RECORD OF DECISION

Unisys Corporation
Operable Unit Number 02: Offsite Groundwater
State Superfund Project
Lake Success, Nassau County
Site No. 130045
December 2014

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

DECLARATION STATEMENT - RECORD OF DECISION

Unisys Corporation
Operable Unit Number: 02
State Superfund Project
Lake Success, Nassau County
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Statement of Purpose and Basis

This document presents the remedy for Operable Unit Number: 02: Offsite Groundwater of the Unisys Corporation 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 (40CFR300), 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: 02 of the Unisys Corporation 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. A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

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

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

2. The continued operation of the existing 500 gpm OU2 IRM groundwater extraction and treatment system located at the Great Neck School property.

3. Upgrade of the current 730 gpm OU1 groundwater remediation system by the installation of a new 120 gpm extraction well to collect and treat an additional volume of groundwater bringing the total system up to 850 gpm. This upgrade is needed to improve groundwater capture from the basal Magothy aquifer to ensure complete capture. Treatment will be provided by the existing OU1 system. Treated water will be discharged in the same location.

4. Public Water Supply Protection and Mitigation Program.

A program that promotes the distribution of potable water of the highest quality will be developed and implemented, until such time as groundwater standards are achieved in all areas impacted by the Unisys Groundwater Plume. The program will be consistent with the requirements of Subpart 5-1 of the State Sanitary Code and will include, but may not be limited to, the following:

- an installation, operation and maintenance plan for public water supply wellhead treatment systems (including continued operation of all existing systems or installation of additional treatment systems or upgrades to existing systems) on wells affected by site-related contamination, now or in the future, to assure for as long as the wells are used as public water supply sources that drinking water standards are achieved and that the finished water is of no lesser quality as currently distributed due to actions taken as part of this remedy;
- a monitoring plan that will include, but may not be limited to, groundwater monitoring at sentinel wells installed upgradient of water supply wells that could potentially be affected by the continued migration of the groundwater contamination;
- periodic updates on the groundwater model simulation results to track contaminant migration; and
- a response plan that will be implemented if site-related contaminant concentration(s) in the sentinel well(s) approach or exceed site-specific action levels and will include, but may not be limited to, notifying the Department, NYSDOH, County Health Department and the potentially impacted water district and evaluating the rate of movement of site-related contaminants toward the public supply well(s) and the need for wellhead treatment. If treatment is needed, an appropriate system will be designed, installed and maintained at the wellhead.

5. Site Management Plan. A site management plan is required, which includes the following:

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

- monitoring of the groundwater to assess the performance and effectiveness of the remedy;
- monitoring of the groundwater at irrigation wells that are or that become impacted by site-related groundwater contamination; and
- a schedule of monitoring and frequency of submittals to the Department.

b. 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:

- compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
- maintaining site access controls and Department notification;
- providing the Department access to the site and O&M records; and
- an O&M Plan for the on demand treatment system at irrigation well (N-8038) owned by Village of Lake success. This irrigation well is used when needed to supply additional water for golf course irrigation.

c. periodic certification - the remedial party or site owner must provide, on such periodic basis as established by the Department:

- certification of institutional and/or engineering controls in accordance with Part 375-1.8(h)(3);
- certification of compliance with the Public Water Supply Protection and Mitigation Program; and
- certification of compliance with the Department approved Site Management Plan.

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.

December 23, 2014
Date

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

RECORD OF DECISION

Unisys Corporation
Lake Success, Nassau County
Site No. 130045
December 2014

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of hazardous wastes at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of hazardous wastes at this site, as more fully described in this document, has contaminated various environmental media. The remedy is intended to attain the remedial action objectives identified for this site for the protection of public health and the environment. This Record of Decision (ROD) identifies the selected remedy, summarizes the other alternatives considered, and discusses the reasons for selecting the 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 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: 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 repositories:

Great Neck Public Library
Attn: Ms. Laura Weir
159 Bayview Avenue
Great Neck, NY 11023
Phone: 516-466-8055

Hillside Public Library

Attn: Ms. Charlene Noll
155 Lakeville Road
New Hyde Park, NY 11040
Phone: 516-355-7850

A public meeting was also conducted. 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 the 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

Site Location: The former Unisys Site is located in the Village of Lake Success and the Town of North Hempstead, Nassau County. The site is bounded by Marcus Avenue to the north, Union Turnpike to the south, Lakeville Road to the west and the Triad Office Park to the east.

Site Features: The site is approximately 94 acres in area. The former Unisys property is fully developed, with the bulk of the property comprised of the main manufacturing building, various smaller support buildings (e.g., foundry and boiler building), three recharge basins, and parking lots. The smaller buildings are located south of the main building. The site was redeveloped by the current owner for commercial use. Presently, the buildings house a number of tenants The current site owner has deeded 3.5 acres of the property in the southeast corner to the Town of North Hempstead for their use as soccer fields.

Current Zoning/Use(s): The site straddles the border of the Village of Lake Success and the Town of North Hempstead. The portion of the property in the Village of Lake Success is zoned Economic Development A (commercial). The portion of the property in the Town of North Hempstead, including the soccer fields, is zoned Industrial A. The off-site area (OU2) is mixed residential/commercial/industrial.

Past Use of the Site: The former Unisys facility was an active manufacturing facility from its start-up in 1941 until approximately 1995, when most manufacturing activities ceased, although

some assembly, integration, prototype development/testing, and/or engineering and administrative activities continued at the facility through early 1999. The facility has been served by a sanitary sewer system since it was constructed in 1941. The on-site storm water collection system which received runoff from the parking lot, roofs and surrounding roads is connected to the three recharge basins located in the southwest corner of the property. Groundwater had been used for non-contact cooling purposes since the facility was constructed. The non-contact cooling water system consisted of three extraction wells and four diffusion wells which were located to the north and south of the main manufacturing building, respectively. The groundwater is no longer used for cooling purposes. In the past, the facility manufactured a wide range of defense related products. Past manufacturing processes included casting, etching, degreasing, plating, machining and assembly. Chemicals used during manufacturing at the facility included halogenated solvents, cutting oils, paints and fuel oils and plating compounds. The facility had five drywells located off the southeastern corner of the main building. These drywells were used to dispose of water containing solvents and oils from approximately 1941 to 1978.

Operable Units: The site was divided into two Operable Units. An operable unit represents a portion of the site remedy that for technical or administrative reasons can be addressed separately to eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination.

Operable Unit 1 (OU1) consists of the 94 acre site property. A Record of Decision (ROD) was issued for OU1 in March 1997.

Operable Unit 2 (OU2) is defined as the off-site area beyond the 94 acre property where contaminants in groundwater have migrated from the site (OU1). Eleven active public supply wells are located within OU2, nine drawing from the Magothy aquifer, and two drawing from the Lloyd aquifer. Four inactive public supply wells (Magothy) are located within OU2, as are six active irrigation wells.

Geology/Hydrogeology: The site and surrounding area is underlain by unconsolidated surficial deposits with an estimated 700 foot thickness, and Precambrian bedrock below. The unconsolidated deposits are comprised of the following formations from the ground surface downward: Upper Glacial deposits (150 ft); Magothy formation (250 ft); Raritan Upper Clay unit (200 feet); Raritan Lloyd Sand unit (190 feet) and bedrock.

The groundwater flow in the area has been divided into four zones: the Upper Glacial aquifer and the upper, middle, and basal portions of the Magothy aquifer. The depth to groundwater is approximately 100 feet bgs. Generally, the groundwater flow direction is north/northwest. However, pumping by several public supply/irrigation wells in the area affects the groundwater flow direction.

Operable Unit (OU) Number 02 is the subject of this document.

A Record of Decision was issued previously for OU 01.

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 groundwater, site land use is not a consideration in remedy selection. The local zoning and current use of the site and its surroundings are described in Section 3.

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:

Unisys Defense Systems, Inc.

Lockheed Martin Corporation

Loral Corporation

The facility was originally designed and built by the United States Government and was operated under a contract with Sperry Gyroscope Company (Sperry) from 1941 to 1951. In 1951, the property was sold to Sperry, which merged with Burroughs in 1986 to form the Unisys Corporation. In 1995, Loral Corporation (Loral) obtained the property from Unisys Corporation. In 1996, the property was purchased by Lockheed Martin Corporation (LMC). In 2000, LMC sold the property to i.park, Lake Success, LLP (i.park). The current owner of the property is Marcus Avenue Unit and 1111 Marcus Avenue Unit 2 Owner, LLC.

The NYSDEC and the Unisys Defense System, Inc. entered into a Consent Order (W-1-0527-91-02) on December 13, 1991. The Order obligates the responsible party to implement a remedial program, consisting of a Remedial Investigation (RI), Feasibility Study (FS) and Interim Remedial Measure (IRM). On July 11, 1995 Loral Corporation agreed to implement the obligations under the order. Effective July 23, 1996, Lockheed Martin Tactical Systems, Inc. undertook the obligations of the aforementioned Order.

The NYSDEC and the Lockheed Martin Corporation entered into a Consent Order (W1-0787-96-12) on October 29, 1997. The order obligates the responsible party to develop and implement a remedial program in accordance with the Record of Decision for OU1.

After the remedy is selected for OU2, the Department will again approach the 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) has been conducted. The purpose of the RI was to define the nature and extent of any contamination resulting from previous activities at the site. The field activities and findings of the investigation are described in the RI Report.

The following general activities are conducted during an RI:

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

The analytical data collected on this site includes data for:

- air
- groundwater
- surface water
- drinking water
- soil
- sediment
- soil vapor
- indoor air
- sub-slab vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

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

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

6.1.2: RI Results

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

TRICHLOROETHENE (TCE)	1,1,2-TRICHLORO-1,2,2-
TETRACHLOROETHYLENE (PCE)	TRIFLOUROETHANE (Freon 113)
	CIS-1,2-DICHLOROETHANE

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

- groundwater
- drinking water

6.2: Interim Remedial Measures

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

The following IRM(s) have been completed at this site based on conditions observed during the RI.

OU1 IRM - Groundwater

Two IRMs, dealing with OU1 soils and groundwater, were implemented prior to issuance of the OU1 ROD. The groundwater IRM consisted of the installation of a 1,100 gallon per minute (gpm) groundwater pump and treat system. The groundwater IRM began operation in April 1993 and was initially equipped with an activated carbon treatment system. The control system was upgraded to an air stripper as part of the OU 1 Record of Decision and began operating in August 2002.

OU1 IRM - SOIL

An IRM was undertaken to address soil contamination in 1994. The soil IRM consisted of a soil vapor extraction (SVE) and catalytic incineration system which was installed in the vicinity of the VOC impacted drywell area located off the southeastern corner of the main building. The SVE system uses a blower attached to several soil vapor extraction wells to draw air through soils. This flow of air allows VOCs to evaporate from the soils and into the air spaces between soil particles. Contaminants are then drawn toward the wells and into the treatment system where the vapors are treated prior to discharge to the atmosphere.

The treatment system is catalytic incineration (oxidation) which is a process in which the vapors are passed over a catalyst at an elevated temperature and the contaminants are converted to carbon dioxide, water, and inorganic acids. The SVE system began operating in January 1994. The system was subsequently upgraded, as required by the OU1 ROD, and the upgraded system went into operation in the summer of 2001. The system continues to operate.

OU2 IRM - Lloyd Public Supply Well

The Public Supply Well - Lloyd Well No. N-1802 was located adjacent to the site, on the corner of Lakeville Road and Union Turnpike. The well was installed in 1941. This well was owned and operated by Manhasset-Lakeville Water District (MLWD). The well screen was reported to be set at a depth of 641 to 691 feet in the Lloyd formation. The Lloyd formation is separated from the overlying Magothy formation by approximately 150 feet of impermeable clay (Raritan Clay). Routine testing of this well detected the presence of VOCs in the pretreated water and therefore a treatment system was installed to remove VOCs. NYSDEC requested that the well be investigated as part of the RI. Investigation of the well was conducted between April and June 1993. The contamination was attributed to a hole in the well casing. The casing was repaired as an IRM, and the well was put back in service in July 1996. Since repairing the well, the concentrations of VOCs had slowly decreased to non -detect in the pretreated water. The water is routinely monitored by the water supplier to ensure that it meets NYSDOH public drinking water supply standards.

OU2 IRM - The Great Neck School District Property

During the RI, an area of the groundwater plume was identified below the Great Neck School District property. To address this identified "hot spot", an off-site groundwater IRM was implemented to enhance contaminant mass reduction, to minimize the off-site migration of impacted groundwater toward downgradient public supply wells and other receptors, and minimize further contaminant migration into the North Hills Special Groundwater Protection Area. This IRM consists of a groundwater recovery well screened at various depths in the Magothy aquifer beneath the Great Neck School District property. The system includes two air strippers, an emission control system (located on property leased from the Manhasset-Lakeville Water District) and three injection/diffusion wells located on New York State-owned recharge basin property located east and adjacent to Great Neck School District property. The OU2 groundwater IRM system has been running at 500 gpm since 2006.

6.3: Summary of Environmental Assessment

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

Based upon the resources and pathways identified and the toxicity of the contaminants of ecological concern at this site, a Fish and Wildlife Resources Impact Analysis (FWRIA) was deemed not necessary for OU 02.

Operable Unit 2 (OU2):

Nature and Extent of Impacted Groundwater:
The groundwater contamination originates from the former plant site (OU1) and extends over one mile into the off-site area. Groundwater migration from OU1 has resulted in a significant off-site groundwater plume. The groundwater flow direction is to the northwest.

The primary site-related contaminants of concern (COCs) for the groundwater include: 1,2 DCE, TCE, PCE, and Freon 113. The groundwater plume originating from the nearby 400 Lakeville Road site (Site No. 130176), known to contain Freon 22, also extends off that site and comingles with the Unisys site groundwater plume.

The groundwater plume in the Upper Glacial aquifer, as defined by the 5 part per billion (ppb) contour, extends off site approximately 1,400 feet north of Marcus Avenue and approximately 2,500 feet west of Lakeville Road with the highest levels of total volatile organic compounds (TVOCs) 260 ppb 400 feet northwest of the intersection of Marcus Avenue and Lakeville Road. The TVOC groundwater plume in the Magothy aquifer extends off site approximately 6,000 feet north of Marcus Avenue and approximately 4,800 feet west of Lakeville Road with the peak off-site TVOC concentration at 910 ppb. The Water Authority of Great Neck North supply wells N12999, N 13821 and N13000 are actively pumping water for public supply purposes from the Magothy aquifer. The impact that these public supply wells have on the plume is seen as the 5 ppb TVOC contour is deflected toward the pumping wells. Throughout the study area, the Lloyd aquifer is isolated and hydraulically separate from the overlying Magothy aquifer, and has not been affected by the VOC plume.

The Manhasset Lakeville Water District (MLWD) public supply well N-5099, when operating, pumps water for public supply purposes from the Magothy aquifer. Site related VOCs continue to be detected at low levels in this well. Based on groundwater modeling, the maximum TVOC concentration is expected to reach approximately 160 ppb after 19 years. This well is not in service at this time.

The OU1 groundwater remedial system is effectively containing on-site VOCs in the Upper Magothy aquifer. This proposed remedy will upgrade the OU1 system to ensure containment in the Basal Magothy.

Surface Water/Sediments in Lake Success and Lake Surprise:
No site-related constituents were detected in the water or sediment in Lake Success or the irrigation pond (Lake Surprise). The groundwater plume, is below the bottom of both Lake Success and Lake Surprise, has not affected either lake, and is not expected to affect these lakes in the future.

Nature and Extent of Impacted Soil Vapor:
An off-site soil vapor intrusion (SVI) evaluation was completed in 2009. The soil vapor intrusion samples were collected from a total of eight off-site properties. TCE and PCE were detected in a limited number of sub-slab soil gas and indoor air samples. However, TCE and PCE were detected below the NYSDOH air guideline of 5 micrograms per cubic meter (ug/m3) and 30

ug/m3, respectively. Based on the NYSDOH guidance, no further action is needed as the data indicate that concentrations in sub-slab soil gas and indoor air are below levels of potential concern.

Resources impacted/threatened: The Long Island Sole Source Aquifer has been impacted with site-related contamination resulting in impacts to nearby Public Supply Wells and Golf Course Irrigation Wells. Several of these wells have treatment systems in place so the water supplied meets acceptable drinking water quality.

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 public water suppliers have taken appropriate actions (such as treating the groundwater to remove contaminants prior to distribution or removing wells from service) to ensure that the public water supply continues to meet drinking water standards (OU-1/OU-2). Potential exposure to contaminated groundwater via irrigation well usage to air (via volatilization) was evaluated and no impacts were identified (OU-2). It is not likely that people will come into direct contact with soil contaminants because the majority of the site (OU-1) is covered with buildings and pavement and contaminated soils have been removed from the drywells. Contaminated sediments found in three recharge basins (OU-1) are covered with standing water and a fence surrounds the basins preventing unauthorized access. Signs are posted around the recharge basin area, indicating that trespassing, swimming and fishing are prohibited (OU-1). Volatile organic compounds in 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 indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. The potential for soil vapor intrusion to impact indoor air has been addressed in current on-site structures by the continued operations of sub-slab depressurization systems (active and passive) and a soil vapor extraction system. Based on environmental sampling, the potential exists for people to inhale site contaminants in indoor air due to soil vapor intrusion in any future on-site building development and occupancy (OU-1). Environmental sampling indicates the indoor air quality of off-site structures is not impacted by site-related contamination (OU-2).

6.5: Summary of the Remediation Objectives

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

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Prevent the discharge of contaminants to surface water.
- Remove the source of ground or surface water contamination.

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 remedy is set forth at Exhibit D.

The selected remedy is referred to as the Continue Operation of existing OU2 Groundwater IRM, Upgrade OU1 groundwater treatment system and Public Water Supply Protection and Mitigation plan.

The estimated present worth cost to implement the remedy is $32,000,000. The cost to construct the remedy is estimated to be $8,600,000 and the estimated average annual cost is $1,400,000.

The elements of the selected remedy are as follows:

1. A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design,

implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows;

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gas and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;

Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;

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

2. The continued operation of the existing 500 gpm OU2 IRM groundwater extraction and treatment system located at the Great Neck School property.

3. Upgrade of the current 730 gpm OU1 groundwater remediation system by the installation of a new 120 gpm extraction well to collect and treat an additional volume of groundwater bringing the total system up to 850 gpm. This upgrade is needed to improve groundwater capture from the basal Magothy aquifer to ensure complete capture. Treatment will be provided by the existing OU1 system. Treated water will be discharged in the same location.

4. Public Water Supply Protection and Mitigation Program.

A program that promotes the distribution of potable water of the highest quality will be developed and implemented, until such time as groundwater standards are achieved in all areas impacted by the Unisys Groundwater Plume. The program will be consistent with the requirements of Subpart 5-1 of the State Sanitary Code and will include, but may not be limited to, the following:

- an installation, operation and maintenance plan for public water supply wellhead treatment systems (including continued operation of all existing systems or installation of additional treatment systems or upgrades to existing systems) on wells affected by site-related contamination, now or in the future, to assure for as long as the wells are used as public water supply sources that drinking water standards are achieved and that the finished water is of no lesser quality as currently distributed due to actions taken as part of this remedy;
- a monitoring plan that will include, but may not be limited to, groundwater monitoring at sentinel wells installed upgradient of water supply wells that could potentially be affected by the continued migration of the groundwater contamination;
- periodic updates on the groundwater model simulation results to track contaminant migration; and
- a response plan that will be implemented if site-related contaminant concentration(s) in the sentinel well(s) approach or exceed site-specific action levels and will include, but may not be limited to, notifying the Department, NYSDOH, County Health Department and the potentially impacted water district and evaluating the rate of movement of site-related

contaminants toward the public supply well(s) and the need for wellhead treatment. If treatment is needed, an appropriate system will be designed, installed and maintained at the wellhead.

5. Site Management Plan. A site management plan is required, which includes the following:

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

- monitoring of the groundwater to assess the performance and effectiveness of the remedy;
- monitoring of the groundwater at irrigation wells that are or that become impacted by site-related groundwater contamination; and
- a schedule of monitoring and frequency of submittals to the Department.

b. 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:

- compliance monitoring of treatment systems to ensure proper O&M as well as providing the data for any necessary permit or permit equivalent reporting;
- maintaining site access controls and Department notification;
- providing the Department access to the site and O&M records; and
- an O&M Plan for the on demand treatment system at irrigation well (N-8038) owned by Village of Lake success. This irrigation well is used when needed to supply additional water for golf course irrigation.

c. periodic certification - the remedial party or site owner must provide, on such periodic basis as established by the Department:

- certification of institutional and/or engineering controls in accordance with Part 375-1.8(h)(3);
- certification of compliance with the Public Water Supply Protection and Mitigation Program; and
- certification of compliance with the Department approved Site Management Plan.

Exhibit A

Nature and Extent of Contamination

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

For each medium, a table summarizes the findings of the investigation. The tables present the range of contamination found at the site in the media and compares the data with the applicable SCGs for the site. The contaminants are arranged into volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides/ polychlorinated biphenyls (PCBs), and inorganics (metals and cyanide).

Waste/Source Areas

As described in the RI report, waste/source materials were identified at the site and are impacting groundwater and soil vapors.
Wastes are defined in 6 NYCRR Part 375-1.2(aw) and include solid, industrial and/or hazardous wastes. Source Areas are defined in 6 NYCRR Part 375(au). Source areas are areas of concern at a site were substantial quantities of contaminants are found which can migrate and release significant levels of contaminants to another environmental medium. Wastes and source areas identified at the site include drywells located off the southeastern comer of the main building. These drywells were used to dispose waste water containing solvents and oils. Soil vapors have been detected under the main building and have been mitigated. Investigations of additional potential source areas under the main building slab are being conducted which may support the need for further remediation pursuant to the ongoing RCRA Closure of the site.

The waste/source areas located off the southeastern corner of the main building were addressed by an IRM and the ongoing OU1 remedy. A soil vapor extraction system was installed in 1994 as an IRM and the OU1 remedy included the removal of approximately 800 tons of contaminated soil from the drywells in 1998.

Groundwater

A complete round of groundwater sampling data was collected from June 2009 through January 2010 and periodic groundwater sampling of selected outpost monitoring wells continued during 2011 and 2012.

Figure 2 provides the location of wells located within a 2.5 mile radius of the former Unisys site. Groundwater samples were collected from off-site monitoring wells, irrigation wells, and public supply wells. Groundwater flow is generally to the northwest, except in local areas affected by current pumping. Figure 3 provides approximate maximum extent and concentration distribution of total volatile organic compounds (VOCs) in groundwater regardless of the aquifer horizon.

As noted on Figure 3, VOCs [cis 1,2 dichloroethene (cis, DCE), trichloroethene (TCE), tetrachloroethene (PCE) and Freon 113] have been detected in on-site and off-site groundwater. The VOC distribution and peak concentrations in the Upper Glacial and Magothy aquifers zones are summarized below:

Upper Glacial Aquifer

The VOC groundwater plume in the Upper Glacial aquifer, as defined by the 5 ppb contour on Figure 3, extends off-site approximately 1,400 feet north of Marcus Avenue and approximately 2,500 feet west of Lakeville Road. The groundwater flow is to the northwest. The peak VOC concentration of 260 ppb was detected in a monitoring well 18GL located approximately 400 feet northwest of the intersection of Marcus Avenue and Lakeville Road. In monitoring well 18GL, three out of four contaminants of concern (COCs) exceeded the Department's Ambient Water Quality Standards and Guidance values (Standards, Criteria and Guidance-SCGs) of 5 ppb. No site-related VOCs were detected in monitoring well 16GL located approximately 2,000 feet north of the intersection between Marcus Avenue and Lakeville Road on the Great Neck North School property.

The groundwater plume, which is below the bottom of both Lake Success and Lake Surprise, has not affected either lake, and is not expected to impact these lakes in the future because the groundwater is below the bottom of the lakes.

Upper Magothy Aquifer

The total VOC groundwater plume in the upper Magothy aquifer, as defined by the 5 ppb contour on Figure 3, extends off-site approximately 6,200 feet north of Marcus Avenue and approximately 4,800 feet west of Lakeville Road. The groundwater flow is to the northwest. At least one COC was detected at concentrations above the SCGs in 16 out of 22 wells. The peak VOC concentration of 580 ppb was found in a monitoring well 16ML located approximately 2,000 feet north of intersection between Marcus Avenue and Lakeville Road on the Great Neck North School property. A VOC concentration of 270 ppb was found in a monitoring well ERM-04 located approximately 500 feet west of Lakeville Road. A total VOC concentration of 130 ppb was found in an irrigation well N13266 located approximately 2,000 feet west of Lakeville Road on North Shore Golf Course (high rise residential buildings on the property). A total VOC concentration of 140 ppb was found in monitoring well 45MU located approximately 3,500 feet west of Lakeville Road and 3,000 feet north of Marcus Avenue on the Village of Lake Success property. A total VOC concentration of 4.9 ppb was found in monitoring well 15GL located approximately 250 feet south of Union Turnpike.

Middle Magothy Aquifer

The total VOC plume, as defined by the 5 ppb contour on Figure 3, extends off-site approximately 6,000 feet north of Marcus Avenue and approximately 4,800 feet west of Lakeville Road. At least one COC was detected at concentrations above the SCGs in 12 out of 19 wells. The peak VOC concentration of 910 ppb was found in monitoring well 38MI located approximately 1,200 feet north of Marcus Avenue and 50 feet west of Lakeville Road.

A total VOC concentration of 230 ppb was found in monitoring well 43MI, located approximately 4,500 feet north of Marcus Avenue and 600 feet east of Community Drive Road on the Deepdale Golf Course property. Monitoring well 43MI is an outpost monitoring well for three public supply wells located northeast. The total VOC concentration in monitoring well 31MI, located approximately 5,000 feet north of Marcus Avenue and 500 feet east of Community Drive, was 360 ppb in 2009 and 430 ppb in 2012. Monitoring well 31MI is an outpost monitoring well for three public supply wells located to the northeast.

The total VOC concentration in monitoring well 46MI was 110 ppb in 2009 and 370 ppb in 2012. This well is located approximately 4,500 feet north of Marcus Avenue and 800 feet west of Community Drive. The total VOC concentration found in monitoring well 50MI was 330 ppb. This well is located southeast on an adjacent property. The VOC concentration found in monitoring well 44MI, located approximately 500 feet west of Lakeville Road, was 860 ppb. The total VOC concentration found in outpost monitoring well 51MI, for the public supply well N-5099, was non-detect in 2010 and 4.7 ppb in 2012. This well is

located approximately 6,500 feet north of Marcus Avenue and 800 feet west of Community Drive on the Fresh Meadow Golf Course property.

The groundwater flow is to the northwest, except in local areas affected by current pumping. The Water Authority of Great Neck North supply wells N12999 and N13000 are actively pumping water for public supply purposes. The effect the pumping of these public supply wells have on the plume is seen as the 5 ppb VOC contour is deflected toward these pumping wells.

Basal Magothy Aquifer

The VOC plume, as defined by the 5 ppb contour on Figure 3, extends off-site approximately 4,800 feet north of Marcus Avenue and approximately 6,000 feet west of Lakeville Road. The groundwater plume is migrating to the north-northwest. At least one COC was detected at concentrations above the SCGs in 8 out of 16 monitoring wells. The peak VOC concentration of 590 ppb was found in monitoring well 37ML located approximately 500 feet north of Marcus Avenue, and 300 feet west of Lakeville Road. A total VOC concentration of 15 ppb was found in monitoring well 15ML, located approximately 250 feet south of Union Turnpike.

Lloyd Aquifer

The groundwater sampling results from the former Lloyd Public Supply Well N1802, Public Supply Well N12802, and Monitoring Well N12450 indicate that the site-related groundwater plume present in the overlying Upper Glacial and Maghothy aquifers is not present in the Lloyd aquifer. Public supply Well N1802 was located on the southwest side of the site. In 1996, the work performed to repair a hole in the casing of well N1802 had successfully eliminated the source of VOCs from the overlying aquifers. In 2011, a replacement Lloyd aquifer well (N13749) was installed approximately 25 feet from the former N1802 location. This well currently does not show any impacts from site-related COCs.

Development of a Computer Groundwater Model

A groundwater flow and solute transport model was developed for the site. The model was constructed in order to simulate groundwater flow throughout the entire thickness of the Upper Glacial and Magothy aquifers. A groundwater model documentation report is included in the OU2 Remedial Investigation Report and OU2 Feasibility Study Report, dated May 2012.

Table 1 - Groundwater

Detected Constituents	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)	Frequency Exceeding SCG
VOCs			
Cis-1,2 Dichloroethene	ND to 630	5	74 of 143
Tetrachloroethene (PCE)	ND to 95	5	46 of 143
Trichloroethene (TCE)	ND to 190	5	69 of143
1,1,2-Trichloro-1,2,2-triflouroethane (Freon 113)	ND to 29	5	31of 143

a - ppb: parts per billion, which is equivalent to micrograms per liter, µg/L, in water.

b - SCG: Standard Criteria or Guidance - Ambient Water Quality Standards and Guidance Values (TOGs 1.1.1), 6 NYCRR Part 703, Surface water and Groundwater Quality Standards, and Part 5 of the New York State Sanitary Code (10 NYCRR Part 5).

ND: Non-detect

Based on the findings of the RI, the past disposal of hazardous waste has resulted in the contamination of groundwater. The site contaminants that are considered to be the primary contaminants of concern which will drive the remediation of groundwater to be addressed by the remedy selection process are: cis-1,2 dichloroethene (cis-1,2 DCE), trichloroethene (TCE), tetrachloroethene (PCE) and Freon 113.

Surface Water

No site-related surface water contamination of concern was identified during the RI. Therefore, no remedial alternatives need to be evaluated for surface water.

Sediment

No site-related sediment contamination of concern was identified during the RI. Therefore, no remedial alternatives need to be evaluated for sediment.

Soil Vapor

Off-site soil vapor intrusion (SVI) evaluations were conducted at eight properties in 2009. PCE was detected in the indoor air samples at concentrations ranging from non-detect to 1.7 micrograms per cubic meter (µg/m³), and TCE was detected at concentrations ranging from non-detect to 0.14 µg/m³. The levels of PCE and TCE detected in the indoor air are well below the New York State Department of Health's (NYSDOH) air guideline values of 30 µg/m³ for PCE and 5 µg/m³ for TCE, and do not represent a health concern. PCE was detected in sub-slab soil gas samples ranging from 0.7 µg/m³ to 33 µg/m³ and TCE was detected at concentrations ranging from 0.34 µg/m³to 23 µg/m³. Based on an evaluation of the indoor air and sub-slab soil gas concentrations, soil vapor intrusion is not affecting the indoor air quality of the off-site structures. No further actions are warranted.

Exhibit B

Description of Remedial Alternatives

With the exception of Alternative No. 1, No Action, each of the alternatives includes the following common remedial element:

- Public Water Supply Protection and Mitigation Program - A program that promotes the distribution of potable water of the highest quality will be developed and implemented, until such time as groundwater standards are achieved in all areas impacted by the Unisys Groundwater Plume. The program will be consistent with the requirements of Subpart 5-1 of the State Sanitary Code and will include, but may not be limited to, the following:
    - an installation, operation and maintenance plan for public water supply wellhead treatment systems (including continued operation of all existing systems or installation of additional treatment systems or upgrades to existing systems) on wells affected by site-related contamination, now or in the future, to assure for as long as the wells are used as public water supply sources that drinking water standards are achieved and that the finished water is of no lesser quality as currently distributed due to actions taken as part of this remedy;
    - a monitoring plan that will include, but may not be limited to, groundwater monitoring at sentinel wells installed upgradient of water supply wells that could potentially be affected by the continued migration of the groundwater contamination;
    - periodic updates on the groundwater model simulation results to track contaminant migration; and
    - a response plan that will be implemented if site-related contaminant concentration(s) in the sentinel well(s) approach or exceed site-specific action levels and will include, but may not be limited to, notifying the Department, NYSDOH, County Health Department and the potentially impacted water district and evaluating the rate of movement of site-related contaminants toward the public supply well(s) and the need for wellhead treatment. If treatment is needed, an appropriate system will be designed, installed and maintained at the wellhead.

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

Alternative 1: No 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 and does not provide any additional protection to public health and the environment. This baseline scenario does not include continued operation of the current OU2 groundwater IRM system. However, the OU1 soil and groundwater remedial systems will continue to operate as required by OU1 ROD and the order on consent to meet the remedial goals selected for the site.

The OU1 groundwater remediation system is located in the northeast corner of the site and includes a groundwater treatment plant and three remedial groundwater extraction wells. Treated water is conveyed

to three off-site diffusion (recharge) wells located northeast of the site, on property owned by the New York State Office of Parks and Historic Preservation. This system is currently operating at a flow rate of 730 gpm.

Assuming that the existing OU2 IRM is turned off and no further off-site remediation is undertaken, a review of the groundwater modeling results predicts that the leading edge of the site related VOC plume will be approximately 2.5 miles downgradient of the site in approximately 30 years.

Present Worth: *$00*
Capital Cost: *$00*
Annual Costs: *$00*

Alternative 2: Continue Operation of existing OU2 Groundwater IRM, Upgrade OU1 groundwater treatment system and Public Water Supply Protection and Mitigation Plan

This Alternative recognizes the remediation of the site completed by the IRM(s) described in Section 6.2, and includes Site Management and Institutional Controls and Engineering Controls to confirm the effectiveness of the IRM. This alternative maintains engineering controls which were part of the IRM and includes institutional controls, in the form of an environmental easement and site management plan, necessary to protect public health and the environment from contamination remaining at the site after the IRMs. This alternative would include:

a. the continued operation of the existing 500 gpm OU2 IRM groundwater extraction and treatment system at the Great Neck School;

b. installation of a new 120 gpm extraction well and increasing capacity of the current OU1 groundwater remediation system from 730 gpm to 850 gpm; and

c. upgrade the existing groundwater and air emission control systems to accommodate the increased groundwater extraction in OU1.

This alternative would remediate 59% volume of impacted groundwater.

Present Worth: *$32,000,000*
Capital Cost: *$8,600,000*
Annual Costs: *$1,400,000*

Alternative 3: Removing COCs with one Additional Treatment System and Public Water Supply Protection and Mitigation Plan

This alternative would include:

a. the continued operation of the existing 500 gpm OU2 IRM groundwater extraction and treatment system at the Great Neck School;

b. installation of a new 120 gpm extraction well and upgrade of the current OU1 groundwater remediation system to treat additional treatment volume;

c. installation of another 500 gpm groundwater extraction and treatment system at the Village of Lake Success Golf Course (VLSGC) property and the diffusion of treated water on VLSGC property;

d. the treatment system should be designed to remove VOCs from all of the extracted groundwater to meet the State Pollutant Discharge Elimination System (SPDES) Permit discharge limitations; and

e. the installation of air emission controls, if required, to comply with the NYSDEC air regulations.

This alternative would remediate 68% volume of impacted groundwater.

Present Worth: *$55,000,000*
Capital Cost: *$20,000,000*
Annual Costs: *$2,500,000*

Alternative 4: Removing COCs with two additional Treatment Systems and Public Water Supply Protection and Mitigation Plan

This alternative would include:

a. continued operation of the existing 500 gpm OU2 IRM groundwater extraction and treatment system at the Great Neck School;

b. installation of a new 120 gpm extraction well and upgrade of the current OU1 groundwater remediation system to treat additional treatment volume;

c. installation of another 500 gpm groundwater extraction and treatment system at the Village of Lake Success Golf Course (VLSGC) property and the diffusion of treated water on VLSGC property;

d. installation of a 1,100 gpm groundwater extraction and treatment system at the North Shore Long Island Jewish Hospital (NSLIJH) property and the diffusion of treated water along the southeast portion of the NSLIJH property or the Deepdale golf course property;

e. the treatment system should be designed to remove VOCs from all of the extracted groundwater to meet the State Pollutant Discharge Elimination System (SPDES) Permit discharge limitations; and

f. the installation of air emission controls, if required, to comply with the NYSDEC air regulations.

This alternative would remediate 76% volume of impacted groundwater.

Present Worth: *$80,000,000*

Capital Cost: *$31,000,000*
Annual Costs: *$4,000,000*

Alternative 5: Restoration to Pre-Disposal Conditions and Public Water Supply Protection and Mitigation Plan

This alternative achieves all of the SCGs discussed in Section 6.1.1 and Exhibit A. This alternative will include:

a. Continued operation of the existing 500 gpm OU2 IRM groundwater extraction and treatment system at the Great Neck School;

b. installation of a new 120 gpm extraction well and upgrade of the current OU1 groundwater remediation system to treat additional treatment volume;

c. extraction of groundwater at a rate of 1,300 gpm from northwest of the Long Island Expressway (LIE), 1,000 gpm from the Fresh Meadow Country Club (FMCC), and 1000 gpm from North Shore Long Island Jewish Hospital (NSLIJH). The combined 3,300 gpm of extracted groundwater will be treated by two separate treatment plants at VLSGC and NSLIJH. The treated water will be diffused back into the aquifer by the diffusion wells;

d. the treatment system should be designed to remove VOCs from all of the extracted groundwater to meet the State Pollutant Discharge Elimination System (SPDES) Permit discharge limitations; and

e. the installation of air emission controls, if required, to comply with the NYSDEC air regulations.

This alternative would remediate 95% volume of impacted groundwater.

Present Worth: *$97,000,000*
Capital Cost: *$34,000,000*
Annual Costs: *$5,500,000*

Exhibit C

Remedial Alternative Costs

Remedial Alternative	Capital Cost ($)	Annual Costs ($)	Total Present Worth ($)
No Action	0	0	0
Alternative 2	8,600,000	1,400,000	32,000,000
Alternative 3	20,000,000	2,500,000	55,000,000
Alternative 4	31,000,000	4,000,000	80,000,000
Alternative 5	34,000,000	5,500,000	97,000,000

Remedial Alternative costs are adapted from the 2012 FS Report.

Exhibit D

SUMMARY OF THE SELECTED REMEDY

The Department has selected Alternative 2, which removes COCs and reduces impacts to public supply wells by treatment of off-site groundwater at three separate locations as the remedy for this site. Alternative 2 with a provision for the public water supply protection program would achieve the remediation goals for the site by preventing exposure to public health and the environment to site-related contamination, minimize potential impacts to the public water supply wells, reduce impacts to North Hills Special Groundwater Protection Area and treat elevated concentration of groundwater contamination off-site. The elements of this remedy are described in Section 7. The selected remedy is depicted in Figure 4.

Basis for Selection

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

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

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

The proposed remedy, Alternative 2, would satisfy this criterion by continuing treatment of groundwater contamination at the existing OU1 and OU2 (IRM) groundwater treatment systems, upgrade the OU1 groundwater treatment system and implement a wellhead treatment plan for all public supply wells currently impacted, or threatened, by the Unisys site plume. The area is currently served by one public water supply with existing wellhead treatment.

Alternative 1 (No Action) is not protective of public health or the environment since it would discontinue the existing OU2 IRM groundwater treatment system thus deceasing, rather than achieving, protection of public health and the environment. Hence, Alternative 1 will not be evaluated further.

Alternative 5, by restoring the groundwater aquifer to pre-disposal/pre-release conditions meets the threshold criteria. Alternative 4 would control spread of higher concentrations of groundwater contamination in the area near the two new pump and treat locations. Alternatives 3, 4 and 5 would provide varying degrees of additional environmental protection as compared to Alternative 2 since these three alternatives would allow less migration of higher concentration groundwater within the plume, however they are not more protective of public health since Alternatives 2, 3, 4 and 5 would all require wellhead treatments at impacted public supply wells.

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.

Alternatives 2, 3, 4 and 5 would meet SCGs for groundwater to varying degrees. The additional pumping and treating (P&T) of Alternatives 3,4 and will provide SCG compliance in somewhat reduced time periods than Alternative 2 since they allow less migration of higher concentration groundwater. Alternative 2 will meet groundwater standards eventually, but a wider area will be affected before this occurs. However, under for all alternatives, wellhead treatment will be required at the currently impacted well and threatened well for at least 20 years.

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.

Alternatives 3, 4 and 5 would reduce the contaminant mass to varying degrees before reaching public supply wells and thus providing marginally better long-term effectiveness and permanence for environmental protection than Alternative 2. However, all alternatives would provide similar protection for public health. Alternative 2 would reduce less contaminant mass than other Alternatives 3, 4 and 5 before reaching public supply wells but provide similar protection for public health.

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.

Alternatives 2, 3, 4 and 5 all address the off-site contaminated groundwater to varying degrees and thus each result in reduction of the toxicity and mobility or volume of the contaminants in the off-site groundwater. Alternative 3, 4 and 5 would further reduce toxicity and mobility or volume at P&T locations. Alternatives 3 and 4 would not completely contain the groundwater plume, which will continue to spread in those areas outside the capture zone of the pump and treat systems, but to a lesser extent than Alternative 2. Alternative 5 best satisfies this criteria, by providing the most containment. Alternative 2 will reduce the toxicity and mobility or volume at public supply well locations, but plume will spread in those areas outside capture zone of public supply well locations.

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

Alternative 2 poses minimal disruption to the community as the treatment systems are largely already installed and additional wells will not be required. Alternatives 3 through 5 will result in increased short-term impacts to the community due to the degree of difficulty of constructing the ever larger off-site groundwater pump and treatment systems. These systems would include a larger number of groundwater extraction wells, pipelines, treatment system(s) and points of discharge at several locations in the plume. There are potential risks to the community, workers, and environment that would result from the carrying out of these tasks under Alternatives 3, 4

and 5 to varying degrees associated with the significant construction related noise, dust, traffic and road closures within highly developed residential/commercial areas. These impacts would be controlled with the appropriate health and safety measures and proper engineering controls. Alternative 3 has the highest potential short-term impacts and would take the longest to implement followed by Alternatives 4 and 5.

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.

There is a significantly greater degree of difficulty for the implementation of Alternatives 3, 4 and 5 as gaining access to multiple off-site properties (including park land) would be required for the construction of the wells, treatment systems and pipelines associated with these alternatives. This will require negotiation with several parties. All of this would be occurring within highly developed residential/commercial areas. Alternative 4 would have a somewhat lesser degree of difficulty relative to implementation, than Alternative 5. Alternative 3 would have a lesser degree of difficulty than Alternatives 4 and 5. The OU2 groundwater IRM is already implemented and operational. No impediments exist to implement Alternative 2. It could begin as soon as the ROD is issued.

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 total present worth for the four alternatives under consideration ranged from $32 to $97M. From the least expensive to the most expensive they are Alternative 2, Alternative 3, Alternative 4 and Alternative 5. While Alternatives 3 through 5 would result in some increase in environmental protection; and reduction in toxicity, mobility and volume by limiting expansion of the plume, they would all result in comparable degrees of protection of public health as all would have relied on wellhead protection. Long-term effectiveness also would be marginally more effective under Alternatives 5, 4 and 3, respectively than Alternative 2, though all would require wellhead protection for at least 20 years. Short-term impacts would be insignificant for Alternative 2, as would issues that could affect the implementability of this alternative, since it could proceed as soon as the ROD is issued. However, for Alternatives 3 through 5, significant nuisance short-term impacts to the community resulting from construction related noise, dust, traffic and road closures are likely. Issues relative to the implementability of Alternatives 3 through 5 would be significant, and experience with other such large projects indicate these issues (notably access) could result in months to years of delay in the implementation of these alternatives. Finally, given the incremental benefit to environmental protection, with comparable public health protection afforded by Alternatives 3 through 5, Alternative 2, at a cost of $32M, is viewed as the most cost effective alternative.

8. Land Use.
Alternative 2 does not require any change in land use or commitment of new land areas to construct the remedy. Alternatives 3, 4 and 5 should not result in any new restriction on current land use. However,

there will be a commitment of land area for treatment facilities and wells, as well as the rights of way for the pipelines.

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

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

Alternative 2 is being proposed because, as described above, it satisfies the threshold criteria and provides the best balance of the balancing criterion.

APPENDIX A

Responsiveness Summary

RESPONSIVENESS SUMMARY

Unisys Corporation Site
Operable Unit No. 02, Off-site Groundwater
State Superfund Project
Lake Success, Nassau County, New York
Site No. 130045

The Proposed Remedial Action Plan (PRAP) for the Unisys Corporation 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 June 13, 2014. The PRAP outlined the remedial measure proposed for the contaminated groundwater at the Unisys 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 June 26, 2014, which included a presentation of the remedial investigation and feasibility study (RI/FS) for the Unisys 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 July 14, 2014

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:

I. Questions relating to off-site groundwater contamination/plume and groundwater modeling

COMMENT 1: At what depth is the groundwater contamination located?

RESPONSE 1: The depth to groundwater is approximately 100 feet below ground surface (bgs). The groundwater contamination is located at the water table (100 feet bgs) on-site. In the off-site plume area, the contaminant plume extends as deep as 450 feet bgs, however in this area, a layer of clean groundwater (not impacted by site contamination) also lies over the contaminant plume. The presence of the clean groundwater in the off-site plume area means soil vapor in areas over the plume has not been impacted.

COMMENT 2: How much time will the sentinel wells give to the supply wells to put on treatment if needed? Are there sentinel wells that will tell us that contamination may be reaching a public supply well?

RESPONSE 2: Sentinel wells are typically installed upgradient of public water supply wells at a distance, based on groundwater modeling, to provide at least two years of time before the plume

potentially could impact the public supply wells. All sentinel wells for the public supply wells will be monitored periodically at a frequency based on the updated groundwater model results.

COMMENT 3: When was the plume map developed for the off-site area?

RESPONSE 3: The groundwater plume maps were developed in 2000 based on the results of groundwater modeling at that time and have been periodically updated as remedial investigation continued and more data was available. The plume maps currently in use were last updated during the development of the 2012 Feasibility Study.

COMMENT 4: Does your modeling go back in time as well? How accurate is the model?

RESPONSE 4: Groundwater modeling is not used to predict what levels may have been present in an area at a specific time in the past, groundwater modeling is the tool that we use to predict contaminant migration. For this site, modeling has been conducted a number of times using available groundwater data. Initially, modelling was undertaken for the 1997 OU1 Feasibility Study, which was used to determine the best location and pumping rates for the OU1 groundwater extraction system. The use of modeling continued through the OU2 Remedial Investigation and Feasibility Study process, to predict what the future groundwater contamination levels would be under the different alternatives. The latest groundwater modeling results are included in the 2012 Remedial Investigation Report (RI) and 2012 Feasibility Study (FS) Report.

COMMENT 5: You talked about north of the site, what is happening south of this site?

RESPONSE 5: Based on the current and historic data, the groundwater plume that previously (pre-remediation) extended south of the site has been steadily moving northward due to the operation of the OU1 groundwater pump and treat system. The movement of this plume from south of the site to the north was expedited by recharge of treated water northeast of the site instead of on-site recharge as part of the operation of the interim remedial measure. Recent data indicates that there is no longer groundwater contamination associated with the site to the south.

COMMENT 6: At what point does the plume reach the bay and at what depth in Alternative 2? What about the other Alternatives?

RESPONSE 6: It does not appear there will be a measurable impact to the Bay under any alternative. The groundwater contamination is too deep and the shallow groundwater discharging to the Bay is not contaminated by this site.

COMMENT 7: Did the Department require modeling of the plume in connection with the off-site IRM in 2006? If so, where can I find that information/modeling? I am looking for records which reflect the historic accuracy of previous modeling that projects the direction/behavior of this plume.

RESPONSE 7: See Response 4. All site reports are available in the document repositories (i.e., Great Neck Public Library, Hillside Public Library).

COMMENT 8: Your note indicates that the CDM Smith document that you sent has modeling for all the alternatives. Unfortunately, that is not the case - it contains modeling for just 3 of the 19 scenarios. Moreover, this document was clearly crafted by the RP's consultant to justify selection of 2b. Where can I find modeling that reflects how the plume will behave over the next 5-30 years for each of the alternatives/scenarios under consideration?

RESPONSE 8**:** The 19 different scenarios are differing variations of the approaches that became alternative in the PRAP. The modelling that was provided is representative of all of them.

COMMENT 9: Where can I find modeling that reflects the depth of the contaminants over time for each of the Alternatives, and especially for Alternative 2?

RESPONSE 9: See Response 4.

COMMENT 10: How often are the Manhasset-Lakeville Water District (MLWD) monitoring wells monitored?

RESPONSE 10: It is assumed that the question relates to monitoring of the Manhasset-Lakeville Water District public supply wells, since DEC is not aware that they have any monitoring wells. Monitoring of public water supplies is required by both the State and Nassau County Health Departments. The frequency is dependent on several parameters. For example, continuous monitoring is required for chlorine residual and daily monitoring is performed for microbial contamination. Testing for other parameters in the raw water is typically required on a quarterly basis. If the need for treatment of chemical contamination is identified, monitoring of the finished water is required monthly. Please contact the water district for a full list of parameters monitored and the frequency.

COMMENT 11: The OU-2 remedy presumes that the plume continues to move in the current direction. You did not address the issue of Queens pumping water from this area. What happens if the plume changes direction with the opening of the New York City wells? Would the taxpayers of NYC have to pay for the remediation of their wells, if the plume is pulled into their system? Will Lockheed Martin pay for remedies based on the plume direction changing, or would the city be responsible because they caused the plume direction to change?

RESPONSE 11: The Department, through its Region 2 office, will work with New York City to address the issue of proposed pumping in Queens County through the SEQR process. The potential for this pumping to impact groundwater direction and any resulting contamination of the source water for the Queens wells will be evaluated as part of that process. The Public Water Supply Protection and Mitigation Program would apply if contamination attributable to this site impacts a well(s) in the City. The OU 2 ROD does not limit New York City's rights, should the contamination impact any public supply wells in New York City.

II. <u>Questions relating to public health:</u>

<u>(a) Off-site air sampling; off-site soil vapor intrusion evaluations</u>:

COMMENT 12: Has the air quality been sampled at 450 Lakeville Road or at the North Shore Towers parking garage?

RESPONSE 12: Air sampling has not been conducted at 450 Lakeville Road or in the underground parking garage located at North Shore Towers. Sampling was however conducted at the North Shore Towers Golf Course and the air intakes for the parking garage. Based on the review of this data, no levels of site related contaminants were identified above typical background levels at the intakes and as a result there was no need to sample air inside of the garage. The off-site groundwater contamination is well below the surface of the groundwater and a layer of clean groundwater overlies the contaminated groundwater, precluding any concern for vapor intrusion due to groundwater. There is no site-related contaminated soil off-site which would be the only other contributor to vapor intrusion. Also see Response 1.

COMMENT 13: Will additional soil vapor intrusion evaluations be conducted off-site?

RESPONSE 13: Based on the results of the off-site soil vapor intrusion evaluations and the presence of a layer of clean groundwater over the contamination in the plume area, the State has determined that additional off-site evaluations are not necessary. Also see Responses 1 and 12.

COMMENT 14: How can I get my home sampled?

RESPONSE 14: Additional sampling related to this site is not planned. See Response 13.

COMMENT 15: Homes that have soil vapor issues were not discussed as part of the presentation.

RESPONSE 15: A vapor intrusion issue has not been observed off-site, see Response 12.

COMMENT 16: At what depth does vapor become a concern for the contaminants present in OU-2?

RESPONSE 16 See Responses 12 and 13.

COMMENT 17: I'm concerned about the use of groundwater for the golf course and the impacts that breathing this water may have for residents of North Shore Towers.

RESPONSE 17: An ambient air study was conducted at the North Shore Towers Golf Course, during which air samples were collected during golf course irrigation activities. Based on the review of this data, no levels of site related contaminants were identified above typical background levels. See Response 12 relative to the Tower structure.

COMMENT 18: At no time can I recall was any notification given to the residents and workers (over 3000) about the vapors of the irrigation of the golf course.

RESPONSE 18: This information was provided to the North Shore Towers and Country Club on November 11, 2009, to be shared with members and tenants. Also see Responses 12 and 17.

(b) Impacts to Public Water Supply:

COMMENT 19: How long have the public supply wells in the area been affected by this plume?

RESPONSE 19: Groundwater contamination was detected in a public supply well in 1977. As noted in the 1997 OU1 Record of Decision (ROD), the Manhasset-Lakeville Water District was treating the water before distribution from two former public supply wells located at Tanners Road and a former public supply well located near the corner of Lakeville Road and Union Turnpike. These public supply wells were located within a half mile radius of the Unisys site.

COMMENT 20: When did the DEC know that the public supply wells would be impacted?

RESPONSE 20: In early 2000, the Water Authority of Great Neck North (WAGNN) and the Department became aware that the two new public supply wells installed by WAGNN would be contaminated by the groundwater plume in the near future, based on groundwater modeling results. At that time, the Department directed Lockheed Martin to install a groundwater collection and treatment well, as an IRM, at the Great Neck Public School Property (OU2 IRM) to address an off-site hot spot (area of highest groundwater contamination). The primary objective of the IRM was to effectively capture this portion of the plume.

COMMENT 21: There are quite a few drinking water wells impacted in Alternative 2. Did the Department expect all these drinking water wells to be impacted by the plume going back to 2006?

RESPONSE 21: The Department was aware of the contamination, or potential for contamination, of wells in the area prior to 2006 and had already directed Lockheed Martin to install an IRM to minimize the impact, see Response 20.

COMMENT 22: How effective is the treatment of water at the wellhead?

RESPONSE 22: The treatment of water at the wellhead is very effective and ensures that potable (drinking) water meets the requirements regarding maximum contaminant levels (MCLs) for the volatile organic compounds (VOCs) of concern prior to distribution. The design goal for VOCs is non-detect. Similar treatment systems are in use throughout the State and nation to treat contaminated water supplies.

COMMENT 23: Are SVOCs (semi-volatile organic compounds) being sampled for in the drinking water?

RESPONSE 23: Yes.

COMMENT 24: You have focused on three compounds, but there are a lot of compounds in this group. What about the other 34 contaminants from the Unisys site? How do we know if these contaminants were removed if the water district is not testing for them? Will treatment remove things that you don't know about, like insecticides, herbicides, all things that are used on the golf course?

RESPONSE 24: While the presentation focused on the four primary site contaminants of concern, the investigation included the entire contaminant list and the proposed remedy will address all of the contaminants identified. The local water suppliers are subject to state and local health department requirements and sample for a wide variety of compounds including those in the Principal Organics List

and for Unspecified Organic Compounds. Treatment is required for any compounds detected above the maximum contaminant levels. Districts also must comply with the USEPA's Unregulated Contaminant Monitoring Rule.

COMMENT 25: Does the ROD require that the public supply wells provide clean water to drink?

RESPONSE 25: The State Sanitary Code (Sub-Part 5-1) contains the requirements for potable drinking water which includes the provision of clean water to drink. The ROD is consistent with these requirements.

COMMENT 26: I have been told by very responsible people, that there are houses in the area which in fact do have vapors emanating from their basements, and the fact that this has not been disclosed here tonight is disturbing. I have also been told that there was absolutely to be no boring in any of the foundations on the properties on the site, based upon the fact that it might allow vapors to be released, and have an effect on whatever is going on under ground.

RESPONSE 26: See Response 12 relative to off-site properties. The on-site building has a vapor mitigation system installed and operating. While there is no prohibition on boring into the foundation, the site is subject to a site management plan (SMP) that specifies procedures that must be followed if the building foundation (or the rest of the site) is disturbed.

COMMENT 27: Regardless of the Alternative selected, transparency is going to be critical to ensuring the ongoing safety and protection of public health. What are the testing protocols and frequency of testing? Will testing be conducted at least once a month? Will the (monthly) reports reflect both raw water analysis and post-treatment analysis? Will testing results be posted on an accessible website and in a manner that is readily understandable by the general public? When will the results of the testing be made public? Will it be within 30 days of the tests?

RESPONSE 27: The specifics of the Public Water Supply Protection and Mitigation Plan, which address the above referenced questions, will be incorporated in the approved Remedial Action Work Plan and subsequent Site Management Plan. These documents will be available in the document repositories. Results from the routine testing of the public water supply wells should be available from the water suppliers.

COMMENT 28: How do you choose between air stripper and carbon when you are picking a treatment option for a public supply well?

RESPONSE 28: The determination of whether an air stripper or granulated activated carbon filtration will be used for control of contaminants in water is based on an engineering and economic analysis, which takes into consideration the specific contaminants in the raw water, their concentration, and the volume of water to be treated. Both technologies can be equally effective for most contaminants. In general, carbon is used when relatively low levels of contamination and lower volumes of water are to be treated, while air strippers are used for higher levels of contamination and water volume. In some cases, both are needed. In this case, the water supplier must submit a proposed design to the Nassau County Department of Health for review and approval, prior to construction.

COMMENT 29: How much time does the ROD require Lockheed Martin to provide filtering equipment for public supply wells?

RESPONSE 29: The ROD does not specify a time frame for Lockheed Martin to provide the necessary treatment. The ROD does however require the Public Water Supply Protection and Mitigation Program be implemented until such time as the water supply meets applicable drinking water standards without treatment or water supplies are no longer threatened by the plume. The Department will be contacting Lockheed Martin to sign an Order on Consent to implement the remedy. The Order on Consent will require them to implement the remedy in a timely manner.

(c) Cancer inquiries; health impact studies:

COMMENT 30: A North Shore Tower resident requests a cancer study be conducted.

RESPONSE 30: A formal request for a Cancer Study at North Shore Towers should be directed to Aura Weinstein, Director, Cancer Surveillance Program; Center for Community Health, New York State Department of Health. (518) 473-7817. Also, detailed information regarding types of cancers and the number of cancer cases can be accessed via the Environmental Facilities and Cancer Map (found on the NYSDOH Web Site). Additional cancer data for New York State can be found on Health Data NY (https:/health.data.ny.gov) and
http:/www.health.gov/statistics/cancer/registry/zipcode/index.htm.

COMMENT 31: Has there been correlation between the NYSDOH and the EPA on impacts of contaminants in drinking water and cancer in the Great Neck Area?

RESPONSE 31: Correlation studies between drinking water contaminants and cancer in the Great Neck area have not been conducted, also see Response 30. The NYSDOH did however performed a cancer incidence study (August 2006) among current and former students at Great Neck South High School. This study can be accessed via the following web address:
https://apps.health.ny.gov/statistiscs/environmental/public_health_tracking/tracking

COMMENT 32: Has there been a health impact study for the North Shore Towers zip code (11005)?

RESPONSE 32: A health study for the North Shore Towers zip code has not been conducted. Also see Response 30

III. Questions relating to proposed remedial actions

COMMENT 33: Why wasn't alternative 5 selected since it is the best? It seems this remedy is a sell out for the least expensive remediation? It has come to my attention that in deciding which of the five alternatives to choose from in attempting to remedy the toxic state of the water table at and around Marcus Ave. and Lakeville Rd., choice number 2 was chosen. I question this choice as it seems less effective and therefore less desirable than choice 5, although this is the most costly. Why are we not choosing what is most effective? Why must the citizens who live in that area pay for the sins of the Sperry Corp by having compromised water?

RESPONSE 33: Alternatives 2, 3, 4 and 5 are each equally protective of public health, since wellhead treatment will be required under each of these alternatives. Alternative 5 would provide some additional environmental protection since this alternative would treat some of the more highly concentrated groundwater within the plume, limiting further migration of this area. The implementation of Alternatives 3, 4 or 5 would be significantly more difficult to implement than Alternative 2 due to the difficulty in finding a location for, and constructing the wells, treatment systems and pipelines associated with these alternatives, within this highly developed residential/commercial area. Further, since multiple private properties (as well as parkland) would need to agree to access, implementation of Alternative 5 may not be possible. Alternative 2 is readily implementable. Alternatives 3, 4 or 5 also have significant short-term impacts associated with the construction of significant infrastructure in this highly developed area, while Alternative 2 has minimal short-term impacts. Alternative 2 was selected because it satisfies the threshold criteria stated in 6 NYCRR Part 375-1.8(f) and provides the best balance of the balancing criterion, as discussed briefly above and in detail in Exhibit D of the ROD.

COMMENT 34: Is this proposed remedy setting a precedent for future remedies? Why wouldn't someone (DEC) go the greatest extent possible to remediate this site

RESPONSE 34: Each remedy is proposed and selected only after consideration of the same remedy selection criteria discussed in Response 33. If another site with similar circumstances were evaluated, the selected remedy would likely be the same. If another site existed where a more aggressive remedy was implementable and would make a significant difference in the protectiveness of the remedy (e.g., prevent the need for wellhead treatment) it is possible that the more aggressive remedy would be selected.

COMMENT 35: At the hearing, every speaker from the general public voiced concern about how such a situation could have been allowed to contaminate the ground, air and water table from 1941-1999, and asked why nothing was done to clean it up, other than minimal treatment, for seventeen years. If the state has been doing a wonderful job, why is the plume gaining on my home, and why has the problem not been corrected after seventeen years?

RESPONSE 35: The Department has been working with the responsible parties (first Unisys and now Lockheed Martin) on this site for a long time and significant progress has been made. The source areas that were the cause of the contamination have been addressed. Exposures to vapor intrusion within the existing building have been addressed, and studies have shown that there are no vapor concerns off-site. The migration of contaminated groundwater from the site has been controlled and measures have been installed to address the off-site groundwater. This action is the final phase of the work associated with the off-site impacts to the public water supplies, both now and going forward.

COMMENT 36: Why do the experts and my local politicians all seem determined to pursue remedy #2? I realize that you may never be able to restore the environment in question to its pre-polluted state, but don't you think you should give it your best shot, and try? Please explain to me why solution #2 is better than solution #5.

RESPONSE 36: See Response 33 for the Department's basis for selecting Alternative 2.

COMMENT 37: Have any properties been looked at for installing any of the other alternatives?

RESPONSE 37: Yes.

COMMENT 38: Is DEC satisfied that this proposed remedy is the best remedy for this site?

RESPONSE 38: Yes. See Response 33.

COMMENT 39: Who is currently paying for the well head treatment? How long have the public supply wells in the area been effected by this plume?

RESPONSE 39: Lockheed Martin Corporation is funding the wellhead treatments at public supply wells contaminated by the site-related groundwater plume. Also see Response 19.

COMMENT 40: Environmental groups are concerned that this is setting a precedent for future remediation efforts? It seems like it is in the interest of the responsible party to delay a cleanup because it will be less expensive to treat the plume than to clean up the entire plume?

RESPONSE 40: See Response 34.

COMMENT 41: Do all the alternatives result in contamination of Public Water Supply Well N-05099? What about Well N-04388 and Well N-12796? It is hard to imagine that impacts to all three of these wells cannot be avoided under any scenario (especially Wells N-04388 and N-12796). Did any of these 16 scenarios specifically evaluate protection of these drinking water wells? If so, which alternative/scenario? If such an analysis was not conducted, why not?

RESPONSE 41: Public Water Supply Well N-05099 is already impacted so none of the alternatives will prevent the contamination of that well. Public Supply Wells N-04388 and Well N-12796 are located well to the north of the current plume and are currently not impacted by the groundwater contamination from the former Unisys site. However, these wells have already been impacted by another groundwater plume, and are equipped with wellhead treatment.

COMMENT 42: Are there other wells that are not currently impacted by the plume that will be impacted beyond these three wells if Alternative 2 is implemented?

RESPONSE 42: See Response 41.

COMMENT 43: What would be the incremental cost to Alternative 2 if additional remedial measures were added at the leading edge of the plume for the purpose of protecting one or more of these drinking water wells?

RESPONSE 43: The incremental cost between Alternative 2 and Alternative 5 is $65,000,000. Any additional measures at the leading edge would be at a significant cost likely comparable to the incremental cost between Alternatives 2 and 5. Also see Response 41.

COMMENT 44: What percentage of the contamination will be removed by the end of the remediation?

RESPONSE 44: It is estimated that Alternative 2 will remediate about 60% of the groundwater contamination.

COMMENT 45: Why is the O&M of the golf course irrigation well (N-8038) included in the ROD?

RESPONSE 45: Irrigation well N-8038 (owned by the Village of Lake Success) is impacted by groundwater contamination related to the former Unisys site. While this well is not often used, the selected alternative requires that a treatment system be maintained and operated when it is used, to prevent possible contamination of Lake Surprise which is also a source of water used for golf course irrigation.

COMMENT 46: What is the difference between Alternative 2 and Alternative 2b? How does 2b differ from 2a and 2c?

RESPONSE 46: Alternative 2 (as proposed in the OU2 PRAP and selected by this ROD) and Alternative 2b (in the FS report) are similar except that Alternative 2 includes the Public Water Supply Protection and Mitigation Plan. Alternatives 2a and 2c were developed and evaluated by Lockheed Martin as part of the 19 alternatives contained in the 2012 FS report, but were not included in the OU2 PRAP. Please refer to 2012 FS report which is available in the document repositories.

COMMENT 47: Can I get a copy of the agreement between the Responsible Party and the water authorities?

RESPONSE 47: A copy of the agreement is available in the public document repositories.

COMMENT 48: While I understand that the Department is not a party to the Agreement between the RP and the water authorities, can you clarify the purpose of the Agreement and whether an agreement between an RP and water authority is typical of other Superfund sites across the state? Or, is this an aberration found only on Long Island and/or only in Nassau?

RESPONSE 48: The Department is not party to any of these agreements and cannot comment as to the purpose or whether others exist.

COMMENT 49: What guidance does the DEC offer to water authorities to manage their role and/or their negotiation with RPs?

RESPONSE 49: DEC has no role in the matter.

COMMENT 50: This Agreement appears to eviscerate the public participation process – as it was executed in May 2013, more than a year before the PRAP. It clearly is intended to bind the water authorities to Alternative 2 before the PRAP and before weighing public comments. Does the existence of this executed agreement contravene the intent of the Law's provisions on public participation?

- The Agreement becomes null and void if the Department chooses an alternative other than 2b.
- What are the implications of such nullification on the remediation? Would it delay progress? Would it impact the payment responsibilities? Would the DEC compel the RP to carry out the short term

remedial measures if the agreement needs to be amended so that there is no further delay in implementing the remediation?

RESPONSE 50: See Responses 48 and 49.

COMMENT 51: Is staffing and funding a problem at DEC? Is that why it took so long to get a remedy proposed?

RESPONSE 51: Staffing and funding at the Department have not impacted the schedule for this site. This is a very complicated site where significant progress has already been made. Also see Response 35.

COMMENT 52: Has the RP or PRP been cooperating?

RESPONSE 52: Yes.

COMMENT 53: Has the local repository been updated and does it now contain all the relevant documents?

RESPONSE 53: Yes.

A letter dated July 14, 2014 was received from resident Jody Kass, which included the following comment:

COMMENT 54: The remedy proposed by NYSDEC for this site, Alternative 2 - which involves filtering the water at the wellhead instead of conventional treatment to address the plume before it impacts drinking water wells - could have health and environmental impacts and could also set a dangerous precedent. According to the PRAP, the DEC may modify the proposed remedy or select another alternative based on new information or public comments. With that in mind, it is respectfully requested that additional remedial measures be added to Alternative #2 at the leading edge of the plume for the purpose of protecting one or more of the vulnerable drinking water wells.
It is outrageous that it has taken 17 years for the PRAP and in that time, the toxic plume has continued to spread over a mile - to the point where residents are now being told that it is too late to protect most of the drinking water wells. Besides setting a dangerous precedent for other Long Island cleanups that are supposed to protect our drinking water from contamination, this relatively low cost remedy at $32m, (compared to Remedial Alternative 5 at $97m) rewards the Responsible Party for the 17 year delay.

According to the PRAP, Alternative 2 would result in the contamination of at least three drinking water wells that are not currently impacted by the plume. These include Public Water Supply Wells N-05099, N-04388 and N-12796. The NYS Superfund law requires the balancing of various selection criteria, including cost-effectiveness in selecting the remedy. To this end, it appears that the decision by DEC to select Alternative 2 was at least partly due to the cost increase from Alternative 2 ($32m) to Alternative 3 (at $55m), and the relatively low increase in the remediated volume of impacted groundwater (from 59% for Alternative 2 to 68% for Alternative 3). However, it is clear that in areas of NYS where the sole source aquifer and drinking water wells are in jeopardy, that the weight of the state's balancing criteria needs to shift so that more weight is given to protectiveness. Of course it is cheaper to use a water authority's infrastructure to filter the contaminated water after it reaches the wellhead than it is to install

expensive remedial apparatus to clean the plume before it reaches the wellhead. But allowing that to happen is clearly not in accordance with either the letter or intent of the Superfund Law. With the spreading of toxic plumes across Long Island, this "business as usual" attitude toward wellhead contamination is unacceptable.

Regardless of the Alternative selected, transparency is going to be critical to ensuring the ongoing safety and protection of public health. What are the testing protocols and frequency of testing? Will testing be conducted at least once a month? Will the (monthly) reports reflect both raw water analysis and post-treatment analysis? Will testing results be posted on an accessible website and in a manner that is readily understandable by the general public? When will the results of the testing be made public? Will it be within 30 days of the tests?

In conclusion, it is requested that additional remedial measures be added to Alternative #2 at the leading edge of the plume for the purpose of protecting one or more of these vulnerable drinking water wells. Moreover, if these adjustments are not made, it is especially important to clarify in the Responsiveness Summary document what the incremental cost of protecting these wells would have been and the reason.

RESPONSE 54: See Responses 27, 33, 35 and 43. The public supply well N-5099 is already impacted by Unisys site related contamination. Public supply wells N-4038 and N-12796 which are located over two miles in northwest direction are impacted by contamination unrelated to Unisys site and treatment systems are installed on both wells. In the future, these supply wells will be impacted by Unisys related groundwater plume based on groundwater modeling. Lockheed Martin will be responsible to provide treatment for Unisys site related contaminations to these wells upon execution of an appropriate consent order. Alternative 5 can prevent these wells from impact by the Unisys site related contamination at an additional cost of approximately $65 million. The specifics of the Public Water Supply Protection and Mitigation Plan, which address the above referenced questions, will be incorporated in the Remedial Action Work Plan and subsequent Site Management Plan.

A letter dated July 15, 2014 was received from resident Michael Currie, which included the following comment:

COMMENT 55: The goal is to minimize and eventually stop the contaminants from leaving the injection site and polluting the surrounding aquifer, the aquifer water needs to be remediated at the injection site. This new extraction and treatment system at the pollution injection site must have extraction at all the depths required and associated pumping rates for each depth appropriate to the density and concentration of the contamination. Installing an extraction and treatment system at the pollution injection site satisfies numbers 1, 3, 4, and 5 of these criteria by its definition and associated requirements. Since it will be very similar to the other on-site system, it will satisfy criteria 2 and 6. There is an active vapor remediation system close to the contaminant injection site now, to expand that to include this new system satisfies criterion 8. Most importantly any plan that will completely and permanently remove the pollution from the aquifer water will have overwhelming community acceptance, satisfying criterion 9. As far as criterion 7 is concerned, the more rapidly and efficiently the contaminants are removed, the more totally cost effective the plan is. It is important for the health of Long Island's precious water aquifer that you take another look at the remedial actions being planned for the Unisys site.

RESPONSE 55: The goal of the remedy for Operable Unit 01 was to address the source of the groundwater contamination and to stop contaminants in the groundwater from leaving the site. That remedy has been implemented and has largely been successful. Based on the data, the concentration of total VOCs in shallow groundwater monitoring well 35GL (near the former source area) has significantly decreased. Levels are also decreasing in the nearby well cluster (2GL, 2MU, 2MI, 2ML). Further success will be realized with the implementation of the OU-1 ROD Amendment which requires upgrading the on-site groundwater extraction, increasing the extraction rate.

A letter dated July 14, 2014 was received from R. Stan Phillips on behalf of the Lockheed Martin Corporation, which included the following comment:

COMMENT 56: Lockheed Martin Corporation ("Lockheed Martin") has examined the June 2014 proposed remedial action plan ("PRAP") for Operable Unit ("OU") No. 02, relating to off-site groundwater at the Unisys Corporation site (the "Proposed ROD"), located in Lake Success, Nassau County. Lockheed Martin requests the Department to adopt the PRAP in its current form as the final OU No. 02 ROD. Lockheed Martin makes this request based on the technical information contained in the PRAP that it has developed with Department oversight over many years during site investigations and the implementation of significant on-site and off-site interim remedial measures. The elements of the on-site and off-site groundwater remedy will assure the protection of human health and the environment. In addition, Lockheed Martin is committed to the implementation of a Public Water Supply Protection and Mitigation Program so that potable water of the highest quality is distributed from public supply wells. Lockheed Martin looks forward to working with Department staff to implement the OU2 ROD.

RESPONSE 56: Comment noted.

A letter dated June 30, 2014 was received from Mayor Ronald Cooper of Incorporated Village of Lake Success, which included following comment:

COMMENT 57: The Mayor supports Alternative 2 and stated that the other alternatives will take significantly more time to effectuate, will pose significant infrastructure issues to the community and will be only marginally more protective. We have waited 17 years to come to this point and I believe it is not in the best interests of the community to wait any longer to put in place the protective measures that need to be made to ensure that the community does not face potential health issues resulting from the plume. The Village of Lake Success is very concerned about the protection of water supply wells that would be affected by the plume. There are no details concerning the execution and monitoring of the provisions of the proposed Record of Decision. Mayor requested that the Record of Decision include a requirement that the Village of Lake Success be informed when all drafts and final reports are prepared in identifying the water supply wells, the sentinel wells, the treatment plant design and the monitoring plan you will be requiring as part of the remedial action and be accorded access to such reports. In addition, we would request that the Record of Decision requires that the Village will receive ground water monitoring reports of the monitoring wells, the supply wells, the extraction and the irrigation wells. The Village requests that the Record of Decision directs the Lockheed Martin Corporation to reimburse the Village for the costs of our consultants in this regard.

RESPONSE 57: The Department appreciates the Village's support of the proposed remedy. All of the information requested that is provided to the Department can be made available to the Village. The

Department is unable to direct the Responsible Party to reimburse the Village's costs for reviewing these documents as it is not part of the remedy.

Two emails dated June 16, 2014 and July 13, 2104 were received from Barbara Leonardi, resident of North Shore Towers, Floral Park, which included the following comment:

COMMENT 58: As per this email you can see I have had very strong feelings about doing a vapor intrusion evaluation at North Shore Towers. We are the only Golf Course that has residential buildings where the vapors from the irrigation could possibly enter our buildings. We are self contained buildings with a very old ventilation system. Trane had sent out warnings as early as 1986. What that means is that any intake remains in the building for years. I would very much like to ask questions at the Public Meeting Thursday June 26, 2014. I would also like a study done for zip code 11005 as to our rate of cancer. Please put us on the list.

I attended your June 26, 2014 Town Hall Meeting on the Unisys Site #130045 and having read your papers on Soil Vapor Intrusion, What is cancer and Environmental Conservation I am more concern than ever that the wells and buildings at North Shore Towers and the surrounding property need much extensive monitoring. The contents reports I have (1999-2001) and 2004 the levels of Trichloroethylene, Tetrachloroethylene and Toluene and the information how these chemicals can be a traced and found in the body are of great concern to me. At no time can I recall was any notification given to the residents and WORKERS (over 3000) about the vapors of the irrigation of the golf course. Since this has been going on for at least 10 years I again must call on the State Agencies and my local politicians to assure me that Health issues have been fully studied by Lockheed Martin at this site. Since we are west of this site and by what I remember from that meeting this plume is spreading Northwest and cannot be contained. It is moving right under our buildings. Detailed Vapor and Soil testing should be done in and around our buildings. Why is Lockheed Martin not more doing more to install a water filtration system before it reaches the water wells in Fresh Meadows? I have been reading how Exxon is cleaning up the waters south of us. Is anyone studying the path that Plume is traveling on Is there any chance the two can meet under us effecting the waters of Nassau and Queens. We cannot just keep putting a band aid on the treatment of Cancer by allowing LIJ North Shore to just build more buildings to treat the disease an Environmental Impact study is needed for the Lake Success area. Please help address my concerns. More needs to be done about this serious issue. Lockheed Martin as owner of this site has an obligation to do its do diligence in protecting the community.

RESPONSE 58: See Responses 12, 13 and 30. So that you will receive all future project related mailings, a subscription was created for your email address for the Nassau County listserv. You will receive notifications issued by the Department via email.

An email dated July 14, 2014 received from Alan Mindel and Vincent M. Lentini, residents of Lake Success, included the following comment:

COMMENT 59: As a resident of Lake Success, I wanted to indicate my support for the Proposed Remedial Action Plan. While I support the plan, I would like to emphasize the importance of the water testing. While I understand there is robust testing of volatile organic compounds, there are many semi volatile organic compounds that are currently not being tested for. The testing should be expanded to include these semi volatile organic compounds. Furthermore, the sentinel wells should be situated so as to

detect contaminants coming from the north, south, east or west. The direction of the plume is only predictable to a point, and the sentinel wells should be positioned for any eventuality. Please keep me informed of your final findings.

RESPONSE 59: See Responses 23 and 24.

An email dated July 8, 2014 from Patricia Hyland, included the following comment:

COMMENT 60: It has come to my attention that in deciding which of the five alternatives to choose from in attempting to remedy the toxic state of the water table at and around Marcus Ave and Lakeville Rd., choice number 2 was chosen. I question this choice as it seems less effective and therefore less desirable than choice 5, although this is the most costly. Why are we not choosing what is most effective? Why must the citizens who live in that area pay for the sins of the Sperry Corp by having compromised water?

RESPONSE 60: See Response 33.

An email dated July 14, 2014 received from Pauline Schwager, included the following comment:

COMMENT 61: When Northrup Grumman bought the Sperry site, they knew of the contamination situation. That pollution must be totally cleaned up - no halfway measures. The health of the people must come first. It is travesty and tragedy that people have suffered and will suffer from the poisons in their atmosphere, land and water, if total restitution is not made.

RESPOSE 61: See Response 33.

An email dated July 7, 2014 received from Ruth Shalom, a resident of Great Neck, included the following comment:

COMMENT 62: I attended the hearing in Great Neck last week regarding the Unisys Superfund site, and I cannot stop thinking about The Plume because it makes me angry. According to the map, the Plume is under my house. At the hearing, every speaker from the general public voiced concern about how such a situation could have been allowed to contaminate the ground, air and water table from 1941-1999, and asked why nothing was done to clean it up, other than minimal treatment, for seventeen years.

The experts from the NYS Dept. of Environmental Conservation proposed 5 remedies, ranging from doing nothing, to restoration of the site to pre-disposal conditions. The costs range from 00.00 for remedy #1 (doing nothing) to $34,000,000 and a cost of $5,500,000 per year for remedy #5. The experts recommend remedy #2 at a cost of $8,6000,000 and $1,4000.000 per year. Lockheed Martin, who owns the site now, has to bear the cost. I am sure they would prefer remedy #2 over remedy #5.

Michelle Schimel, our State Assemblywoman, spoke about how upset she was with the situation, and her determination to see that it never happens again. Jack Martins, our State Senator, who has one of the lowest environmental ratings in the state, said that we should stop looking at the past because that will not solve the problem, and concentrate on the future, and he was sure that the experts from the state were doing a wonderful job.

If the state has been doing a wonderful job, why is the Plume gaining on my home, and why has the problem not been corrected after seventeen years?

Why do the experts and my local politicians all seem determined to pursue remedy #2? I realize that you may never be able to restore the environment in question to is pre-polluted state, but don't you think you should give it your best shot, and try? Please explain to me why solution #2 is better than solution #5.

RESPONSE 62: See Responses 33 and 35.

Several emails dated June 23, 2014, July 1, 2014, July 9, 2014 were received from Jody Kass, resident of Great Neck, which included the following comment.

COMMENT 63: Can you let me know whether the June 26th presentation at the public meeting on the Unisys site will address the disturbing issues raised in the attached article (Huntington Buzz – October 23, 2013) including but not limited to how the plume will be contained, whether new extraction wells are part of the remedy, and who has been paying for well head treatment?
- Modeling of the plume that was done in previous years that reflects the expectations of how the plume would move. I am particularly interested in seeing information that clarifies the earliest date by which it became clear that there was nothing that could be done to protect the drinking water wells from the plume.
- Modeling that shows how the plume will change over the next 5, 10, and 20 years for each of the alternatives being considered by the Department.
- The agreement between the Responsible Party and the water authorities.
- Any other information that explains why it has taken 17 years to develop the PRAP for this plume that is now impacting all the drinking water wells. For example, were delays a result of insufficient Superfund dollars, DEC staff cuts, recalcitrant behavior by the RP, or other causes?

Thank you for forwarding the requested agreement and also the CDM Smith/Lockheed Martin October 2013 modeling document. This information addresses some but not all of my questions, and also raises additional issues. As you know, I am concerned that the remedy under consideration for this site - which involves filtering the water at the wellhead instead of conventional treatment to address the plume before it impacts drinking water wells - could have health and environmental impacts and also set a dangerous precedent.

I would greatly appreciate your help in identifying the key documents (or links) that can answer the following questions:

- Did the Department require modeling of the plume in connection with the off-site IRM in 2006? If so, where can I find that information/modeling? I am looking for records which reflect the historic accuracy of previous modeling that projects the direction/behavior of this plume.
- There are quite a few drinking water wells impacted in Alternative 2. Did the Department expect all these drinking water wells to be impacted by the plume going back to 2006?
- Your note indicates that the CDM Smith document that you sent has modeling for all the alternatives. Unfortunately, that is not the case - it contains modeling for just 3 of the 16 scenarios. Moreover, this document was clearly crafted by the RP's consultant to justify selection of 2b. Where can I find modeling

that reflects how the plume will behave over the next 5 – 30 years for each of the alternatives/scenarios under consideration?
- Do all the alternatives result in contamination of Public Water Supply Well N-05099? What about Well N-04388 and Well N-12796? It is hard to imagine that impacts to all three of these wells cannot be avoided under any scenario (especially Wells N-04388 and N-12796). Did any of these 16 scenarios specifically evaluate protection of these drinking water wells? If so, which alternative/scenario? If such an analysis was not conducted, why not?
- Are there other wells that are not currently impacted by the plume that will be impacted beyond these three wells if Alternative 2 is implemented?
- What would be the incremental cost to Alternative 2 if additional remedial measures were added at the leading edge of the plume for the purpose of protecting one or more of these drinking water wells?
- At what point does the plume reach the bay and at what depth in Alternative 2? What about the other Alternatives?
- At what depth does vapor become a concern for the contaminants present in OU2? Where can I find modeling that reflects the depth of the contaminants over time for each of the Alternatives, and especially for Alternative 2?
- While I understand that the Department is not a party to the Agreement between the RP and the water authorities, can you clarify the purpose of the Agreement and whether an agreement between an RP and water authority is typical of other Superfund sites across the state? Or, is this an aberration found only on Long Island and/or only in Nassau? What guidance does the DEC offer to water authorities to manage their role and/or their negotiation with RPs?
- This Agreement appears to eviscerate the public participation process – as it was executed in May 2013, more than a year before the PRAP. It clearly is intended to bind the water authorities to Alternative 2 before the PRAP and before weighing public comments. Does the existence of this executed agreement contravene the intent of the Law's provisions on public participation?
- The Agreement becomes null and void if the Department chooses an alternative other than 2b. What is the difference between Alternative 2 and Alternative 2b? How does 2b differ from 2a and 2c?
- What are the implications of such nullification on the remediation? Would it delay progress? Would it impact the payment responsibilities? Would the DEC compel the RP to carry out the short term remedial measures if the agreement needs to be amended so that there is no further delay in implementing the remediation?
- Has the local repository been updated and does it now contain all the relevant documents?
- Regardless of the Alternative selected, transparency is going to be critical to ensuring the ongoing safety and protection of public health:
· What are the testing protocols?
· What is the frequency of the testing?
· Will testing be conducted at least 1x/month?
· Will the monthly reports reflect both the test results before treatment and also the test result after treatment?
· Will testing info/results be posted on an accessible website and in a manner that is readily understandable by the general public?
· When will the results of the testing be made public? Will it be within 30 days of the tests?

RESPONSE 63: The October 23, 2013 Huntington Buzz article regarding the Unisys plume and the agreement between Lockheed Martin and the Water Districts was published before a remedy was proposed and we are unaware of the remedy that the article contemplates. Despite the articles' statement

about DEC approval of the agreement, we are not a party to the agreement and do not have an approval role. Also, see Responses 3, 4, 6-8, 16, 20, 21, 27, 33-35, 37, 41-43, 46-51 and 53.

APPENDIX B

Administrative Record

Administrative Record

Unisys Corporation Site
Operable Unit No. 2, Off-site Groundwater
State Superfund Project
Lake Success, Nassau County, New York
Site No. 130045

1. Proposed Remedial Action Plan for the Unisys site, Operable Unit No. 2, dated June 2014, prepared by the Department.

2. Order on Consent, Index No. W-1-0527-91-02, between the Department and Unisys Defense System, Inc., executed on December 13, 1991.

3. Volume I and II Remedial Investigation Report, Operable Unit No. 2 for the Unisys Site, Great Neck, New York, Site No. 130045 - May 2012, Updated: August 17, 2012, prepared by ARCADIS.

4. Feasibility Study, Operable Unit No.2, Former Unisys Facility, Great Neck, New York, Site No. 130045 - May 2012, prepared by ARCADIS.

5. Feasibility Study Addendum, Operable Unit No.2 Former Unisys Facility, Great Neck, New York, Site No. 130045 - May 2012, prepared by ARCADIS.

6. OU-2 IRM South System Groundwater Remediation Work Plan, May 2003, prepared by ARCADIS.

7. Supplemental OU-2 Remedial Investigation Work Plan, April 1999, prepared by ARCADIS Geraghty & Miller.

8. OU2 Remedial Investigation/Feasibility Study Work Plan, Lockheed Martin Corporation, Great Neck, New York, NYSDEC Site # 130045, January 1998, prepared by H2M Group.

9. Record of Decision, Lockheed Martin Tactical Defense Systems, Inc., Operable Unit 1 Lake Success & Town of North Hempstead, Nassau County, Site # 1-30-045, March 1997 prepared by the Department.

Correspondence received during PRAP Comment Period:

10. A letter dated July 15, 2014 from Michael Currie, resident to NYSDEC.

11. A letter dated July 14, 2014 and several emails from Jody Kass, resident and executive director, New Partners for Community Revitalization to NYSDEC.

12. A letter dated July 14, 2014 from R. Stan Philips, Lockheed Martin Corporation to NYSDEC.

13. A letter dated June 30, 2014 from Ronald S. Cooper, Mayor of Incorporated Village of Lake Success to NYSDEC.

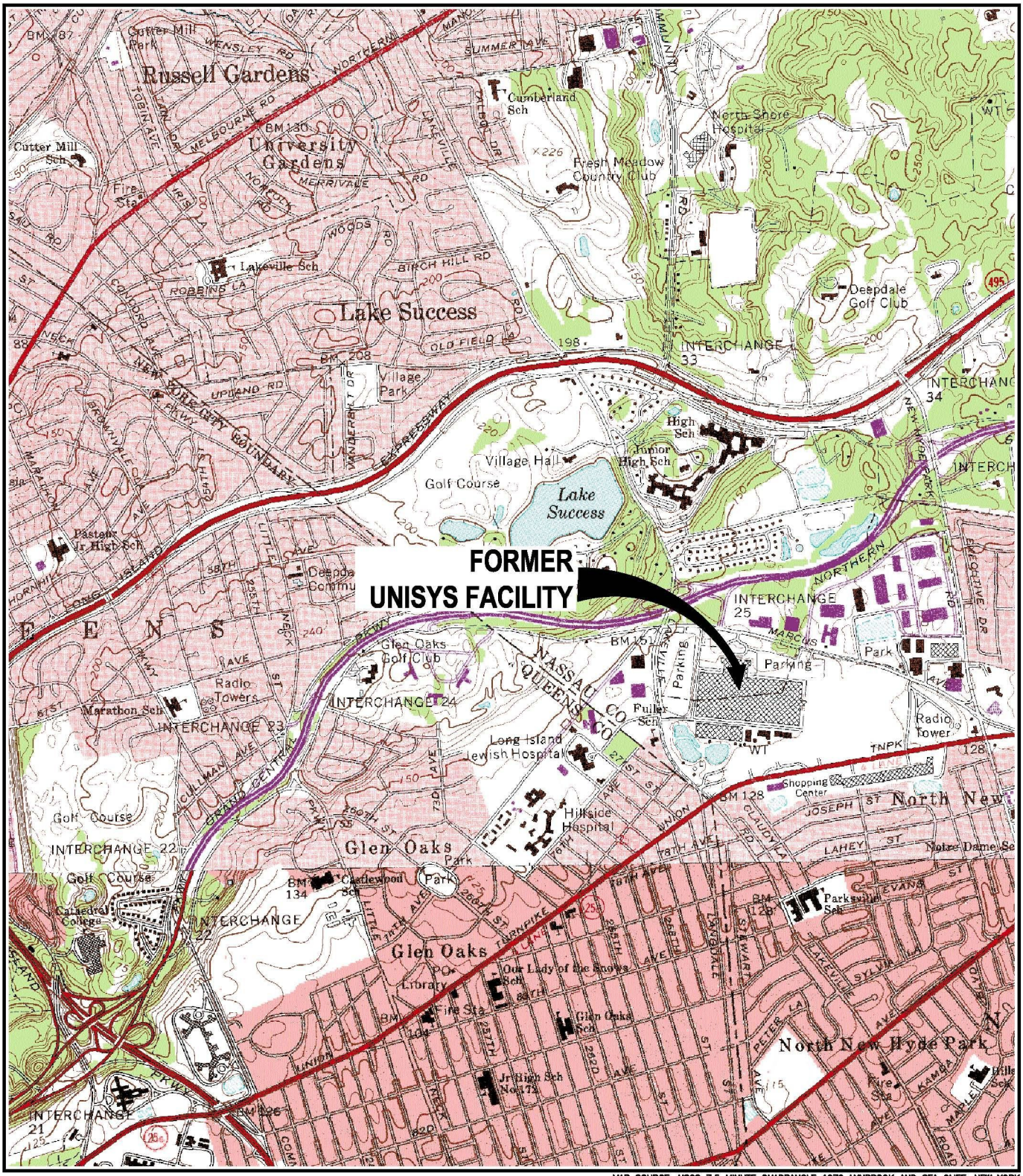
14. Two emails dated June 16, 2014 and July 13, 2104 received from Barbara Leonardi, resident of North Shore Towers, Floral Park.

15. An email dated July 14, 2014 received from Alan Mindel and Vincent M. Lentini, residents of Lake Success to NYSDEC.

16. An email dated July 8, 2014 from Patricia Hyland to NYSDEC.

17. An email dated July 14, 2014 received from Pauline Schwager to NYSDEC.

18. An email dated July 7, 2014 from Ruth Shalom, a resident of Great Neck to NYSDEC.



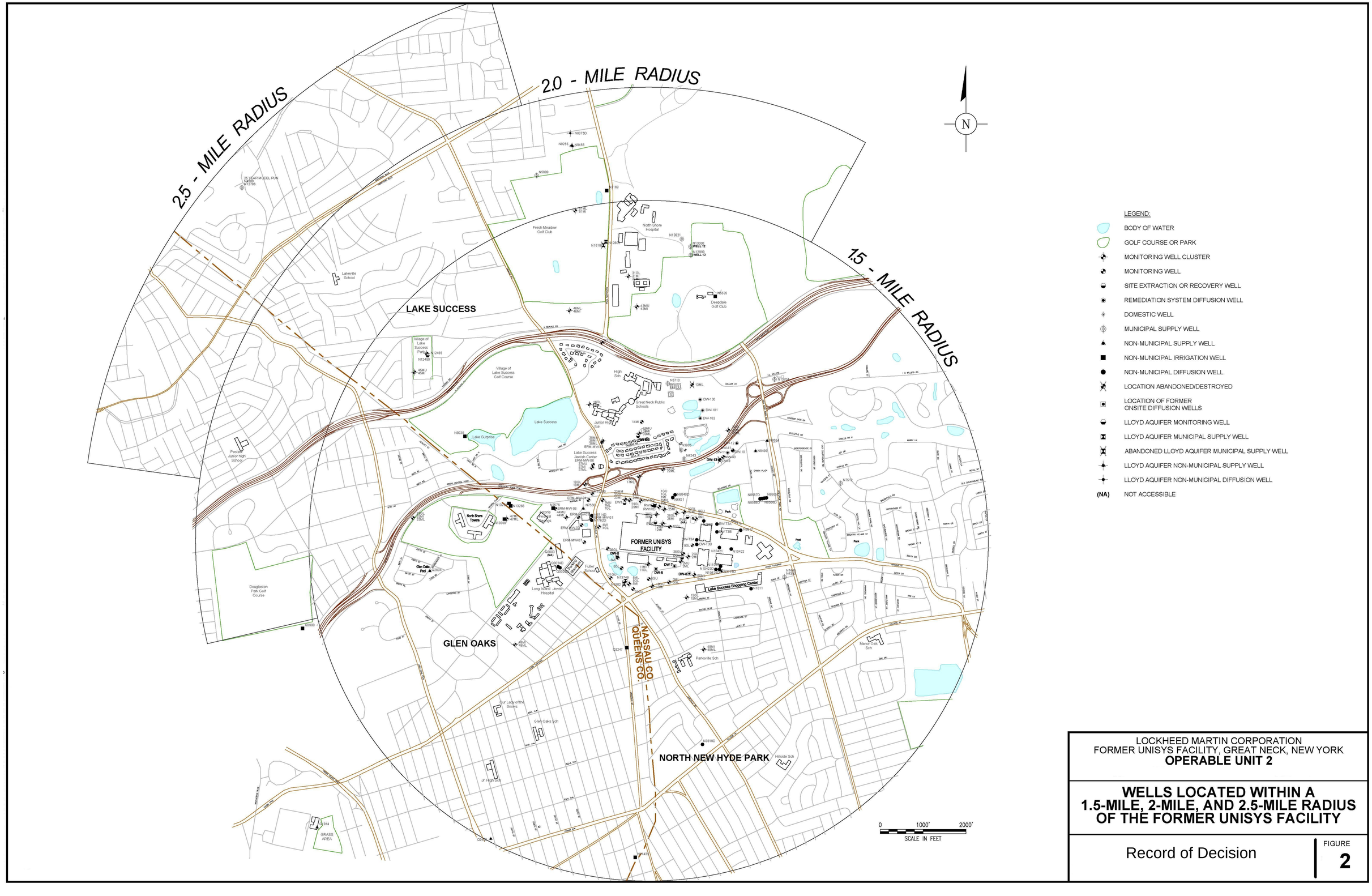
MAP SOURCE: USGS 7.5 MINUTE QUADRANGLE 1979 LYNBROOK AND SEA CLIFF, NEW YORK

LOCKHEED MARTIN CORPORATION
FORMER UNISYS FACILITY, GREAT NECK, NEW YORK
OPERABLE UNIT 2

SITE LOCATION MAP

Record of Decision

FIGURE
1



LEGEND:

- BODY OF WATER
- GOLF COURSE OR PARK
- MONITORING WELL CLUSTER
- MONITORING WELL
- SITE EXTRACTION OR RECOVERY WELL
- REMEDIATION SYSTEM DIFFUSION WELL
- DOMESTIC WELL
- MUNICIPAL SUPPLY WELL
- NON-MUNICIPAL SUPPLY WELL
- NON-MUNICIPAL IRRIGATION WELL
- NON-MUNICIPAL DIFFUSION WELL
- LOCATION ABANDONED/DESTROYED
- LOCATION OF FORMER ONSITE DIFFUSION WELLS
- LLOYD AQUIFER MONITORING WELL
- LLOYD AQUIFER MUNICIPAL SUPPLY WELL
- ABANDONED LLOYD AQUIFER MUNICIPAL SUPPLY WELL
- LLOYD AQUIFER NON-MUNICIPAL SUPPLY WELL
- LLOYD AQUIFER NON-MUNICIPAL DIFFUSION WELL

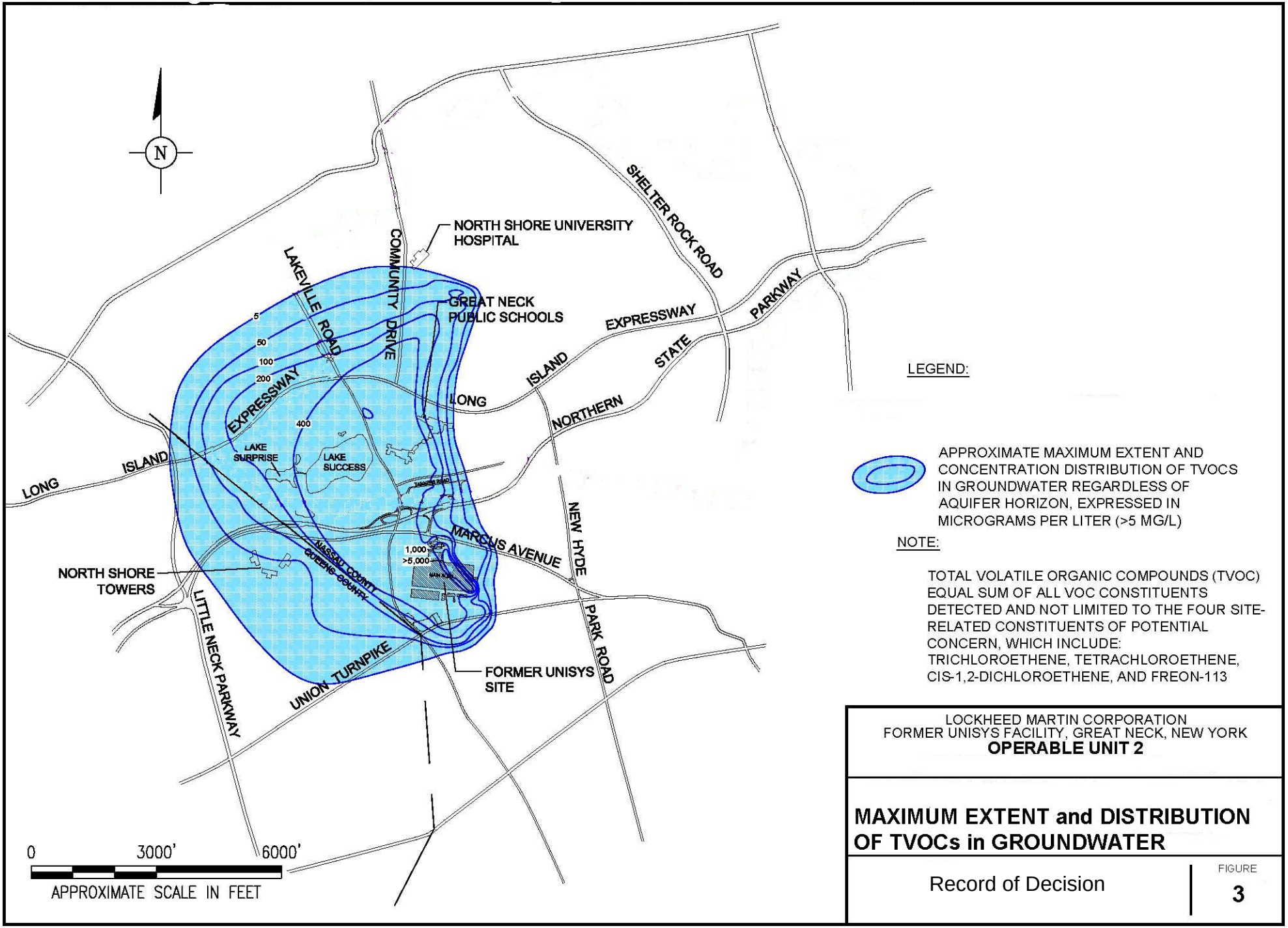
(NA) NOT ACCESSIBLE

LOCKHEED MARTIN CORPORATION
FORMER UNISYS FACILITY, GREAT NECK, NEW YORK
OPERABLE UNIT 2

WELLS LOCATED WITHIN A 1.5-MILE, 2-MILE, AND 2.5-MILE RADIUS OF THE FORMER UNISYS FACILITY

Record of Decision

FIGURE **2**



LEGEND:

APPROXIMATE MAXIMUM EXTENT AND CONCENTRATION DISTRIBUTION OF TVOCS IN GROUNDWATER REGARDLESS OF AQUIFER HORIZON, EXPRESSED IN MICROGRAMS PER LITER (>5 MG/L)

NOTE:

TOTAL VOLATILE ORGANIC COMPOUNDS (TVOC) EQUAL SUM OF ALL VOC CONSTITUENTS DETECTED AND NOT LIMITED TO THE FOUR SITE-RELATED CONSTITUENTS OF POTENTIAL CONCERN, WHICH INCLUDE: TRICHLOROETHENE, TETRACHLOROETHENE, CIS-1,2-DICHLOROETHENE, AND FREON-113

LOCKHEED MARTIN CORPORATION
FORMER UNISYS FACILITY, GREAT NECK, NEW YORK
OPERABLE UNIT 2

MAXIMUM EXTENT and DISTRIBUTION OF TVOCs in GROUNDWATER

Record of Decision

FIGURE
3

NOTE

1. THE FOLLOWING ON-SITE EXTRACTION AND RECOVERY WELLS WITHDRAW FROM THE INDICATED AQUIFERS:
   - UPPER GLACIAL AND UPPER PORTION OF THE MAGOTHY - RW1RS
   - UPPER AND MIDDLE PORTION OF THE MAGOTHY - RW1RD
   - UPPER PORTION OF THE MAGOTHY - EW1
   - UPPER AND MIDDLE PORTION OF THE MAGOTHY - RW100

LEGEND:

- BODY OF WATER
- SITE EXTRACTION AND RECOVERY WELLS
- REMEDIATION SYSTEM DIFFUSION WELL
- MUNICIPAL SUPPLY WELL
- NON-MUNICIPAL SUPPLY WELL
- NON-MUNICIPAL IRRIGATION WELL
- NON-MUNICIPAL DIFFUSION WELL
- LLOYD AQUIFER MUNICIPAL SUPPLY WELL
- LLOYD AQUIFER NON-MUNICIPAL SUPPLY WELL
- LLOYD AQUIFER NON-MUNICIPAL DIFFUSION WELL
- PROPOSED RECOVERY WELL
- EXISTING IRM TREATMENT SYSTEM AND COMPOUND
- NEW TREATMENT SYSTEM AND COMPOUND
- EXISTING OU-1 TREATMENT SYSTEM AREA AND COMPOUND LOCATION
- GROUNDWATER 30 YEARS MODEL PREDICTED 5 ug/L TVOC CONCENTRATION CONTOUR LINE
- CURRENT 5 ug/L TVOC CONCENTRATION CONTOUR LINE
- EXISTING SYSTEM PIPING LAYOUT

0 1600' 3200'

SCALE IN FEET

LOCKHEED MARTIN CORPORATION
FORMER UNISYS FACILITY
Operable Unit 2

ALTERNATIVE 2

Record of Decision

FIGURE
4