor extraction and off-site by in-situ thermal (via steam) in the DNAPL source area, and possibly beneath the railroad tracks pending the chosen in-situ treatment method. The on-site low-flow DNAPL recovery system, however, is likely to have minimal effect at reducing toxicity or volume within the proposed 5 years of operation given that the contamination is in fractured bedrock. If this system were turned off after 5 years it would have been likely that contaminants would continue to migrate and re-contaminate the area beneath and downgradient of the railroad tracks.

The proposed in-situ chemical reduction of the source area is likely to reduce contaminant mass by approximately 90% which will greatly reduce toxicity and future mobility.

6. Implementability. The technical feasibility 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.

The original and proposed remedies being considered are both technically feasible to implement, although the original remedy would be more challenging than the amended proposal given the various original remedies each requiring significant construction activities. The proposed in-situ chemical reduction remedy would be easier and quicker to implement since it requires minimal equipment (primary equipment is a drill rig) and causes very little disruption of existing site features.

Each remedy is administratively feasible to implement. Both remedies would require similar administrative activities related to obtaining environmental easements and access agreements to the off-site area. The proposed remedy will not require administrative activities associated with water and air discharge permits that the original remedy would require.

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.

The estimated present worth cost to carry out the proposed remedy is $3,410,000. These costs are primarily capital costs to implement the remedy and also include installation of additional monitoring wells and long-term monitoring for 30 years. Other than the maintenance of existing and possible future subslab depressurization systems, there are no long-term operational or maintenance costs associated with this remedy. The estimated cost to complete the original remedies proposed in March 1999 (on-site) and March 2002 (off-site) were $974,300 and $3,599,255 respectively, for a total of $4,573,555 ($5,977,459.12 based on present worth). These costs included installation of the treatment systems, operation and maintenance of the systems and long-term monitoring for 30 years. However, based on the updated conceptual site model (better understanding on DNAPL quantity and distribution) and a review of previously prepared feasibility studies and associated costs (as well as experience and estimated costs for implementing a pilot study at the Chemical Sales, Site 828086), information now indicates that the assumptions used in developing the original cost estimates resulted in an unrealistic cost to implement the original remedy and the actual costs would be significantly higher. In addition, the cost of the original remedies would further increase if updated to reflect inflation since the original estimate.

Therefore the proposed in-situ chemical reduction remedy is more cost effective than the previously proposed remedies.

This final criterion is considered a modifying criterion and is considered after evaluating those above. It is focused upon after public comments on the proposed ROD amendment have been received.

8. Community Acceptance. Concerns of the community regarding the proposed changes 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 final remedy differs significantly from the proposed remedy, notices to the public will be issued describing the differences and reasons for the changes.

SECTION 9: PROPOSED CHANGES

The Department is proposing to amend the ROD documents for the Scobell Chemical - NYSDOT site for OU1 and OU2. The changes to the selected remedies are summarized in Section 7.3 above and Table 2.

The elements of the proposed amended remedy listed below are identified as *unchanged, modified or new* when compared to the 1999 and 2002 proposed remedies:

- 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. (*modified – Green remediation principles were not required for remedial designs in 1999 and 2002*)

- In-Situ Chemical Reduction (pneumatic fracturing and injections of ZVI was used for costing purposes) will be implemented to destroy VOCs in the on-site and off-site source area (i.e. area of DNAPL). ZVI has been known to be effectively used for passive treatment systems such as permeable reactive barriers (PRBs), but in the case of the Scobell Chemical - NYSDOT Site where DNAPL is present in fractured bedrock, ZVI will be injected directly into the fractured bedrock within the source area (an approximately 180,000 square foot area, located both on-site and off-site) to destroy the contaminants. An initial ZVI injection will occur along with a contingency for a targeted ZVI injection based on long-term monitoring. If an alternate in-situ chemical reduction treatment is implemented, the approach used for ZVI will be assessed for its applicability. (*new*)

- Groundwater contamination (remaining after active remediation) will be addressed with long term monitoring. This will include the addition of monitoring wells downgradient of the site to evaluate the extent of groundwater contamination and facilitate future soil vapor intrusion investigations off-site, including actions to address potential exposure. Groundwater will be monitored for site related contamination and attenuation indicators which will provide an understanding of the (biological activity) breaking down of the contamination. It is anticipated that contamination in the treated portion of the source area will decrease by approximately 90% during the first year, effectively reducing migration of impacted groundwater and allowing the downgradient groundwater to attenuate over time. Reports of the attenuation will be provided after 5 and 10 years, and active remediation will be

proposed if it appears that natural processes alone will not reduce the contamination to below SCGs. (*modified*)

- The soil remediation component of the remedy will be revised to achieve industrial SCOs for the soils at the site. Based on the detected concentrations of contaminants (metals and pesticides) identified in surface and subsurface soils meeting the SCOs for industrial use, no additional remedial action is warranted. The site is also covered with a nominal twelve inch thick clay cap; therefore, the cover will be maintained and a Department approved SMP will be implemented that addresses preventing potential exposure to soils during excavation. An environmental easement will be placed on the property to limit the future use of the site to industrial use, which is consistent with the zoning of the site and surrounding area. (*new*)

- Imposition of an institutional control in the form of an environmental easement for the controlled property that: (*modified*)

  a) 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);

  b) allows the use and development of the controlled property for industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;

  c) restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH;

  d) requires any future buildings constructed at the site to have a sub-slab depressurization system, or a similar engineered system, to prevent the migration of vapors into the building from soil and groundwater; and,

  e) requires compliance with the Department approved SMP.

- A Site Management plan is required, which includes the following: (*new*)

  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 Easement discussed above.

     Engineering Controls: The existing clay cover discussed above, the existing off-site subslab depressurization system, and potential future subslab depressurization systems.

     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 institution control including any land use, and groundwater and surface water use restrictions;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls;
- address off-site contamination, including:
    - identify contamination existing on an adjacent property;
    - state that groundwater should not be use as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
    - state that an evaluation of potential exposure via soil vapor intrusion should be conducted if that land is developed.

b) A Monitoring Plan to assess the performance and effectiveness of the remedy (*modified*). The plan includes, but may not be limited to:

- monitoring of groundwater and fractured rock to assess the performance and effectiveness of the remedy;
- monitoring of off-site groundwater to delineate the extent of contamination;
- a schedule of monitoring and frequency of submittals to the Department;
- sampling for vapor intrusion of downgradient structures (existing and future), including provisions for actions to address exposure, if needed; and,
- monitoring of surface water conditions.

c) An Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, monitoring, inspection, and reporting of any mechanical or physical components of the remedy (*modified*). The plan includes, but is not limited to:

- maintaining existing site cover and access controls and Department notification; and providing the Department access to the site and O&M records.

SECTION 10: NEXT STEPS

As described above, there will be a public meeting and comment period on the proposed changes to the selected remedy. At the close of the comment period, the Department will evaluate the comments received and prepare a responsiveness summary which will be made available to the public. A notice describing the Department's final decision will be distributed electronically by way of the

county email listserv for Monroe County (see information on the county listservs in Section 2 of this document).

If you have questions or need additional information you may contact any of the following:

Jason Pelton, Project Manager
NYS Dept. of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233-7016
(518) 402-9814

TABLE 1
SUMMARY OF SELECTED REMEDIAL ACTIONS TO MEET REMEDIAL OBJECTIVES
PROPOSED DECISION DOCUMENT

Remedial Action Objectives (RAOs)	Selected Remedial Actions
Groundwater RAOs for Protection of Public Health	
Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards	• Achieved by the availability and connection to public water that is provided to this area. Groundwater is not the source of public water on-site or downgradient of the site. • Achieved with a deed restriction and associated site management plan that prohibits groundwater use at the Site. • Achieved by developing a Site Management Plan that will include protocols to safely handle groundwater encountered during potential future excavation activities. • Achieved by developing a Site Management Plan that includes periodic groundwater monitoring and a contingency for additional treatment to address residual groundwater contamination.
Prevent contact with, or inhalation of volatiles, from contaminated groundwater	• Achieved with a deed restriction and associated site management plan that requires potential future buildings constructed on the site be designed and constructed to address potential for soil vapor intrusion and demonstrate effectiveness of mitigation controls. • Achieved with a Site Management Plan that will include protocols for any subsurface work where groundwater and/or dense non-aqueous phase liquid (DNAPL) could be encountered to protect construction and utility workers. • Achieved by continuing to monitor groundwater including installation of additional groundwater monitoring wells to determine extent of off-site plume and to assess contamination concentrations over time. • Achieved by continuing to conduct soil vapor intrusion sampling as necessary at downgradient structures and if necessary, actions recommended to address exposures related to soil vapor intrusion would be implemented.
Groundwater RAOs for Environmental Protection	
Restore groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable	• Restoring the groundwater aquifer to pre-disposal/pre-lease conditions is not practical. The only possible alternatives to eliminate the entire DNAPL source would be excavation/blasting and removal of bedrock or possibly in-situ thermal treatment (IST). Both of these alternatives are cost prohibitive and are in excess of $11 million to implement. • The remedy will include In-Situ Chemical Reduction (e.g., pneumatic fracturing and injections of ZVI) throughout the source zone to decrease the overall contaminant mass and decrease migration of impacted groundwater. • Achieved by developing a Site Management Plan that includes periodic groundwater and surface water sampling to monitor the effectiveness of the treatment alternative and monitor downgradient natural

TABLE 1
SUMMARY OF SELECTED REMEDIAL ACTIONS TO MEET REMEDIAL OBJECTIVES
PROPOSED DECISION DOCUMENT

	attenuation.
Remove the source of ground or surface water contamination	• Restoring the groundwater aquifer to pre-disposal/pre-lease conditions is not practical. The only possible alternatives to eliminate the entire DNAPL source would be excavation/blasting and removal of bedrock or possibly in-situ thermal treatment (IST). Both of these alternatives are cost prohibitive and are in excess of $20 million to implement. • Additional investigation to better define the extent of the source area. • The remedy will include In-Situ Chemical Reduction (e.g., pneumatic fracturing and injections of ZVI) throughout the source zone to decrease the overall contaminant mass and decrease migration of impacted groundwater. • Achieved by developing a Site Management Plan that includes periodic groundwater and surface water sampling to monitor the effectiveness of the treatment alternative and monitor downgradient natural attenuation.
Prevent the discharge of contaminants to surface water	• Conduct In-Situ Chemical Reduction (e.g., pneumatic fracturing and injections of ZVI) throughout the source zone to decrease the overall contaminant mass in the source area thus reducing impacts to downgradient groundwater and surface water. • Achieved by developing a Site Management Plan that includes periodic groundwater and surface water sampling to monitor the effectiveness of the treatment alternative and monitor downgradient natural attenuation.
Soil RAOs for Protection of Public Health	
Prevent ingestion/direct contact with contaminated soil	• Achieved with the 9-12 inch thick clay cap that currently overlies the site. • Achieved with a deed restriction limiting the use of the site to industrial. • Achieved by developing a Site Management Plan, that will include a soil excavation plan for construction or utility work to protect workers from residual subsurface soil contaminants during potential future excavation activities.
Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.	• Achieved with the 9-12 inch thick clay cap that currently overlies the site. • Achieved with a deed restriction and associated site management plan that requires potential future buildings constructed on the site be designed and constructed to address potential for soil vapor intrusion and demonstrate effectiveness of mitigation controls.
Soil RAOs for Environmental Protection	

TABLE 1
SUMMARY OF SELECTED REMEDIAL ACTIONS TO MEET REMEDIAL OBJECTIVES
PROPOSED DECISION DOCUMENT

Prevent migration of contaminants that would result in groundwater or surface water contamination	• Achieved with the 9-12 inch thick clay cap that currently overlies the site. • The impacted soil is not located near a surface water source.
Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain	• Achieved with the 9-12 inch thick clay cap that currently overlies the site.
Sediment RAOs for Protection of Public Health	
Prevent direct contact with contaminated sediments	NA
Prevent surface water contamination which may result in fish advisories	NA
Sediment RAOs for Environmental Protection	
Prevent releases of contaminant(s) from sediments that would result in surface water levels in excess of (ambient water quality criteria)	NA
Prevent impacts to biota from ingestion/direct contact with sediments causing toxicity or impacts from bioaccumulation through the marine or aquatic food chain	NA
Restore sediments to pre-release/background conditions to the extent feasible	NA
Surface Water RAOs for Protection of Public Health	
Prevent ingestion of water impacted by contaminants	• Achieved by developing a Site Management Plan that includes periodic surface water sampling to monitor the effectiveness of the treatment alternative and monitor downgradient natural attenuation. • Surface water is not being used as a source of drinking water, and it is not a water body that is used for recreational use.
Prevent contact or inhalation of contaminants from impacted water bodies	• Achieved by developing a Site Management Plan that includes periodic surface water sampling to monitor the effectiveness of the treatment alternative and monitor downgradient natural attenuation. • Surface water is not being used as a source of drinking water, and it is not a water body that is used for recreational use.

TABLE 1
SUMMARY OF SELECTED REMEDIAL ACTIONS TO MEET REMEDIAL OBJECTIVES
PROPOSED DECISION DOCUMENT

Prevent surface water contamination which may result in fish advisories	• Site contaminants detected in surface water in do not exceed the surface water guidelines for the consumption of fish. • Achieved by developing a Site Management Plan that includes periodic surface water sampling to monitor the effectiveness of the treatment alternative and monitor downgradient natural attenuation.
Surface Water RAOs for Environmental Protection	
Restore surface water to ambient water quality criteria for the contaminant of concern	• Site contaminants detected in surface water in do not exceed the surface water guidelines for the consumption of fish. • Achieved by developing a Site Management Plan that includes periodic surface water sampling to monitor the effectiveness of the treatment alternative and monitor downgradient natural attenuation.
Prevent impacts to biota from ingestion/direct contact with surface water causing toxicity and impacts from bioaccumulation through the marine or aquatic food chain	• Site contaminants detected in surface water in do not exceed the surface water guidelines for the consumption of fish. • Achieved by developing a Site Management Plan that includes periodic surface water sampling to monitor the effectiveness of the treatment alternative and monitor downgradient natural attenuation.
Soil Vapor RAOs for Protection of Public Health	
Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site	• Achieved with the 9-12 inch thick clay cap that currently overlies the site. • Achieved with a deed restriction and associated site management plan that requires potential future buildings constructed on the site be designed and constructed to address potential for soil vapor intrusion and demonstrate effectiveness of mitigation controls. • Achieved by continuing to conduct soil vapor intrusion sampling as necessary at downgradient structures and if necessary, actions recommended to address exposures related to soil vapor intrusion would be implemented.

TABLE 2
SUMMARY OF SELECTED REMEDY CHANGES
PROPOSED DECISION DOCUMENT

Media:	Previous ROD Documents[1]	Amended ROD
Groundwater/DNAPL	OU1 - (1) Groundwater Pump & Treat; (2) DNAPL Recovery; (3) Long Term Monitoring	Combine on site and off site source areas (DNAPL source area): (1) In-situ chemical reduction (assumed Zero Valence Iron for FS) throughout entire DNAPL source area including under railroad tracks; (2) ICs (EE prohibiting use of groundwater for drinking purposes); (3) Well installation & Long Term Monitoring.
	OU2 - (1) In-situ Thermal via Steam; (2) In-Situ injections/surfactant flushing beneath railroad tracks; (3) Downgradient Pump & Treat or in-situ enhanced bioremediation after in-situ thermal; (4) Long-term Monitoring	
Soil	OU 1 - (1) Limited soil excavation for surface soil; (2) Soil Vapor Extraction for Subsurface soil	Surface and subsurface concentrations are below SCGs for Industrial Use. (1) ICs (EE for industrial use, SMP with soil excavation plan to protect exposure to construction and utility workers). (2) ECs (site fence and & maintain existing clay cover).
Surface Water	OU2 - (1) Long Term Monitoring	(1) - Long Term Monitoring
Soil Vapor/Indoor Air	OU1 – (1) Soil Vapor Extraction (see above); (2) Deed Restriction	(1) - Long Term Monitoring for vapor intrusion of future on site buildings & downgradient structures (existing and future), including provisions for actions to address exposure, if needed. (2) Long Term OM&M will include maintaining existing sub-slab depressurization systems, and new systems, if needed.
	OU2 - Would be addressed with Downgradient Pump & Treat or in-situ enhanced bioremediation (see above)	

[1] = OU1 ROD (NYSDEC 1999); OU2 ROD (NYSDEC 2002)

ROD = Record of Decision

DNAPL = dense non-aqueous phase liquid

FS = Feasibility Study

ICs = Institutional Controls

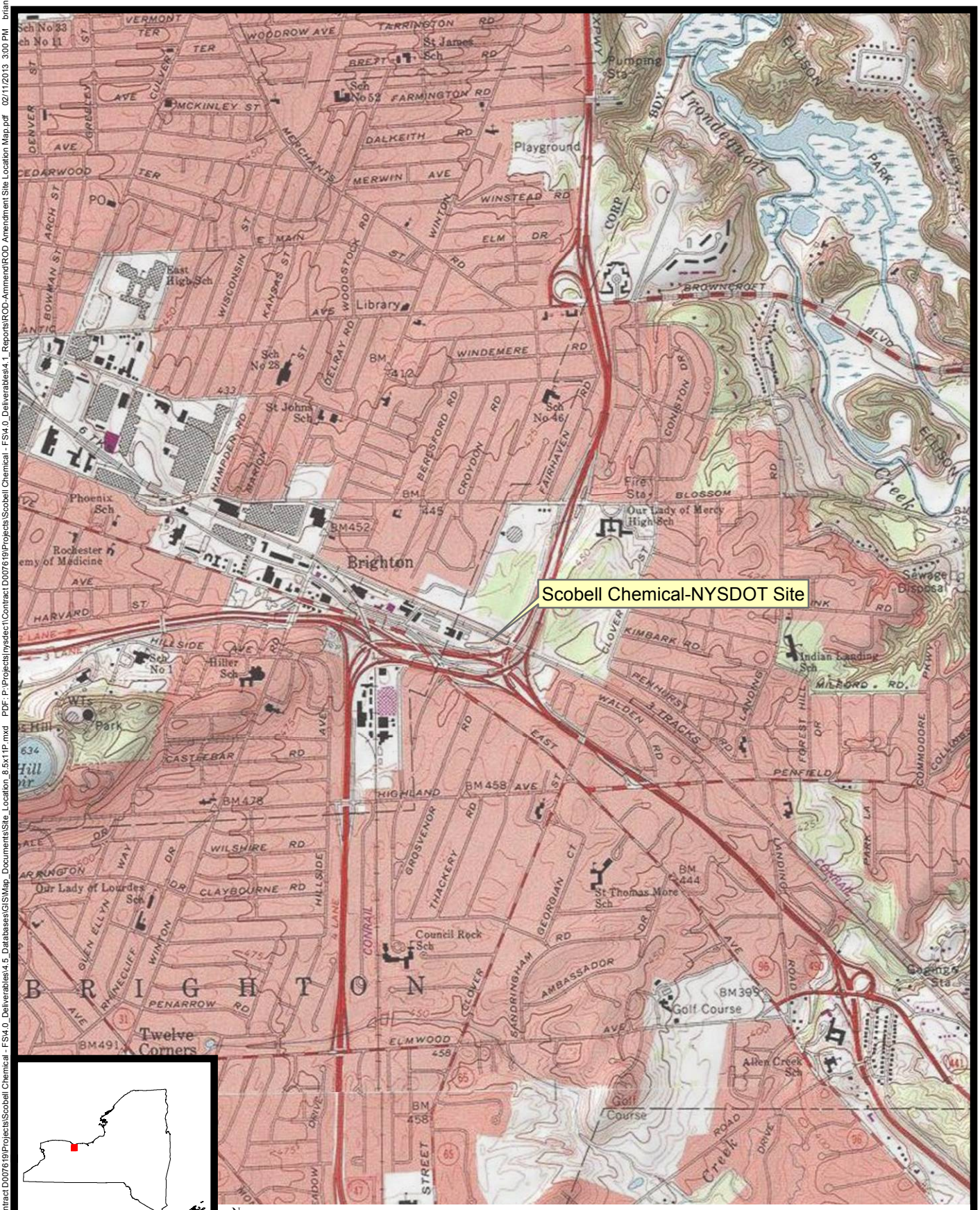
ECs = Engineering Controls

EE = Environmental Easement

SMP = Site Management Plan

SCGs = Standards, Criteria, and Guidance

OM&M = Operation, Maintenance, and Monitoring



Service Layer Credits: Copyright:© 2011 National Geographic Society, i-cubed

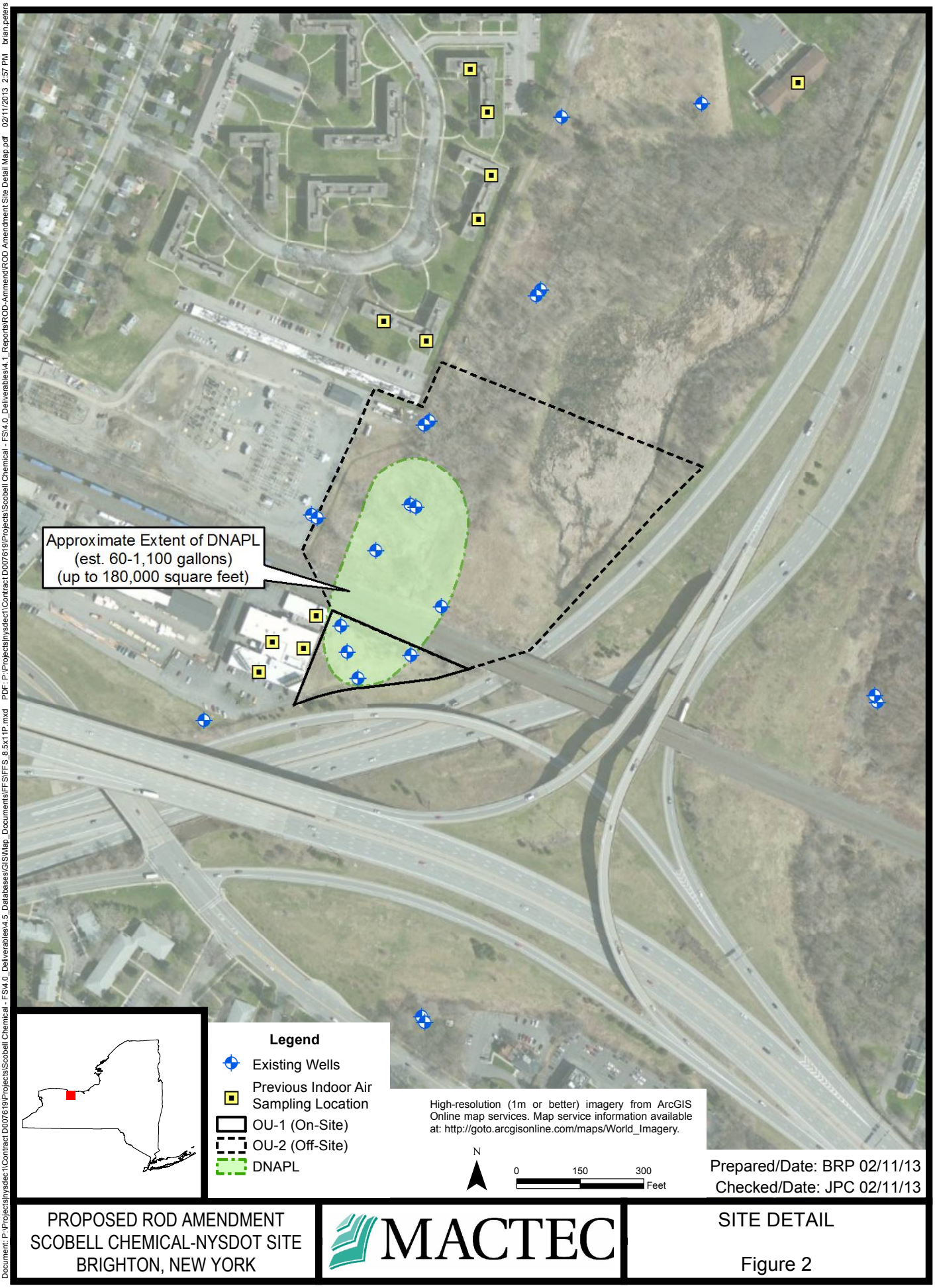
Prepared/Date: BRP 02/11/13
Checked/Date: JPC 02/11/13

PROPOSED ROD AMENDMENT
SCOBELL CHEMICAL-NYSDOT SITE
BRIGHTON, NEW YORK

MACTEC

SITE LOCATION

Figure 1



Prepared/Date: BRP 02/11/13
Checked/Date: JPC 02/11/13

PROPOSED ROD AMENDMENT
SCOBELL CHEMICAL-NYSDOT SITE
BRIGHTON, NEW YORK

MACTEC

SITE DETAIL

Figure 2