RECORD OF DECISION

RUCO Polymer Corp.
(Bayer OXY Hooker RUCO)
Operable Unit Number 05: Offsite Soil Vapor
State Superfund Project
Hicksville, Nassau County
Site No. 130004
March 2017

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

DECLARATION STATEMENT - RECORD OF DECISION

RUCO Polymer Corp. (Bayer OXY Hooker RUCO)
Operable Unit Number: 05
State Superfund Project
Hicksville, Nassau County
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Statement of Purpose and Basis

This document presents the remedy for Operable Unit Number: 05: Offsite Soil Vapor of the RUCO Polymer Corp. (Bayer OXY Hooker RUCO) site, a Class 2 inactive hazardous waste disposal site. The remedial program was chosen in accordance with the 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, and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40 CFR 300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for Operable Unit Number: 05 of the RUCO Polymer Corp. (Bayer OXY Hooker RUCO) site and the public's input to the proposed remedy presented by the Department. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the ROD.

Description of Selected Remedy

The elements of the selected remedy are as follows:

1. Remedial Design

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

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would

otherwise be a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and landscapes which balance ecological,
  economic and social goals; and
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development.

2. Vapor Mitigation
The warehouse building immediately to the east of the site, also known as former Grumman Plant 37, would be outfitted with a sub-slab depressurization system, or a similar engineered system, to mitigate the potential migration of vapors into the building from soil under the former Grumman Plant 37 building.

3. Engineering Controls: The Vapor Mitigation Systems discussed in item 2 above.

This plan includes, but may not be limited to:

- provisions for the management and inspection of the identified engineering controls; and

- the steps necessary for the periodic reviews and certification of the engineering controls.

4. Site Management Plan

A Site Management Plan (SMP) will include the following:

A. An Engineering Control Plan that identifies the engineering controls and details the steps necessary to ensure the engineering controls remain in place and are effective. Engineering Controls: The sub-slab depressurization system discussed in Paragraph 2 above; and

- Provisions for the management and inspection of the identified engineering controls;

- maintaining site access controls and department notification; and

- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

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

- Periodic monitoring of the sub-slab depressurization system to assess the performance and effectiveness of the remedy.

- a schedule of monitoring and frequency of submittals to the Department until such time as the Department determines this is no longer necessary;

- monitor along New South Road to confirm that residential sampling is not required to confirm that actions to address potential exposures in adjacent residential areas are not necessary;

C. An Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection and reporting of any mechanical or physical components of the active vapor mitigation system. This plan includes, but is not limited to:

- Procedures for operation and maintaining the system; and

- compliance inspection of the system(s) to ensure proper O&M as well as providing the data for any necessary reporting.

New York State Department of Health Acceptance

The New York State Department of Health (NYSDOH) concurs that the remedy for this site is protective of human health.

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 to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

March 31, 2017
Date

Robert W. Schick, P.E., Director
Division of Environmental Remediation

RECORD OF DECISION

RUCO Polymer Corp. (Hooker Chem)
Hicksville, Nassau County
Site No. 130004
March 2017

SECTION 1: SUMMARY AND PURPOSE OF THE SELECTED REMEDY

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 hazardous wastes at the site has resulted in threats to public health and the environment that will be addressed by the remedy selected by this record of decision (ROD). The disposal of hazardous wastes at this site, as more fully described in Section 6 of this document, has contaminated various environmental media. The selected remedy is expected to attain the remedial action objectives identified for this site for the protection of public health and the environment. This ROD identifies the preferred remedy, summarizes the other alternatives considered, and discusses the reasons for the selected remedy.

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

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

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repository:

Hicksville Public Library
169 Jerusalem Ave

Hicksville, NY 11801
Phone: 516-931-1417

A public meeting was also conducted on January 19th, 2017. At the meeting, the findings of the remedial investigation (RI) and the feasibility study (FS) were presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period was held, during which verbal or written comments were accepted on the proposed remedy.

Comments on the remedy received during the comment period are summarized and addressed in the responsiveness summary section of this ROD.

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 former RUCO (Rubber Co of America) Polymer Corporation facility (the site) consists of a 14-acre triangular-shaped parcel located just southeast of the intersection of New South Road and Commerce Place in the Town of Oyster Bay and the unincorporated Village of Hicksville, in Nassau County.

Site Features -
All structures on the site were demolished, leveled soil covered and seeded and the site is currently fenced with locking gates. Former structures included Plant 1, Plant 2, Plant 3, the Pilot Plant and the Administration Building and several warehouses attached to the manufacturing plants.

Current Zoning/Use -
The site is currently zoned light industry. The site is bordered north by industrial properties; south and west by LIRR tracks and commercial/industrial properties; and to the east by commercial properties. South and west of the manufacturing area of the site past the LIRR tracks and cross roads are some residences about ¼ mile away.

Historic Uses -
The manufacturing facility at the site was originally constructed in 1945. It was acquired by Hooker Chemical and Plastic Corporation/Occidental Chemical Corporation (OXY) in 1966 and operated to 1982. In 1982, the employees of the RUCO Division bought the company from OXY and it became known as the RUCO Polymer Corporation. In 1998, Sybron Chemicals, Inc., acquired the RUCO Polymer Corp. The facility was acquired by Bayer Material Science, LLC (Bayer) in 2000, which operated the site until it was shut down in 2002.

The facility produced polyester resins, polyurethane dispersions, polyvinyl chloride (PVC), and latex and ester compounds. From 1951 to 1975, three on-site sumps were used to dispose of wastewaters from PVC, latex and ester manufacturing processes. Waste waters contained resin solids, vinyl chloride, trichloroethylene and vinyl acetate. Styrene and butadiene were also discharged from the latex process. Two sumps also received wastewater containing an unknown amount of mixed glycols and alcohols from the ester processes at Plant 1. Between 1946 and 1978, the Pilot Plant used a heat transfer fluid that contained polychlorinated biphenyls (PCBs). The incidental release of this fluid to the ground resulted in soil contamination. Soil under a former underground fuel oil tank were also contaminated with PCBs.

The site was designated a Superfund site and placed on the United States Environmental Protection Agency's (EPA) National Priorities List (NPL) in 1984. The site has also been, over time divided into the following five operable units:

Operable Unit 1 (OU1)-USEPA: Waste Water Sumps: This OU consists of the waste water sumps that were located in the southeast corner of the site. Contaminants of Interest for OU1 are volatile organic compounds (VOCs), trichlorethene (TCE), perchlorethene and vinyl chloride monomer (VCM). A Record of Decision (ROD) for this OU (OU1) was issued by the USEPA in 1993. The selected remedy called for soil flushing of the remaining VOCs in the south sumps and a pump and treat system for impacted groundwater at the downgradient edge of the site. The soil flushing for solvents in the former sumps was completed in 2005. The downgradient and off-site groundwater pump and treat system was ultimately addressed in the OU3 ROD where the OU1 containment system remedy was removed from the remediation process.

OU2-USEPA- PCB Soil Removal: This OU consisted of soil and debris within four areas: (1) a "direct-spill area" in the vicinity of the Pilot Plant where PCB laden heat transfer fluid was released; (2) the area surrounding the Pilot Plant where heat transfer fluid was spread by on-site truck traffic; (3) sump 3 (AOC 30), which received surface water runoff from the vicinity of the Pilot Plant; and (4) former soil stockpile areas east and south of the Pilot Plant. The OU2 ROD, issued by the USEPA in 1990, required excavation and offsite treatment and disposal of soils with PCBs at concentrations greater than 10 ppm. The ROD also established cleanup criteria for excavation of areas contaminated with inorganics and poly-cyclic aromatic hydrocarbons (PAHs). Ultimately, cleanup under this OU for PCBs was limited to the Pilot Plant Area and the remainder of the site was dealt with under OU4.

OU3-USEPA- Off-site Groundwater: The OU3 remedy included the off-site groundwater remediation of the vinyl chloride (VCM) sub-plume, within the northern portion of the larger downgradient Navy-and Northrop Grumman regional VOC plume, created by direct discharge of VCM in the drainage sumps. The OU3 remedy also included VOCs monitoring, biosparge treatment and groundwater extraction and treatment. The USEPA issued the OU3 ROD in September 2000. The OU3 selected remedy, called for the groundwater containment system established by the OU1 ROD to be replaced with groundwater impacted by VOCs leaving or have left the site to be monitored and the plume tracked to ensure that the remaining downgradient VCM groundwater contamination to be extracted and treated by the downgradient Northrop Grumman containment system.

The OU3 ROD also called for bio-sparging in the downgradient and offsite groundwater in a downgradient location to destroy VCM in the off-site and downgradient groundwater and tracking the VOC and tentatively identified compound (TIC) remnant plume as it enters the Grumman Onsite Containment (ONCT) System for treatment. The bio-sparge system and off-site monitoring and treatment program has been operational since 2005 and continues to operate effectively.

Operable Unit 4 (OU4)- NYSDEC: On-Site Soils and On-Site Soil Vapor: The OU4 ROD was issued by the NYSDEC in December 2012. This OU includes all on-site soils and on-site soil vapor not previously addressed by the EPA OU2 ROD. This ROD was issued pursuant to the State Superfund program and also addresses the outstanding Resource Conservation and Recovery Act (RCRA) corrective action issues. The ROD required excavation and off-site disposal of soil with PCBs at concentrations greater than 10 parts per million (ppm) and a 1 foot cover to achieve a level of 1 ppm for PCBs for surface (0 to 1 foot) and 10 ppm for subsurface soil. Soil will be excavated at two locations with PAH concentrations above the commercial SCOs, so that total PAHs in subsurface soils remain less than 500 ppm. All the soil cleanup objectives established for this site were met through this operable unit. The remedy for OU4 also included all the aspects of site closure, requiring an environmental easement and site management that includes a soils management plan and any new buildings onsite to include vapor mitigation. The remedy has been implemented and, as part of this remedial program, all former site buildings were demolished.

Operable Unit 5 (OU5)-NYSDEC: Offsite Soil Vapor Intrusion: See the end of this section.

Site Geology and Hydrogeology:

The site is underlain by unconsolidated coastal plain deposits, mainly sands and gravels intermixed with lenses and types of clay that ultimately overlie bedrock. The general groundwater flow direction in the vicinity of the site is north to south. The closest body of water in the downgradient direction is the South Oyster Bay, about 12 miles south of the site. There are several aquifers in the area. The aquifer closest to the surface is the Upper Glacial Aquifer. Below the Upper Glacial Aquifer lie the Magothy aquifer and then

the Raritan Clay unit. The Magothy is ultimately separated from the Lloyd Aquifer by the relatively impermeable clay of the Raritan Formation. The Magothy aquifer is the primary source of water for municipal and industrial use in the vicinity of the site. Based on available information, groundwater at the site is located at depths greater than 50 feet below ground surface (bgs).

Operable Unit (OU) Number 05 is the final OU and is the subject of this document. OU5 addresses the off-site vapor intrusion.

A Record of Decision was issued previously for OU 01, 02, 03, and 04.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy. Since the remedy for this operable unit addresses off-site soil vapor intrusion only, site land use is not a consideration in the OU5 remedy selection. The local zoning and current use of the site and its surroundings are described in Section 3 and also covered in the OU4 ROD.

SECTION 5: ENFORCEMENT STATUS

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

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

Occidental Chemical Corporation (Formerly Hooker Chemical and formerly RUCO)

Bayer Material Science LLC/Covestro Inc.

Sybron Chemical Inc.

This OU5 remedial project is a responsible party funded Remedial Investigation/Feasibility (RI/FS) under the New York State Superfund Program. The Department, Occidental Chemical (former owner) and Bayer Corporation (current owner) entered into an Order on Consent for OU5 on June 1, 2013. The Order obligates the responsible parties to implement a full soil vapor remedial investigation for the off-site portion of the former facility. After the remedy is selected, the Department will approach the potentially responsible parties (PRPs) to implement the selected remedy. If an agreement cannot be reached with the PRPs, the Department will evaluate the site for further action under the State Superfund. The PRPs are subject to legal actions by the State for recovery of all response costs the State has incurred.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A Remedial Investigation (RI) for OU5 has been conducted. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during the various RI's:

- Research of historical information,
- conduct a soil vapor investigations,
- Sampling of waste, surface and subsurface soils, groundwater, and soil vapor,
- Sampling of surface water and sediment,
- Ecological and Human Health Exposure Assessments.

Most of the work listed above was completed during previous OU investigations. The OU5 RI was limited to soil vapor sampling both onsite and offsite and compiling previous SVI data.

The analytical data collected on this site includes data for:

- Soil vapor
- Indoor air
- Sub-slab vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

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

To determine whether the contaminants identified in various media are present at levels of concern, the data from the OU5 RI were compared to media-specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. The tables found in Exhibit A list the applicable SCGs in the footnotes. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

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

1,1,2-trichlorene (TCE)
tetrachloroethene (PCE)
vinyl chloride (VCM)

As illustrated in Exhibit A, the contaminant(s) of concern exceed the applicable SCGs for:

-Soil vapor intrusion;
-Indoor air.

6.2: Interim Remedial Measures

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

There were no IRMs performed at this site during the OU5 RI.

6.3: Summary of Environmental Assessment

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

Based upon the resources and pathways identified and the toxicity of the contaminants of ecological concern at this site, a Fish and Wildlife Resources Impact Analysis (FWRIA) was deemed not necessary for OU5.

An off-site soil vapor investigation was completed in 2011 and prior to the OU5 SVI. This included the off-site commercial building, also known as former Grumman Plant 37, located just east of the site. The investigation consisted of a building reconnaissance, product inventory, and sub-slab vapor sampling and indoor air sampling. Concentrations of PCE were detected in a majority of the sub-slab soil vapor samples; ranging from 11 micrograms per cubic meter (ug/$m^{3)}$ to 32,000 ug.m^3. TCE detections in the sub-slab soil vapor ranged from not detected (ND) to 66 ug/m^3. Indoor air detections of PCE and TCE

were within typical background values (i.e., PCE ranged from ND to 6.5 ug/m^3 and TCE ranged from ND to 0.25 ug/m^3).

Further east from former Plant 37 are former Grumman Plants 114, 115 and 116. These facilities are being evaluated under the deletion process of the Northrop Grumman RCRA permit. The 2011 SVI included one sampling effort beneath and inside the neighboring warehouse located to the east of the site. This investigation determined that while soil vapors were detected in some of the sub-slab areas beneath the building, no soil vapors were detected at actionable levels within the indoor air. The results of this supplemental investigation were submitted to the Department in the report entitled "Soil Vapor Intrusion Investigation Summary Report (August 2011)". Based on these findings the evaluation of off-site soil vapor was designated as OU5 and included a requirement for a comprehensive off-site soil vapor investigation of the surrounding area to the east, south and southwest, and to within the site boundaries to the north.

The OU5 RI work plan provided for a phased implementation approach. The phased approach began with a set of on-site and off-site soil vapor sampling points being installed and sampled to determine the current conditions across and off the site along the property boundaries and to the east of the former Grumman Plant 37 building (Phase 1), to the south, southwest and west. Based on the results of the Phase 1 samples, appropriate locations for sampling on adjacent properties to the west/southwest were selected (Phase 2). The off-site sampling stations were selected to be adjacent to on-site locations that exhibited the highest Phase 1 soil vapor concentrations. Overall, 11 sample locations to the east were taken offsite. This SVI data did indicate that former Plant 37 building, just to the east of the site, has elevated levels of sub-slab soil vapor contamination. For TCE, the sub-slab concentrations ranges from 76 to 570 ug/m^3. Other locations indicated levels that were not of concern. Nonetheless, the southwest area will be resampled to confirm this result. For more details on the OU5 soil vapor investigation refer to the Soil Vapor Section of Exhibit A.

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.*

The site is completely fenced, which restricts public access. However, people who enter the site could contact contaminants in the soil by digging or otherwise disturbing the soil. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in the contaminated groundwater 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 a soil vapor intrusion. There are no occupied buildings on the site and the inhalation of site contaminants in indoor air via soil vapor intrusion does not represent a concern for the site in its current condition. The potential exists for

the inhalation of site-related contaminants due to soil vapor intrusion for any future on-site redevelopment and/or building occupancy. The potential for soil vapor intrusion to affect indoor air quality in one off-site structure exists and additional off-site soil vapor intrusion evaluations were recommended.

6.5: Summary of the Remediation Objectives

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

The remedial action objectives for this site are:

Soil Vapor

RAOs for Public Health Protection

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

SECTION 7: SUMMARY OF THE SELECTED REMEDY

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

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

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

The selected remedy is referred to as the Sub-Slab Depressurization System Remedy.

The estimated present worth cost to implement the remedy is $350,000. The cost to construct the remedy is estimated to be $200,000 and the estimated average annual operating cost is $10,000.

The elements of the selected remedy are as follows:

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

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

2. Vapor Mitigation: The warehouse building immediately to the east of the site, also known as former Grumman Plant 37, will be outfitted with a sub-slab depressurization system, or a similar engineered system, to mitigate the potential migration of vapors into the building from soil under the building.

3. Engineering Control:

Engineering Controls: The Vapor Mitigation Systems discussed in item 2 above.

This plan includes, but may not be limited to:

- a provision for the management and inspection of the identified engineering controls; and

- the steps necessary for the periodic reviews and certification of the engineering controls.

4. Site Management Plan: An OU5 Site Management Plan (SMP) will include the following:

A. An Engineering Control Plan that identifies the engineering controls and details and the steps necessary to ensure the engineering controls remain in place and are effective.

Engineering Controls: The sub-slab depressurization system discussed in Paragraph 2 above; and:

- Provisions for the management and inspection of the identified engineering controls;

- steps necessary for the periodic reviews and certification of the engineering controls.

B. A monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:

- periodic monitoring of the sub-slab depressurization system to assess the performance and effectiveness of the remedy;

- a schedule of monitoring and frequency of submittals to the Department until such time as the Department determines this is no longer necessary;

- monitor along New South Road to confirm that residential sampling is not required to confirm that actions to address potential exposures in adjacent residential areas are not necessary;

C. An Operation and Maintenance (O&M) Plan to ensure continued operation, maintenance, inspection and reporting of any mechanical or physical components of the active vapor mitigation system. This plan includes, but is not limited to:

- Procedures for operation and maintaining the system; and

- compliance inspection of the system(s) to ensure proper O&M as well as providing the data for any necessary reporting.

Exhibit A

Nature and Extent of Environmental Impacts

This section describes the findings of off-site soil vapor investigations conducted at the site as OU5. As described in Section 6.1, samples were collected and analyzed from various areas of concern (AOCs) and off-site to characterize the nature and extent of contamination. Based on prior investigations for soil, groundwater and soil vapor, five operable units (OUs) were established to address contamination of these media. This operable unit (OU5) concerns soil vapor and is the final OU for this site.

On-site and off-site GW impacts as well as on-site soils and on-site soil vapor have been addressed in previous operable units. Sample data from OU4 was also included in the final OU5 soil vapor report. The results of the on-site soil vapor testing led to the conclusion that the extent of off-site soil vapor impacts should be investigated under OU5.

The site is currently vacant, and all former site buildings have been demolished. Redevelopment is planned with construction of new buildings. A summary of the findings of soil vapor investigations performed at the site are identified on Figures 3 through 6. These figures show the range of impacts found in the site soils and the data was compared to applicable SCOs. The evaluation of the potential for soil vapor intrusion for OU5 was driven by the presence of site related on-site soil vapor and off-site sub-slab soil vapor to the east at a neighboring building complex, also known as the former Grumman Plant 37 Building.

Soil Vapor

Soil vapor intrusion investigations focus on volatile organic compounds (VOCs). Prior to the creation of OU5, four soil vapor intrusion (SVI) sampling rounds were performed at the Site from 2007 to 2009. As part of the OU5 SVI, soil vapor samples were collected from 28 off-site locations and analyzed for VOCs. Eleven of those sample locations were re-visited, after the 2009 soil removal activities, to re-evaluate the presence of VOCs in soil vapor. Soil vapor sampling locations were selected to provide coverage across the site to confirm the previous OU4 soil vapor data and off-site component. Tetrachloroethene (PCE) ranged from 3.4 to 28,000 micrograms per cubic meter (ug/m^3). Trichloroethene (TCE) ranged from non-detect, or ND to 4,800 ug/m^3. Vinyl chloride detections in the OU5 RI ranged from all ND to with one sample result at 10,000 ug/m^3.

To determine whether actions are needed to address exposures related to soil vapor intrusion, the OU4 data were used to direct a number of additional sampling events to the east, west and south of the current site boundaries as part of OU5 activities. To the north, west and south and southwest along the Long Island Railroad Tracks, soil vapor concentrations decreased significantly. Based on a review of the on-site soil vapor data, off-site soil vapor to the north was not evaluated. This suggests additional SVI sampling is not needed in these directions, but additional sampling is needed to document a

decreasing trend and consistently low levels of site-related contaminants in certain areas. Based on a review of OU 4 and OU 5 soil vapor and other environmental data, it is unlikely that site related soil vapor intrusion is affecting the indoor air quality of most nearby structures. One soil vapor point (VP), VP 46, located on the southernmost portion just offsite in an area wedged between three property boundaries, exhibits a downward trend with all the other offsite sampling points, but with the last test result of 380 ug/m^3, still contains levels that are considered elevated. The highest VOC concentrations detected in soil vapor on-site and along the eastern property boundary.

The evaluation of the potential for soil vapor intrusion for OU5 used the OU4 data to direct a number of additional sampling events to the east, north, west and south of the current site boundaries. To the north, west, and south and southwest along the Long Island Railroad Tracks, soil vapor concentrations dropped off significantly. Therefore, soil vapor intrusion is not an issue in these directions. One soil vapor point, VP 46, located on the southernmost portion just offsite in an area wedged between three property boundaries, exhibits a downward trend with all the other off-site sampling points, but with the last test result of 380 ug/m^3, still contains levels that are considered elevated. The highest VOC concentrations detected in soil vapor on-site and along the eastern property boundary identified at the revisited locations were generally the same as those identified at the respective locations during the previous soil vapor investigations.

All the SVI field work for OU4 and OU5 identified the presence of site related soil vapor contamination on-site and to the east beneath a neighboring building complex. Based on the findings of the Remedial Investigation, the presence of chlorinated VOCs resulted in the contamination of soil vapor on-site and for the off-site building immediately to the east. The conclusion from the soil vapor data evaluation is that the former Grumman Plant 37 Building has the potential for soil vapor intrusion. TCE, PCE and Vinyl Chloride were identified in the initial soil vapor screening assessments, along site boundaries, and in various paved areas. Measures are needed to address potential exposures from soil vapor intrusion from beneath the slab or the former Plant 37 building.

The PCE concentrations in the two off-site probes installed along New South Road, VP-41 and VP-42, were 2,100 and 2,900 ug/m^3, respectively. These elevated concentrations are not consistent with the lower concentrations detected in probes VP-1 were non-detect and VP-2 410 ug/m^3, which are located on-Site along the west Site boundary in close proximity to VP-41 and VP-42. VP-41 and VP-42 along New South Road have decreased from 2,100/2,900 in November 2014 3.4 to 3.7 ug/m^3 in December 2015, respectively.

Along the southeast corner of the site, in an area surrounded by property boundaries, VP-46 and the other surrounding soil gas vapor points have decreased but is still elevated for soil vapor concentrations in the localized VP\-46 area. The PCE concentration in the VP-46 offsite probe installed south of the Site, was 380 ug/m^3. This concentration is lower than the adjacent on-site probe VP-9 with a PCE concentration of 950 ug/m^3 but is still an elevated soil gas reading.

The PCE concentration in the two eastern probes located east of the former Plant 37 building, VP-21 and VP-47, were 2,600 ug/m³ and 130 ug/m³, respectively. Probe VP-47 is located approximately 120 feet east of VP-21 and indicates a significant decrease in PCE concentrations over a relatively short distance in the eastward direction moving away from the Site. The final sampling for TCE concentrations in VP-20, VP-21, VP 22, VP-41 and VP-42, were all non-detect at the associated method reporting limit. The only detected TCE was in VP-46 at 2.9 ug/m³ and VP-47 at 26 ug/m^3 and 43 ug/m^3.

The Phase 2 PCE concentrations in the five locations southeast of the site and the LIRR ranged from non-detect to 70 ug/m3. The results from the probes closest to the residential area. The PCE concentrations in the on-site probe nest VP-1/VP-30 decreased to non-detect. The PCE concentrations in the three probes to the east of the former Plant 37 have significantly decreased.

The NYSDOH recommended mitigation based on the combination of indoor air and sub-slab concentrations detected in former Plant 37.

Exhibit B

Description of Remedial Action Alternatives

This section summarizes remedial alternatives that were considered based on the Remediation Action Objectives, to address the impacted media identified in more detail at the site in Section 6.5 of the PRAP and Exhibit A. The soil vapor remedial action objectives include a detailed evaluation of alternatives which eliminate or control risks to public health and the environment and presented in the New York State Department of Health Guidance for Soil Vapor Intrusion (2006).

Alternative 1: No Action

The no action alternative is evaluated as a procedural requirement and as a basis for comparison. This alternative leaves the site in its present condition relative to the vapor intrusion and does not provide any additional protection to public health and the environment.

Alternative 2: Site Controls and Monitoring

A component of this alternative would be implemented by the environmental easement required under the Record of Decision for OU4. One adjacent off-site building would be monitored for soil vapor intrusion to provide the information to determine if the potential for human exposure exists and additional actions are needed to address the potential for exposures related to soil vapor intrusion.

The capital costs associated with this alternative are related to periodic monitoring required in the SMP. Annual costs associated with this alternative include the annual monitoring costs. This alternative could be implemented in the existing offsite structure. Any new construction of mitigation system(s) would be the responsibility of the new owner and those costs are not included here.

Present Worth: $400,000

Capital Cost:..... $0.00

Annual Costs:..... $25,000

Alternative 3: Sub-Slab Depressurization Systems (SSDS)

This alternative requires installation of an SSDS (or equivalent system) until such time as it is demonstrated that sub-slab vapor mitigation is no longer required there and there is no longer potential for soil vapor to impact the indoor air at the former Plant 37 structure, evaluation of the potential for SVI for any new construction and actions taken to mitigate exposures, if necessary. The institutional controls would include, at a minimum:

Institutional and Engineering Control Plan;

- Installation and maintenance of the SSDS, or similar engineered system; and

A Site Management Plan (SMP) would also be in place also include, at a minimum:

- Maintenance and periodic inspection of the SSDS, or similar engineered system.

The capital costs associated with this alternative include costs associated with design, pilot testing and offsite building SSD construction costs and mobilization and construction for the one offsite structure. This alternative could be implemented in an estimated 6 to 12 months. Annual costs consist of operating and maintaining the SSD system blower and periodic confirmatory monitoring estimated for 10 years.

Present Worth: $350,000

Capital Cost:..... $200,000

Annual Costs:..... $10,000.00

Exhibit C

Remedial Alternative Costs

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
Alternative 1: No Further Action	$0	$0	$0
Alternative 2: Site Controls and Monitoring	$0	$25,000	$400,000
Alternative 3: SSD Systems	$200,000	$10,000	$350,000

Exhibit D

SUMMARY OF THE SELECTED REMEDY

The Department has selected Alternative 3, Sub-Slab Depressurization System (s) as the remedy for this operable unit of the site. The elements of this remedy are described in Section 7.2.

Basis for Selection

The selected remedy is based on the results of the remedial investigations and the evaluation of alternatives. The criteria to which potential remedial alternatives are compared are defined in NYCRR Part 375. A detailed discussion of the evaluation criteria and comparative analysis is included in this Record of Decision. The first two evaluation criteria are termed “threshold criteria” and must be satisfied in order for an alternative to be considered for selection.

1. Overall Protection of Human Health and the Environment

This criterion is an overall evaluation of each alternative’s overall ability to protect public health and the environment. Alternative 1 relies on natural attenuation processes and would not monitor for or reduce constituent concentrations to adequately prevent potential exposure to soil vapor. Therefore, Alternative 1 is screened out from further evaluation. Alternative 2 and 3 are protective of public health because actions would be implemented to monitor and, as necessary, abate human exposures related to soil vapor intrusion at an adjacent off-site building and in future and existing buildings in other areas of contamination.

2. Compliance with New York State SCGs

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

Alternative 1 relies on natural attenuation processes and would not monitor for or reduce constituent concentrations to adequately prevent potential exposure to soil vapor. Therefore, Alternative 1 is screened out from further evaluation. Actions completed under Alternatives 2 and 3 would be in accordance with the state's soil vapor intrusion guidance and therefore in compliance with New York State SCGs.

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

3. Long-Term Effectiveness and Permanence

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

Both Alternatives 2 and 3 would reduce potential contact with soil vapor through continued long-term monitoring activities with a reduced monitoring under Alternative 3.

4. Reduction of Toxicity, Mobility, or Volume

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

Alternative 2 includes monitoring but does not include implementation of active treatment processes to reduce the mobility of COCs in soil vapor. Alternative 3 would reduce the mobility of COC's through the operation of the sub-slab depressurization system in former Plant 37.

5. Short-Term impacts and Effectiveness

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

There are no short-term negative impacts associated with Alternative 2. There is a very limited potential for short-term impacts under Alternative 3 associated with the SSD construction, estimated time of construction is one month.

6. Implementability

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

Each of the alternatives could be implemented at the site. Alternative 2 is most implementable. Alternative 3 would require minimal construction and coordination activities.

7. Cost Effectiveness

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

Alternative 3 is the least expensive of the action alternatives, compared to Alternative 2. With Alternative 2, the potentially impacted soil vapor would not be addressed other than by institutional controls and monitoring costs whereas Alternative 3 has moderate costs at $350,000 present worth, is the least expensive and offers the best overall protection of human health of the action alternatives.

8. Land Use.

When cleanup to pre-disposal conditions is determined to be infeasible, the Department may consider the current, intended, and reasonable anticipated future land use of the site and its surroundings in the selection of the soil remedy. None of the alternatives preclude the current, intended, and reasonable anticipated future land use.

9. Community Acceptance.

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

Concerns of the community regarding the investigation, the evaluation of alternatives, and the PRAP are evaluated. A responsiveness summary was prepared that describes public comments received and the manner in which the Department has address the concerns raised. The selected remedy does not differ significantly from the proposed remedy.

Alternative 3 was selected because, as described above, it satisfies the threshold criteria and is superior for all but one of the balancing criteria.

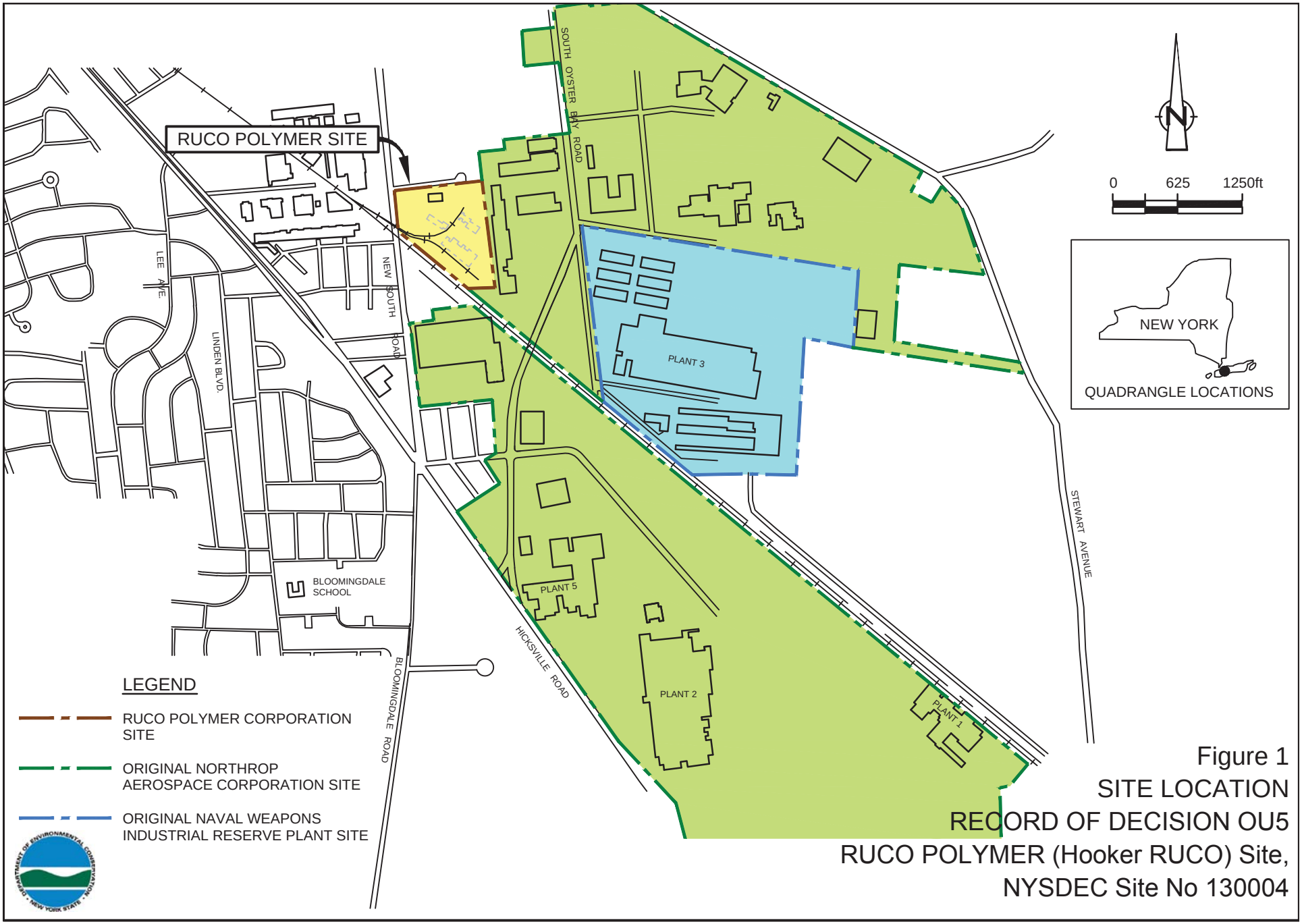


Figure 1
SITE LOCATION
RECORD OF DECISION OU5
RUCO POLYMER (Hooker RUCO) Site,
NYSDEC Site No 130004

Credit: From OU5 OXY RI Report

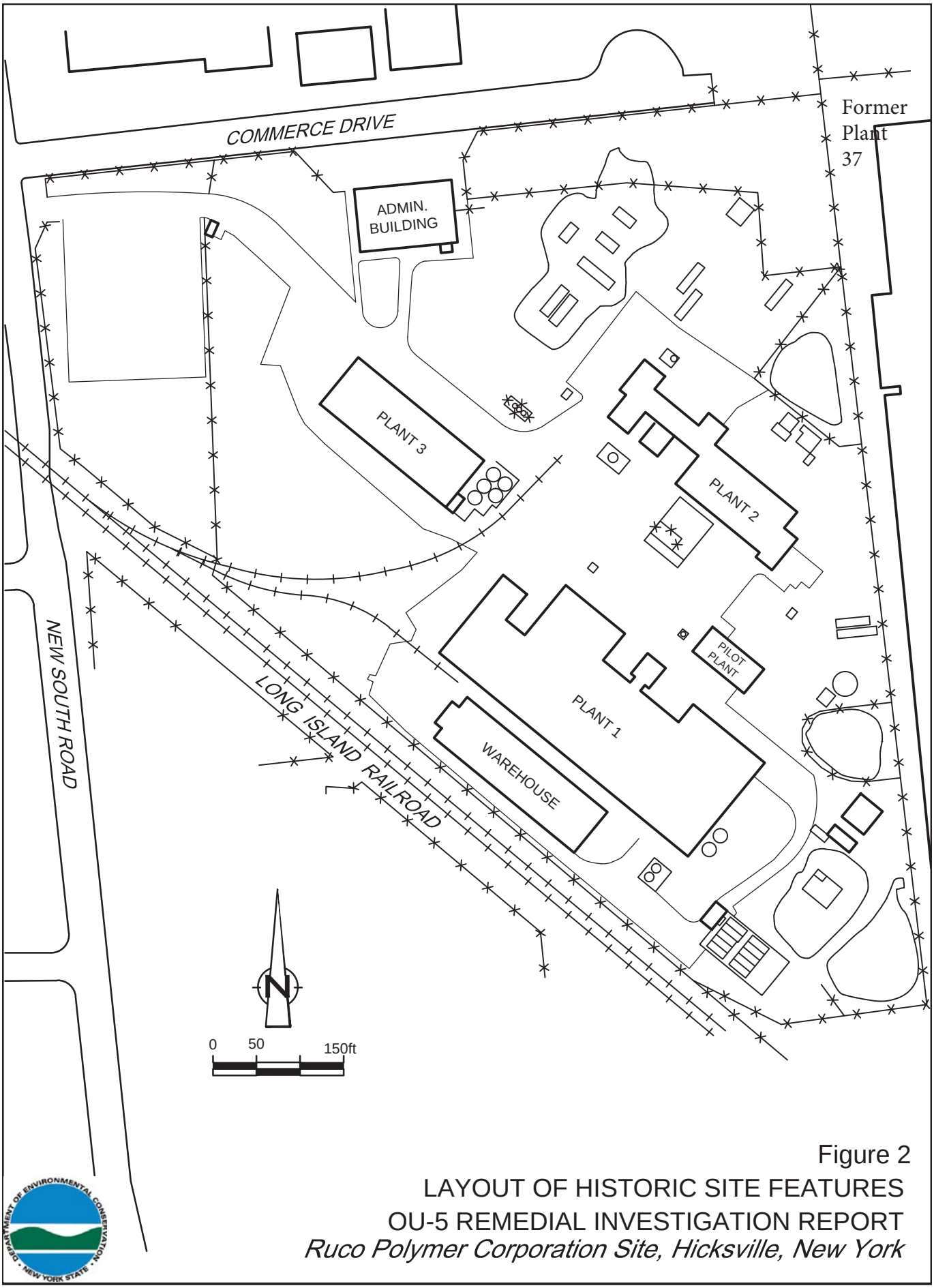
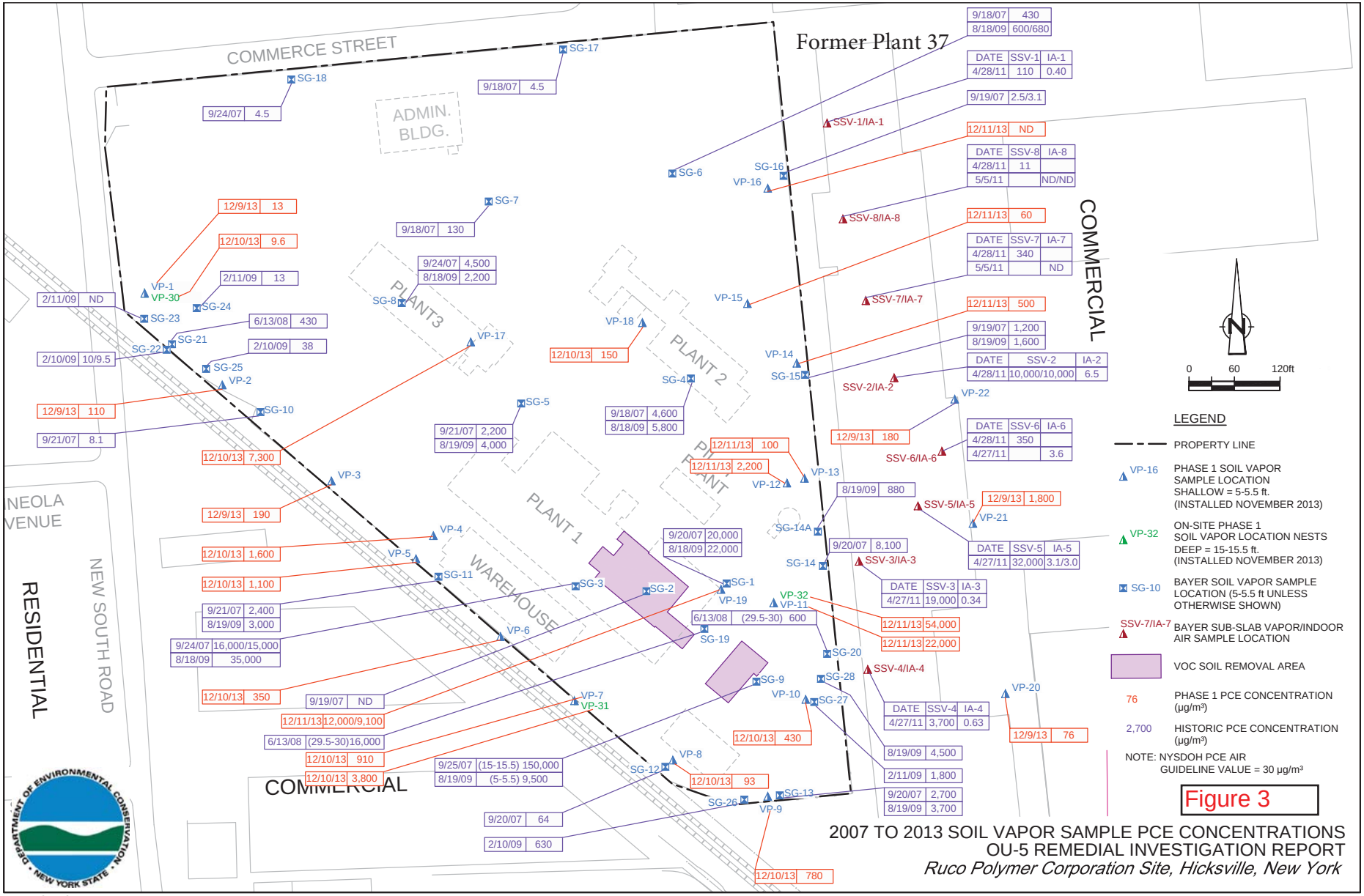


Figure 2
LAYOUT OF HISTORIC SITE FEATURES
OU-5 REMEDIAL INVESTIGATION REPORT
Ruco Polymer Corporation Site, Hicksville, New York

From OXY OU5 RI Report



2007 TO 2013 SOIL VAPOR SAMPLE PCE CONCENTRATIONS
OU-5 REMEDIAL INVESTIGATION REPORT
Ruco Polymer Corporation Site, Hicksville, New York

From OXY OU5 RI Report

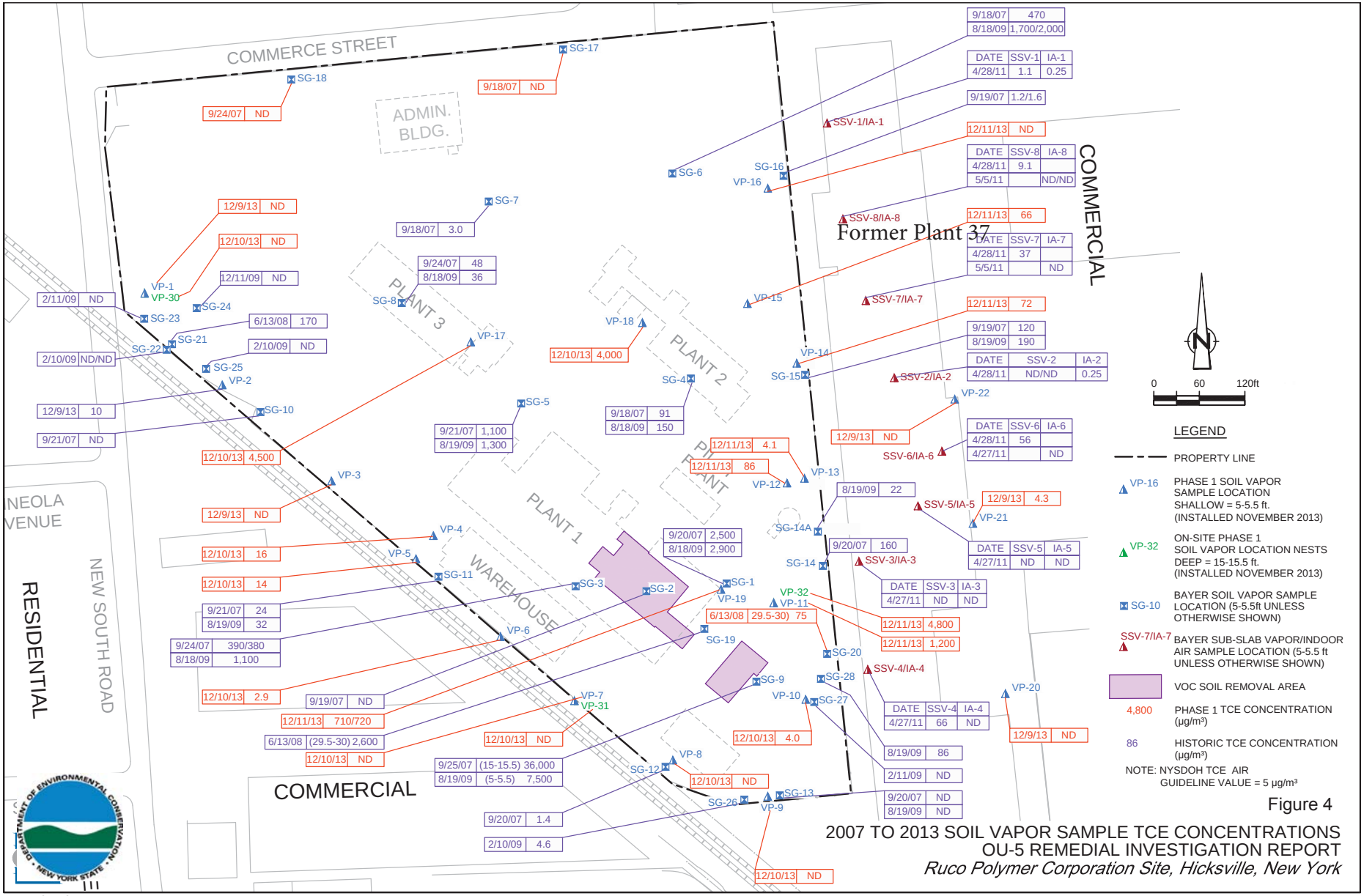


Figure 4

2007 TO 2013 SOIL VAPOR SAMPLE TCE CONCENTRATIONS
OU-5 REMEDIAL INVESTIGATION REPORT
Ruco Polymer Corporation Site, Hicksville, New York

From OXY OU5 RI Report

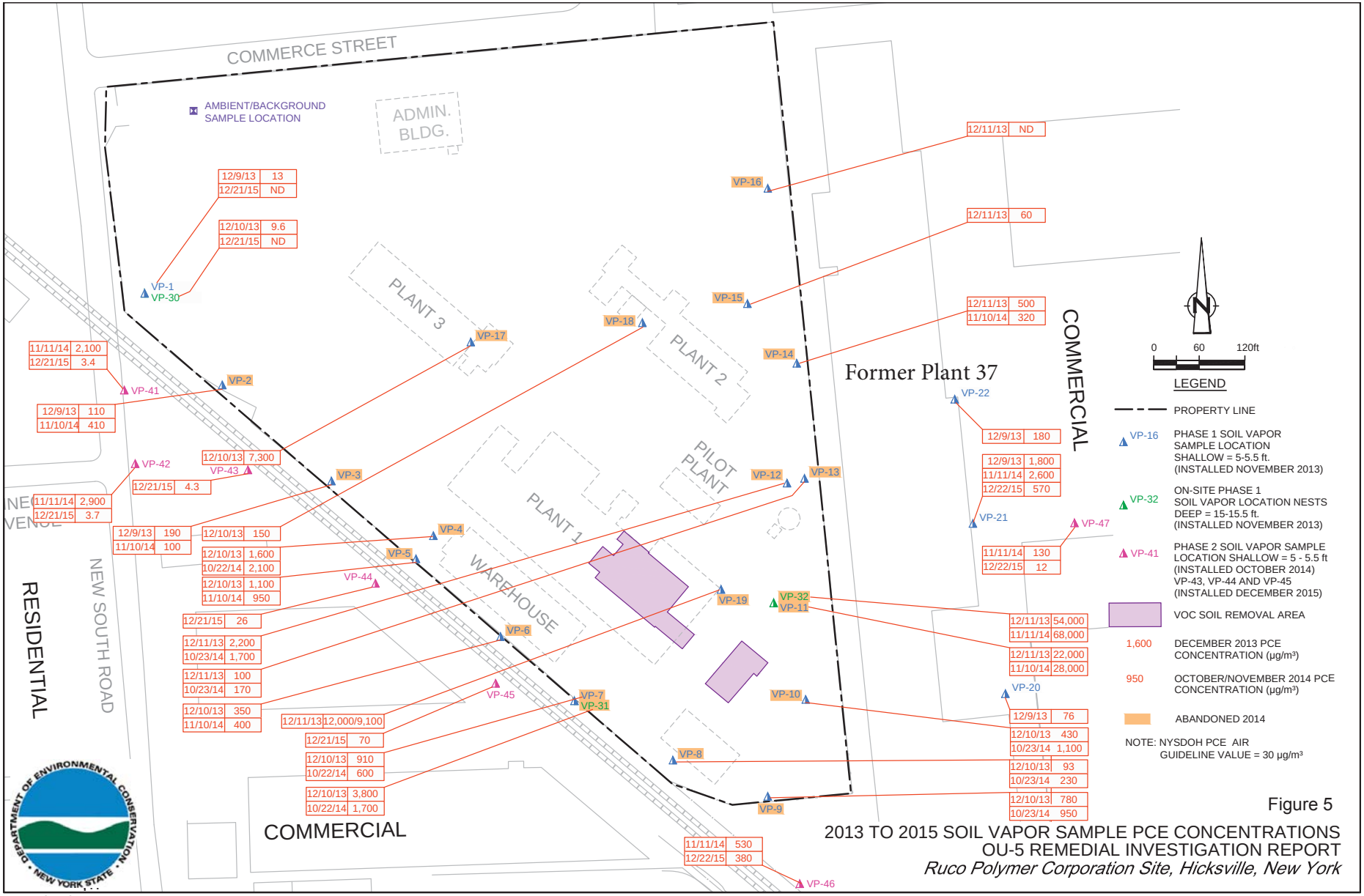


Figure 5

2013 TO 2015 SOIL VAPOR SAMPLE PCE CONCENTRATIONS
OU-5 REMEDIAL INVESTIGATION REPORT
Ruco Polymer Corporation Site, Hicksville, New York

From OXY OU5 Report

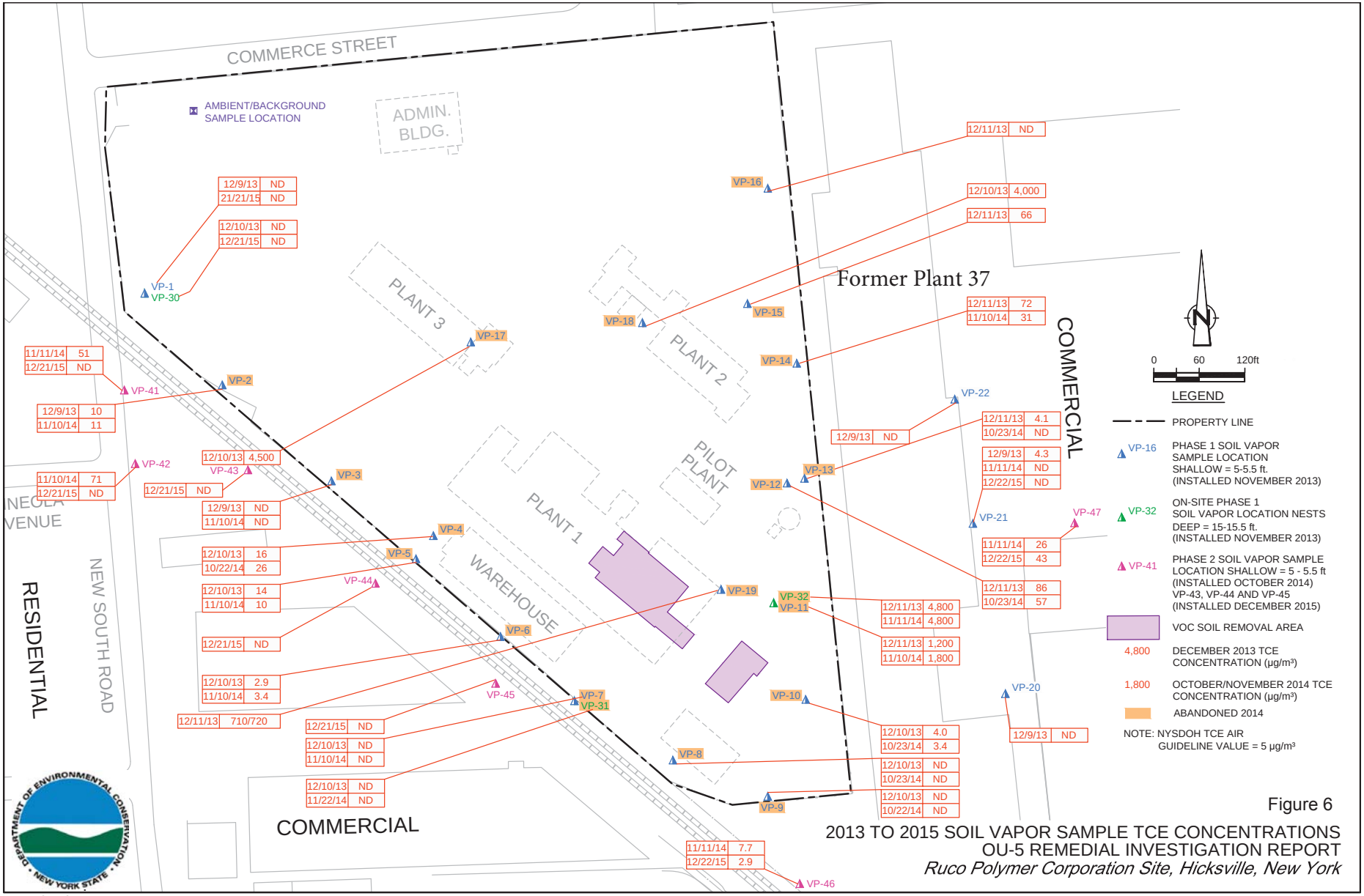


Figure 6

2013 TO 2015 SOIL VAPOR SAMPLE TCE CONCENTRATIONS
OU-5 REMEDIAL INVESTIGATION REPORT
Ruco Polymer Corporation Site, Hicksville, New York

From OXY OU5 RI Report

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

RUCO Polymer Corp. (Hooker Chem) Site, Site No. 130004
EPA CERCLA & New York State Superfund Project
Hicksville, Nassau County, New York
Site No. 130004

The Proposed Remedial Action Plan (PRAP) for the Bayer OXY Hooker RUCO Polymer Corp. site was prepared by the New York State Department of Environmental Conservation (the Department) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on January 9th, 2017. The PRAP outlined the remedial measure proposed for the contaminated soil vapor at the Bayer OXY Hooker RUCO Polymer Corp site.

The release of the PRAP was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed remedy.

A public meeting was held on January 19, 2017, which included a presentation of the alternative analysis (RI/AA) for the RUCO Polymer Corp. (Hooker Chem) Site, as well as a discussion of the proposed remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed remedy. These comments have become part of the Administrative Record for this site. The public comment period for the PRAP ended on February 9, 2017.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the Department's responses:

Bayer OXY Hooker RUCO Polymer Corp. Site Comments/Questions from 1/18/17 Public Meeting

Comment 1: Has there been any investigation by the homes south and west of the site?

Response 1: Yes, the potential responsible parties (PRPs) sampled along the south side of the Long Island Railroad Tracks, along New South Road and along the western edge of the site.

Comment 2: Will the Simone property be under an environmental easement?

Response 2: No. The environmental easement will be filed only for the property comprising the class 2 site. However, there will be two Site Management Plans, where one will address the onsite requirements and the second to address the adjacent Simone property and the additional offsite sampling requirements.

Comment 3: Where is this site in relation to the senior housing complex?

Response 3: There are three senior housing developments on the former Grumman property. Two are located over one mile to the south/southeast of the site, just off Central

Avenue. There is a third senior housing development is off to the east of the RUCO Polymer site.

Comment 4: Has any groundwater investigations been conducted in association with this site?

Response 4: Yes. A number of groundwater investigations have been conducted by the PRPs at the site under the USEPA Administrative Order on Consent as part of the USEPA investigation. Specifically, Operable Units (OUs) 1 and 3, which included the onsite and offsite groundwater sampling, investigation and ultimate remediation.

Comment 5: When was the latest sub-slab investigation done at Plant 37? What are the latest indoor air results and did any indoor air sample results exceed guidance values?

Response 5: The most recent soil vapor intrusion investigation, which included the collection and analyses of sub-slab soil vapor and indoor air samples, was conducted in April 2011. The results are discussed in more detail in the Exhibits to the ROD. The indoor air samples for the former Plant 37 did not exceed NYSDOH Guidance Values for tetrachloroethene (PCE) or trichloroethene (TCE).

Comment 6: Are sub-slab depressurization (SSD) systems used at other sites in Nassau County? Do they work?

Response 6: Yes, there are numerous installations around the county which have been demonstrated to mitigate potential impacts to public health.

Comment 7: How far can vapors travel laterally?

Response 7: This is highly variable and depends on the contaminant, the soil geology, the degree to which the ground surface is covered by pavement and buildings, and the concentration of the contaminant source.

Comment 8: How are soil vapors traced horizontally and how far can they travel underground?

Response 8: Soil vapors are traced in the soil by sampling soil gas via a number of soil vapor sampling techniques. These techniques include direct push temporary sampling points as well as with hand auger installed sample probes.

Comment 9: Would soil vapor also travel southeast, like how the groundwater plumes have travelled? Does soil vapor travel in any one direction? How does the vapor move?

Response 9: While soil vapor frequently travels in the same direction as groundwater contamination, it does not always do so. It travels in the pore spaces of the soil and generally travels away from a source area. Also see Response 7.

Comment 10: Are these soil vapors lighter than air?

Response 10: By definition, soil vapor is the air found in the pore spaces between soil particles. People can be exposed to contaminated soil vapor when the vapor is drawn into the building due to pressure differences and mixed with the indoor air.

Response 11: Is the site being cleaned up to commercial or industrial standards?

Response 11: While most soil contamination was removed to a level that would allow for residential use, the environmental easement will restrict site use to commercial uses.

Comment 12: How thick is the soil cover at the site?

Response 12: Where a soil cover is required, it is a minimum of one foot of clean soil with the top 6" suitable to support vegetation.

Comment 13: Was the area north and west of the former site investigated for soil vapor?

Response 13: Yes, the soil vapor investigation was implemented in all directions outwards from the known source area(s) of the site.

Comment 14: Were any homes near the site sampled for vapors from the site? Are the neighbors being affected by the soil vapors?

Response 14: Soil vapor sampling was conducted in all directions away from the source area and specific to this question, between the site and the residential area to the south-west. However, none of the homes to the southwest of the site were sampled. Based on review of the sampling data, this was determined by NYSDEC and NYSDOH not to be necessary at that time. However additional confirmatory soil vapor monitoring to the south and southwest is a part of the selected remedy.

Comment 15: Where will the soil vapor extraction system for Plant 37 be installed? Inside or outside the building?

Response 15: The Potential Responsible Party (PRP) is currently working on the design for the former Plant 37 Sub-Slab Depressurization SSD system which will include a determination of the location of the vapor extraction system.

Comment 16: Will a sub slab system have to be put in for future buildings or just existing buildings?

Response 16: Any future buildings on the site must include an SSD system. An evaluation is required for the potential for soil vapor intrusion in any new buildings on the former Grumman Plant 37 (Simone) property and appropriate actions will be taken to address potential exposures as necessary.

Comment 17: Can PVC pipe be used as part of a sub-slab system?

Response 17: Yes, generally, the piping used for SSD systems is made from PVC.

Comment 18: When do you think this system at Plant 37 will be put into place?

Response 18: As indicated in Response 15, the PRP is working on the design. Based on the current schedule the installation of the SSD system at former Plant 37 is expected to occur the summer of 2017.

Comment 19: How long will (air) testing go on at this site?

Response 19: This will depend on the review of the compiled results of the periodic sampling program to be implemented with the SSD remedy.

Comment 20: How often will the former Plant 37 be monitored under the chosen alternative?

Response 20: Plant 37 will be monitored periodically. Different aspectof the required sampling will have different schedules. A specific schedule for each component will be incorporated into the Site Management Plan.

Comment 21: How long will the SSD systems be operating and when will the monitoring be completed?

Response 21: The system will be operated until the Department, in consultation with the NYSDOH agree that it is no longer needed. Also see Response. 20.

Comment 22: When the depressurization system achieves its objectives what happens to that system then? What is the decommissioning process and whom will remove the system when it is no longer needed?

Response 22: Once the system achieves the remedial action objectives, the system can be decommissioned. Initially the system will be temporarily shut-down to determine if the soil vapor levels remain acceptable. If testing following the temporary shutdown demonstrate the system is no longer needed, it can be permanently decommissioned. The actual disposition of the system will be determined by the PRPs in consultation with the property owner.

Comment 23: Have sub-slab depressurization (SSD) systems been used in other locations in Nassau County. What do they look like? Are they visually obtrusive?

Response 23: See Response 6.

Comment 24: Does DEC have a time when this site will be done? What is the schedule?

Response 24: The PRPs have already been in contact with the property owner to install the SSD system and Department expects system installation to move quickly once the Record of Decision is signed. After that, the system will be operated for as long as necessary. The operational timeframe for the SSD system can vary so an exact schedule is not available at this time.

Comment 25: Who is paying for this work?

Response 25: The PRPs are funding this remediation.

GHD, on behalf of Covestro and Glenn Springs Holdings, Inc. (GSH), in a letter dated January 13, 2017, provided the following comments:

Comment 26: Covestro and GSH agree with the sub-slab depressurization system mitigative measure selected in the PRAP and look forward to working with the NYSDEC to design and implement the mitigative measure.

Response 26: Comment noted.

Comment 27. GSH further agree that the remedy will implement Green remediation principles and techniques (such as wind driven turbines) to the extent feasible.

Response 27: Comment noted.

Comment 28. There appears to be text missing in the following:
1. Section 4A, first paragraph:"… and details the necessary _____ to ensure the following…"

2. Exhibit B, Alternative 2, second paragraph:"…costs associated with this alternative include the annual ____."

Response 28: The Department has made the appropriate changes to the text in the ROD.

Comment 29. The last sentence in the first paragraph of Exhibit A, Soil Vapor which states "Vinyl chloride ranged from ND to 10,000 µg/m^3." does not properly characterize the vinyl chloride presence. This could be interpreted that vinyl chloride was present throughout the site at various concentrations whereas all sample results were ND except for one location which had a concentration of 10,000 µg/m^3.

Response 29: The Department has made the appropriate changes to the text in the ROD.

Northrop Grumman Systems Corporation, in a letter dated February 3rd, 2017 provided the following comments:

Comment 30. The PRAP states that an off-site commercial building to the east of the site (referred to as "former Grumman Plant 37") had detections of the constituent's tetrachloroethene ("PCE") and trichloroethene ("TCE") in sub-slab soil vapor at levels significant enough to require a vapor mitigation system. The PRAP does not indicate that investigation of soil gas was continued east of Plant 37 to determine the eastward extent of soil vapor impacts, except for sampling locations described as VP-21, VP-22 and VP-47. The PRAP does not recommend any further sampling east of Plant 37 and concludes

in its summary of the Site Assessment, that except for Plant 37 and an area to the southwest, “Other locations indicated levels that were not of concern.” (p. 8).

Response 30: The investigation included sampling in areas east of former Plant 37 and these results indicated that further sampling was not needed to delineate contamination associated with the RUCO site. See also the Remedial Investigation Report for Operable Unit No. 5 at the RUCO Polymer Corporation Site, dated April 14, 2016.

Comment 31. Nevertheless, the PRAP states that east of Plant 37 are some former Grumman Plants and “[t]hese facilities are being evaluated [for vapor intrusion] under the deletion process of the Northrop Grumman RCRA permit.” (p.7). If, as the PRAP indicates, there is no need for further soil vapor sampling east of Plant 37, the former Grumman Plants have no relevance to this Site. Alternatively, if there is a need for further soil vapor sampling east of Plant 37, the PRAP should require the work to be performed as part of the OU5 response for the RUCO Polymer (Hooker Chemical) Site. In either case, the PRAP should be changed to reflect that Northrop Grumman has no responsibility to investigate the extent of potential vapor intrusion originating from the Site.

Response 31: The sampling being requested for areas east of Building 37 relate to releases that may have occurred from sources outside of the RUCO site.

The Town of Oyster Bay (TOB), in a letter dated February 6, 2017, provided the following comments:

Comment 32: At the recent community meeting in January at the Bethpage Community Center, SSD system units were discussed, but one lingering big picture concern is what happens if a property owner refuses to install the system.

Response 32: The responsible parties are working cooperatively with the building owners of former Plant 37 who have agreed to allow the SSD system(s) to be installed.

Comment 33: Location: The former RUCO (Rubber Co of America) Polymer Corporation facility (the site) consists of a 14-acre triangular-shaped parcel located just southeast of the intersection of New South Road and Commerce Place in the Town of Oyster Bay and Village of Hicksville, in Nassau County. Hicksville is a hamlet within the Town of Oyster Bay; Hicksville is not a Village.

Response 33: The appropriate changes to the ROD text have been made.

Comment 34: Current Zoning/Use (General): The site is currently zoned industrial. The site is bordered to the north by industrial properties; to the south and west by LIRR tracks and commercial/industrial properties; and to the east by commercial properties. South and west of the site past the LIRR tracks are some residences. Pursuant to the Building Zone Map of the Town of Oyster Bay, the site is actually zoned, “Light Industry (LI)”. The distance to the nearest residential structure should be quantified. Greater detail should be provided regarding the surrounding land uses.

Response 34: Appropriate changes to the ROD text have been made.

Comment 35. OU2-USEPA- PCB Soil Removal: This OU consisted of soil/debris within four areas: (1) a “direct-spill area” in the vicinity of the Pilot Plant where PCB laden heat transfer fluid was released; (2) the area surrounding the Pilot Plant where heat transfer fluid was spread by on-site truck traffic; (3) sump 3 (AOC 30), which received surface water runoff from the vicinity of the Pilot Plant; and (4) former soil stockpile areas east and south of the Pilot Plant. The OU2 ROD, issued by the USEPA in 1990, required excavation and offsite treatment and disposal of soils with PCBs at concentrations greater than 10 ppm. The ROD also established cleanup criteria for excavation of areas contaminated with inorganics and poly-cyclic aromatic hydrocarbons (PAHs). The above paragraph should specify the cleanup objectives for PAHs and state that remediation levels were achieved.

Response 35: The appropriate changes have been made to the ROD text to add that all the cleanup criteria established for this site were met including those for PCBs, PAHs and inorganics. Discussion has been added on the various methods of offsite disposal utilized over the course of the corrective and remedial actions taken at this site to meet the cleanup criteria that was established.

Comment 36: It might be useful to note the offsite disposal was achieved via trucking and use of the on-site rail spur. Section 6.3 mentions the PCE and TCE concentration ranges recorded, and makes mention to “typical background levels” but does not specifically indicate acceptable levels vs. actionable levels within the indoor air. These values should be specified within the body of the document.

Response 36: The goal is to achieve typical background levels of potential contaminants in air, acceptable levels defined as indicated above have not been set by the State. However, there are indoor air levels at which actions are taken to reduce either the actual concentrations of contaminants in air or levels in sub-slab vapor that may have the potential to impact indoor air. This information is found in the “Guidance for Evaluating Soil Vapor Intrusion in the State of New York”, NYSDOH, October 2006 and associated updates [https://www.health.ny.gov/environmental/indoors/vapor_intrusion/update.htm].

APPENDIX B

Administrative Record

Administrative Record

RUCO Polymer Corp. (Hooker Chem) Site, Site No. 130004
EPA CERCLA & New York State Superfund Project
Hicksville, Nassau County, New York
Site No. 130004

1. Bayer MaterialScience LLC Vapor Intrusion Investigation Work Plan, ARCADIS Inc., Hicksville, New York USEPA ID No. NYD002920312, March 2011

2. Order on Consent, Occidental Chemical Corporation and Bayer MaterialScience, 2013-09-20. Operable Unit 5 (OU5)

3. OU5 SVI Work Plan Final, Offsite , CRA February 28, 2013

4. OU5 SVI Work Plan Final-Phase 2, CRA May 17, 2013

5. Phase I SVI Results Evaluation, RUCO Polymer Corp, Hicksville, NY, February 2014

6. Remedial Investigation Report OU5, RUCO Polymer Corp, Hicksville, NY Report No. 1 Rev 1, April 14, 2016

7. Northrop Grumman Comments on Proposed Remedial Action Plan RUCO Polymer Corp) Site Operable Unit Number 05: Offsite Soil Vapor. Site No. 130004

8. OXY-GHD PRAP Comment Letter 20-03-2017.

9. Email, Town of Oyster Bay Comments on the OU5, 02-06-2017.