New York State Department of Environmental Conservation
Building 40—SUNY, Stony Brook, New York 11790-2356

Thomas C. Jorling
Commissioner

PROJECT FACT SHEET

UNISYS CORPORATION SITE (130045)
REMEDIAL INVESTIGATION / FEASIBILITY STUDY

SUMMARY.... This fact sheet is being provided to inform you of the activities Unisys will be undertaking to address environmental issues at its facility located in Great Neck, New York. The activities will be completed under the guidance of the New York State Department of Environmental Conservation (DEC). This fact sheet provides information regarding historic activities at the site as well as planned future activities at the site.

A Remedial Investigation / Feasibility Study (RI/FS) of the Unisys Facility in Great Neck, NY is scheduled to begin in September, 1993. The purpose of the RI will be to determine the nature and extent of contaminants present at the site, and evaluate the potential risk posed to human health and the environment. The purpose of the FS will be to evaluate potential remedial options to minimize the risks to human health and the environment. The work will be performed by Unisys Corporation following plans approved by the DEC and the New York State Department of Health (DOH).

SITE DESCRIPTION

The Unisys Great Neck Site is a 98 acre parcel located at the intersection of Marcus Avenue and Lakeville Road between the Village of Lake Success and the Town of North Hempstead in Nassau County, New York. A Site Location Map showing the property is attached. The site is an active manufacturing facility which has been in operation since it was constructed in 1941. The property was originally designed and built by the U.S. Government and was operated under contract with Sperry Gyroscope Company from 1941 to 1951. In 1951 the property was sold to Sperry and in 1986 Sperry merged with Burroughs and became Unisys Corporation. The site has been placed on the Registry as an inactive hazardous waste site by the State of New York because some chemical constituents were found to be present in the subsurface (soil and ground water) environment.

BACKGROUND

In the past, and to a minor degree at present, the facility has been used to manufacture various defense and government related products. Chemicals used during manufacturing in the past, including solvents and fuels, were stored in both above ground and below ground storage tanks. The problem at the site appears to be related to historic chemical handling practices.

INVESTIGATIONS & REPORTS

A series of reports has been published documenting the findings of investigations that have taken place from 1988 to present. Extensive testing has been carried out to evaluate the extent to which surface water, ground water, and soils were impacted by past use. Upon review of the data one primary area of concern was identified. This is the area where

chemicals were managed, near the southeast corner of the main manufacturing building. A summary of the investigations is contained in the Draft RI/FS Work Plan which is currently under review by DEC and DOH. The plan is available for public information at the New Hyde Park Public Library located at 1950 Hillside Avenue and DEC Region I, SUNY, Bldg. 40, Stony Brook, NY.

REMEDIAL INVESTIGATION

A two phase Remedial Investigation (RI) will be performed at the site. The first phase will further characterize all areas of environmental concern at the site and evaluate the potential impact on receptors. The second phase if necessary will consist of additional studies to further characterize on and off site environmental conditions. A summary of the RI scope of work is as follows:

- Background Information Review
- Soil Gas Investigation
- On and Off Site Monitor Well Installation and Sampling
- Ground water Flow Modeling
- Fish and Wild Life Impact Analysis
- Air Pathway Analysis and Meteorological Investigation
- Health Risk Assessment
- RI Report Preparation

FEASIBILITY STUDY

Site data and other information gathered during the RI Phase I and Phase II activities will be reviewed to evaluate potential remedial technologies for cleaning up the site. The Feasibility Study (FS) report will include a proposed plan of action which will satisfy environmental constraints and meet regulatory standards. DEC will evaluate the studies and issue a Record of Decision (ROD). The ROD will approve the clean up plan and the proposed plan will be adopted as the Remedial Action Plan.

INTERIM REMEDIAL MEASURES

Interim Remedial Measures (IRM) are presently taking place on site. The purpose of these cleanup activities is to minimize the risk to the environment and public health by beginning remedial measures prior to DEC issuing a ROD. The IRM include both ground water and soil remediation. Work plans for this work have been prepared and submitted to DEC. The ground water IRM was approved by DEC in March of 1993 and a treatment system has been in operation since April of 1993. The soil treatment IRM was installed in October of 1992 and will be in operation after completion of the required testing. The IRM Work Plan is also available for public information at the New Hyde Park Public Library.

NEW YORK STATE INVOLVEMENT

On December 13, 1991 Unisys entered into an Order on Consent with DEC to perform the IRM and RI/FS. DEC will continue to monitor, direct and approve of activities related to this remediation project, along with DOH.

PROJECT SCHEDULE

RI/FS activities will begin upon DEC approval of the Work Plan (anticipated in September, 1993). Part of this is the completion of a Citizen Participation Plan (CPP) that helps ensure full, two-way communication with the public. RI Phase I and Phase II field activities should be completed within one year of approval. The RI and FS reports should be completed several months following field activities.

PARTICIPANTS

Unisys Corporation is paying for the RI/FS and IRM and will take an active role in the project by providing full time management.

Leggette, Brashears and Graham is the hydrogeologic consultant tasked with conducting the soils and ground water investigations. They will prepare the RI report.

Environmental Standards, Inc. (ESI) is the quality assurance, quality control and industrial hygiene consultant. ESI will prepare the Risk Assessment and evaluate the integrity of the ground water and soil data collected during the RI Phase I and II.

IEA is an independent laboratory that will provide analytical testing to document the on and off site ground water and soil quality. A second independent laboratory will be used to validate data for quality assurance purposes.

RETEC will be responsible for air quality concerns during both the RI and IRM.

DEC will monitor activities at the site during all phases of the work relating to environmental protection.

DOH will monitor activities at the site during all phases of the work relating to public health.

HEALTH AND SAFETY

A detailed Health and Safety Plan has been prepared for the project. Unisys will be responsible for implementing the Health and Safety Plan provisions and documenting compliance. One of the more important duties of the Health and Safety Officer will be air monitoring. Air monitoring will be performed in work areas and down wind of work areas. Air quality will be maintained within acceptable limits by controlling work methods on site.

COMMUNITY PARTICIPATION

The CPP provides a framework and process for interested or affected parties to participate in the project. Individuals can contact DEC at any time with questions or concerns regarding the project. An informal project introduction briefing will be held with local officials and public interest groups prior to commencement of RI activities. This meeting will be held in late August 1993 or early September 1993. A list of participants is contained in the Citizen Participation Plan which may be found in the Draft RI/FS Work Plan.

ADDITIONAL INFORMATION

NYSDEC Region I
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Stony Brook, NY 11790

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Citizen Participation Specialist
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Girish Desai
Project Manager
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NYS Department of Health
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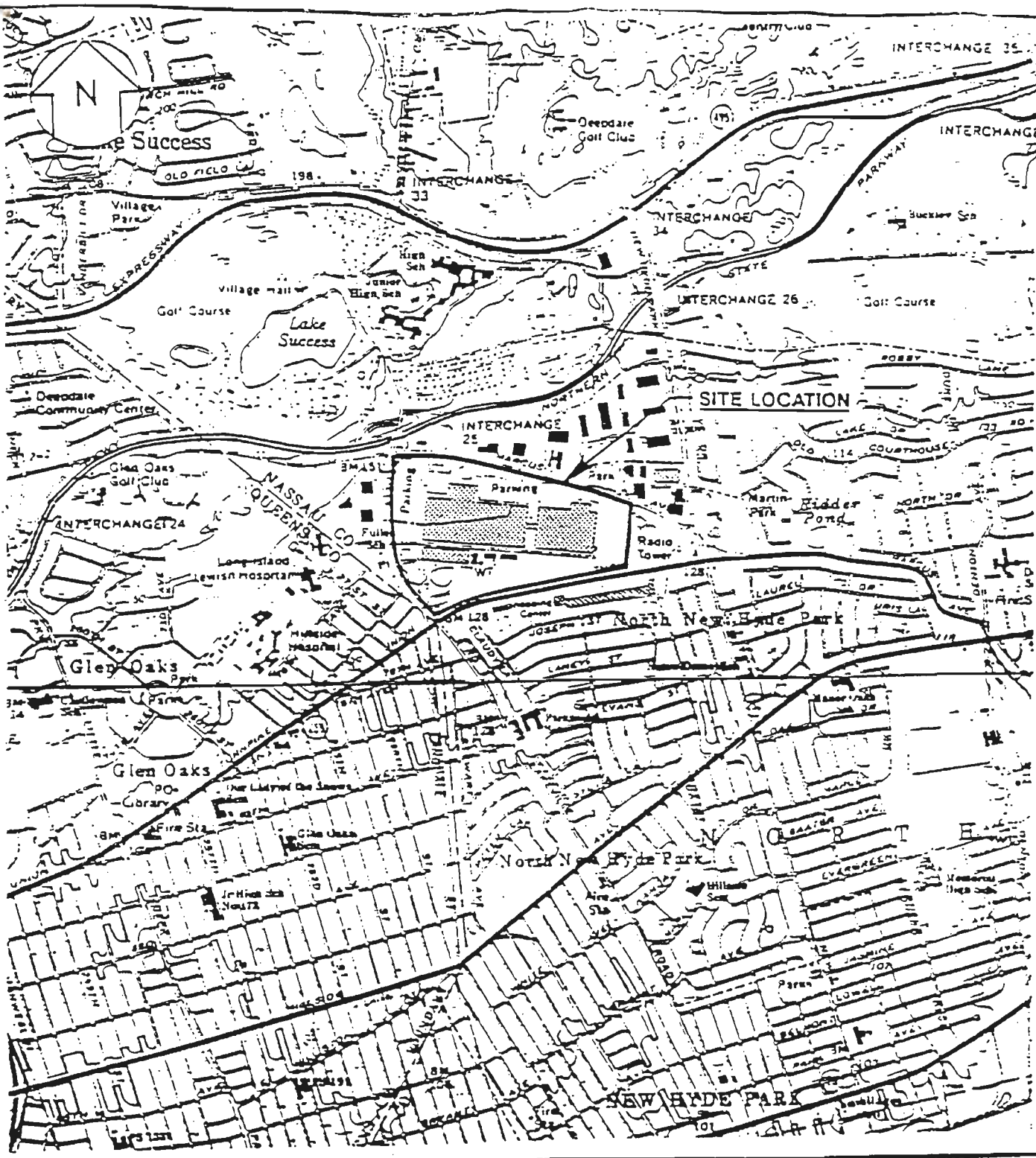
Albany, NY 12203

Nina Knapp or Maureen Schuck
(800) 458-1158

Nassau County Department of Health
Old Country Road
Mineola, NY 11501

Laurie Lutzker
(516) 535-2037



SOURCE: USGS QUADRANGLES
SEA CLIFF & LYNBROOK, NY

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SCALE IN FEET

UNISYS CORPORATION
GREAT NECK, NEW YORK FACILITY

SITE LOCATION MAP

DATE	REVISED

PREPARED BY: LEGGETTE, BRASHEARS & GRAHAM, INC.
Professional Ground-Water Consultants
72 Danbury Road
Wilton, CT 06897
(203) 762-1207

DATE: 12/14/92 FIGURE 1

New York State Department of Environmental Conservation
Building 40 - SUNY, Stony Brook, New York 11790-2356
Division of Environmental Remediation
Telephone: (516) 444-0240
Facsimile: (516) 444-0373

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

PROJECT FACT SHEET

Lockheed Martin Tactical Systems, Inc.
(Former Unisys Corp. Site)
NYSDEC Site ID #130045

December 1996

REMEDIAL INVESTIGATION/INTERIM REMEDIAL MEASURES

PURPOSE

The purpose of this fact sheet is to inform you of the results of the Remedial Investigations (RIs) and Interim Remedial Measures (IRMs) conducted by Lockheed Martin Tactical Defense Systems Division of Lockheed Martin Tactical Systems, Inc. (Lockheed Martin) at and near its facility located in Great Neck, between the Village of Lake Success and the Town of North Hempstead, New York (see Map No. 1). This work is done under the oversight of the New York State Departments of Environmental Conservation and Health (NYSDEC, NYSDOH). **Though Lockheed Martin recently announced it will discontinue operations at its Great Neck facility, it will continue to address environmental concerns related to the site after the facility is closed.**

CURRENT STATUS

In 1995, the NYSDEC divided its management of environmental investigation and remediation associated with the Lockheed Martin facility into two operable units. This fact sheet focuses on Operable Unit 1 (OU1), the on-site project area owned by Lockheed Martin, consisting of 94 acres (see Map No. 2). Operable Unit 2 (OU2) includes the off-site areas immediately surrounding the site. The remaining OU2 work will be addressed after the completion of OU1. This is because the OU1 work is expected to significantly improve the groundwater conditions associated with OU2.

SITE DESCRIPTION

The Lockheed Martin site consists of 94 acres located at the intersection of Marcus Avenue and Lakeville Road between the Village of Lake Success and the Town of North Hempstead in Nassau County, New York (see attached Map No. 2). The site was an active manufacturing facility from its startup in 1941 until approximately 1995, when all manufacturing activities ceased. Presently, only engineering design and administrative activities are conducted at the facility.

The property was originally designed and built by the U.S. Government and was operated under contract with Sperry Gyroscope Company from 1941 through 1951. In 1951, the property was sold to Sperry, which merged with Burroughs in 1986 to form Unisys Corporation. In 1995, Loral Corporation

(Loral) acquired the assets of Unisys Defense Systems, a division of Unisys Corporation. In early 1996, the electronics and systems integration businesses of Loral were purchased by Lockheed Martin, which currently owns and occupies the property. The site has been placed on the NYSDEC Registry as an inactive hazardous waste site due to the presence of contaminants in the subsurface (both soil and groundwater) environment.

The property has a main manufacturing building, and six smaller buildings located immediately south of the main building, which total approximately 1.5 million square feet. Three recharge basins are located in the southwest corner of the property adjacent to Lakeville Road. The basins collect snow melt and rain runoff from the roof and parking lots. The majority of the remaining property is used for parking. In the past, the facility manufactured various defense and government related products. Chemicals used in that manufacturing included halogenated and non-halogenated solvents, cutting oils, paints and fuel oils.

REMEDIAL INVESTIGATION

On December 13, 1991, Unisys entered into an Administrative Order on Consent with the NYSDEC in which Unisys agreed to conduct an RI/FS at the property. The purpose of conducting the remedial investigation was to define the nature and extent of soil and groundwater contamination related to the site (both on and off the facility property).

The Phase I RI was designed to investigate on-site soils, surface water, groundwater, air, and sediment of potential or known concern. The Phase I RI focused on on-site soil quality, on- and off-site groundwater quality, surface water and sediment quality in the three recharge basins, and the investigation and repair of a nearby public water supply well.

As part of the Phase I RI, potential source areas of previously identified groundwater and soil contamination were further investigated. Soil and groundwater samples from across the site were collected and analyzed. Soil samples were analyzed for the NYSDEC target compound list including volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides and polychlorinated biphenyls (PCBs), and target analyte list (TAL) metals. Solvents and their breakdown products were present above NYSDEC levels of concern in the soils near the southeast corner of the facility's main building (the Dry Well Area). This is the location of a former industrial wastewater disposal system consisting of three dry wells which, in years past, had been used for the disposal of wastewater. The wastewater reportedly contained small amounts of spent solvents including tetrachloroethene (also known as perchloroethene - PCE) and trichloroethene (TCE). This waste disposal system was taken out of service prior to 1973.

During early testing, concentrations of contaminants above NYSDOH public drinking water supply standards were found in groundwater samples collected from on- and off-site wells. The chemicals found were similar to those found in the soil samples collected from the vicinity of the Dry Well Area. A total of 59 wells have been installed as part of the groundwater monitoring well network. This network was designed to evaluate the groundwater quality on and off of the site beneath the study area. Based upon the analytical results, the primary contaminants of concern, including PCE, TCE, and cis-1,2-dichloroethene (1,2-DCE), were present at concentrations exceeding NYSDOH public drinking water supply standards in groundwater samples collected from on-site wells and off-site wells.

As part of the Phase I RI, a well survey and data review were conducted for private, industrial, and municipal off-site wells. The survey included a review of water quality results and well records from the Nassau County Department of Health (NCDOH), Nassau County Department of Public Works (NCDPW), and the NYSDEC. No private drinking water-supply wells were found within a 1.5-mile radius of the site.

Contaminants of concern have been detected over the last several years in off-site municipal, industrial, and monitoring wells located in the vicinity of the Lockheed Martin site.

Surface water and sediment samples were collected from the three on-site recharge basins. The results of the drainage basin sampling showed the presence of VOCs, SVOCs, pesticides and PCBs, and metals in the sediment samples. During the last round of sampling of the surface waters, no VOCs were detected in any of the three water samples and none of the metals were detected above NYSDOH public drinking water supply standards. During the last round of sediment sampling, the analytical results confirmed that some metals and other contaminants were present in the basin sediments at concentrations exceeding NYSDEC action levels. Additional testing showed that the metals in the sediment samples did not exhibit hazardous characteristics.

Public Supply Well No. N-1802 is located near the corner of Lakeville Road and Union Turnpike and is owned and operated by the Manhasset-Lakeville Water District. This well supplies water that is treated to remove contaminants. Not withstanding this treatment, routine tests indicating the presence of contamination in the pre-treated water resulted in the well being investigated as part of the RI. The contamination was attributed to a hole in the well casing. The well was tested, repaired, and put back in service in July 1996. The water is routinely monitored by the water supplier and the NCDOH to ensure that it meets NYSDOH public drinking water supply standards. In addition, the levels of contamination in the pre-treated water have decreased since completion of the well repairs.

SUPPLEMENTAL REMEDIAL INVESTIGATION

Based upon review of the Phase I RI report, the NYSDEC identified areas in which additional investigatory work was required. Therefore, additional soil, surface water, groundwater, and sediment samples were collected.

No VOCs were detected above NYSDEC levels of concern in the five soil samples. No pesticides or PCBs were detected above NYSDEC levels of concern in the soil samples collected from the background location and from two soil vapor survey sampling points. Some SVOCs and metals were detected above NYSDEC levels of concern in those three soil samples. Groundwater samples collected from off-site municipal, industrial, and monitoring wells confirmed the presence of contaminants above NYSDOH public drinking water supply standards.

Lake Success is located approximately 1,600 feet north of the site. Three surface water and three sediment samples were collected from Lake Success and analyzed for contaminants of concern to determine if the lake had been affected by contaminants found in the groundwater. None of the contaminants of concern were detected in the sediment or surface waters of Lake Success.

A survey was conducted to evaluate the presence of unknown buried metallic objects in the north parking lot of the facility and none were found.

Based upon the results of the RIs, Lockheed Martin has prepared, and submitted to the NYSDEC, a draft Baseline Human Health Risk Assessment (Risk Assessment) in which the potential health risks from site-related contamination are assessed. Lockheed Martin has also prepared a Feasibility Study (FS) in which various alternatives for addressing and cleaning up environmental problems at the site are evaluated. Lockheed Martin is addressing comments on these two documents from the NYSDEC, NYSDOH, and NCDOH.

INTERIM REMEDIAL MEASURES

The purpose of IRMs is to minimize any risk to the environment and public health during the performance of RI/FS activities and prior to NYSDEC's Record of Decision (ROD). IRM activities at this site consist of groundwater and soil remediation as well as the investigation and repair of Public Supply Well No. N1802.

The groundwater IRM consists of a groundwater pump and treat system. The groundwater is treated to remove the contaminants. The groundwater IRM has been in operation since April 1993, and to date has treated approximately 840 million gallons of water and removed a total of over 8,000 pounds of contaminants.

The soil IRM consists of a soil vapor extraction (SVE) system which has been installed in the vicinity of the VOC-impacted dry wells. The SVE system has been in operation since January 1994 and to date has removed a total of approximately 35,000 pounds of contaminants.

CITIZEN PARTICIPATION

A Citizen Participation Program (CPP) is being carried out to ensure that the public is informed about, and can provide information concerning, the investigation and clean-up of this site. A public meeting was held in August 1993 to present the RI/FS Work Plan to concerned citizens. In addition, information repositories have been established where copies of project-related documents are available for the public to read.

INFORMATION REPOSITORIES

These are places people can go to read the relevant public documents associated with the sites. The repositories are located at the:

1. Hillside Public Library
   1950 Hillside Avenue
   New Hyde Park, NY 11040
   (516) 488-3316
   10:00 AM to 9:00 PM - Weekdays
   10:00 AM to 5:00 PM - Saturdays
   12:00 PM to 4:00 PM - Sundays

2. Parkville Branch Library
   10 Campbell Street
   New Hyde Park, NY 11040
   (516) 466-8055
   9:00 AM to 6:00 PM - Mondays, Fridays, and Saturdays
   9:00 AM to 9:00 PM - Tuesdays and Thursdays
   10:00 AM to 6:00 PM - Wednesdays
   1:00 PM to 5:00 PM - Sundays

3. Region 1 - NYSDEC
   Hazardous Waste Remediation Unit
   SUNY Campus, Building 40
   Stony Brook, NY 11790-2356
   (516) 444-0249
   8:30 AM to 4:45 PM - Weekdays

FUTURE STEPS

There are continuing opportunities for public involvement associated with this project. Another fact sheet, discussing the NYSDEC-approved Risk Assessment and FS, as well as the NYSDEC Proposed Remedial Action Plan (PRAP), will be mailed to you. This fact sheet will also contain a meeting invitation, inviting you to attend a public meeting on the above, to be conducted sometime in January. The public will be notified of this meeting through a NYSDEC press notice to the media.

FOR FURTHER INFORMATION

If, at any time, you have questions or comments regarding these projects, please feel free to contact the individuals listed below:

New York State Department of Environmental Conservation

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Maureen Schuck
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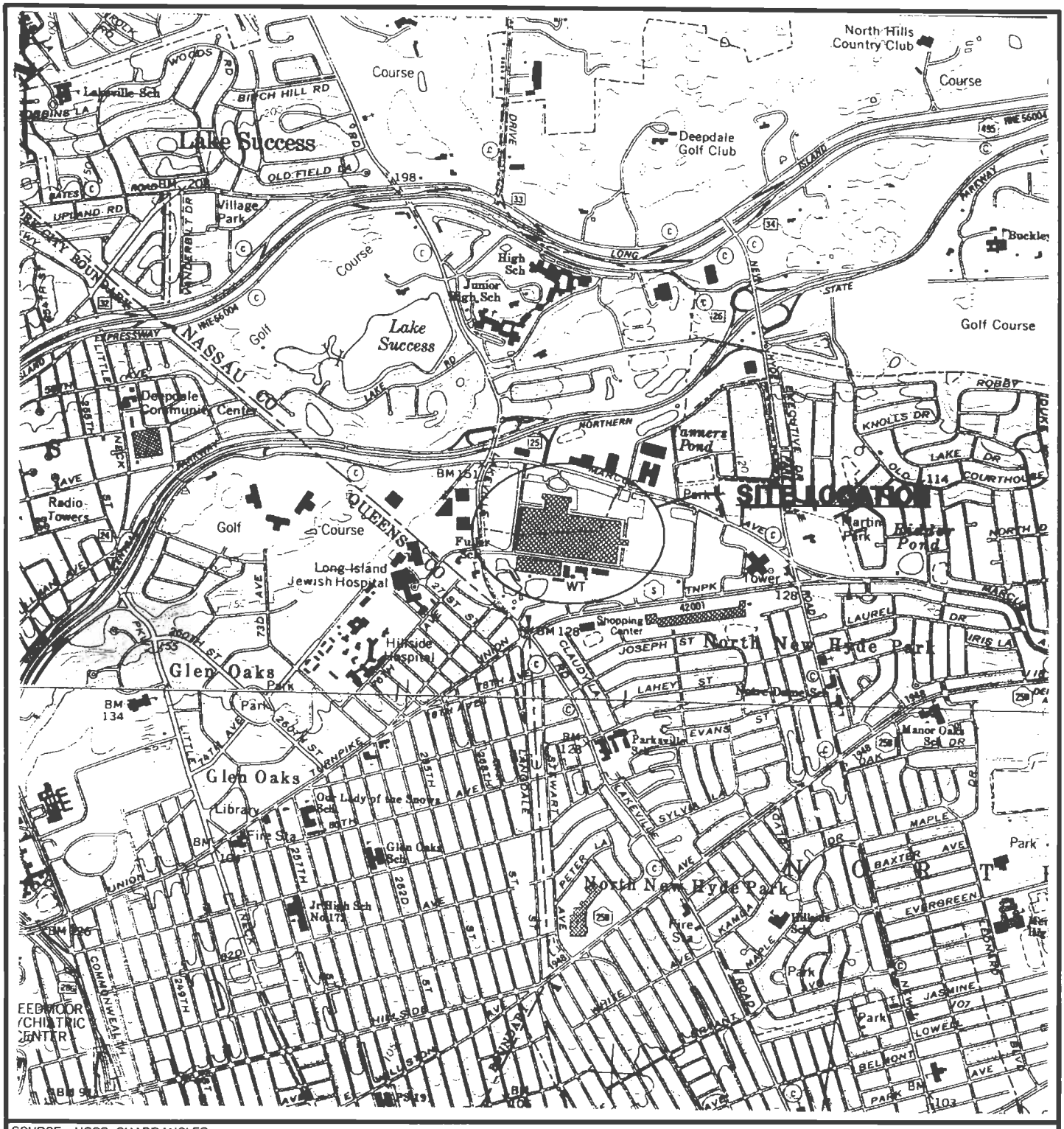
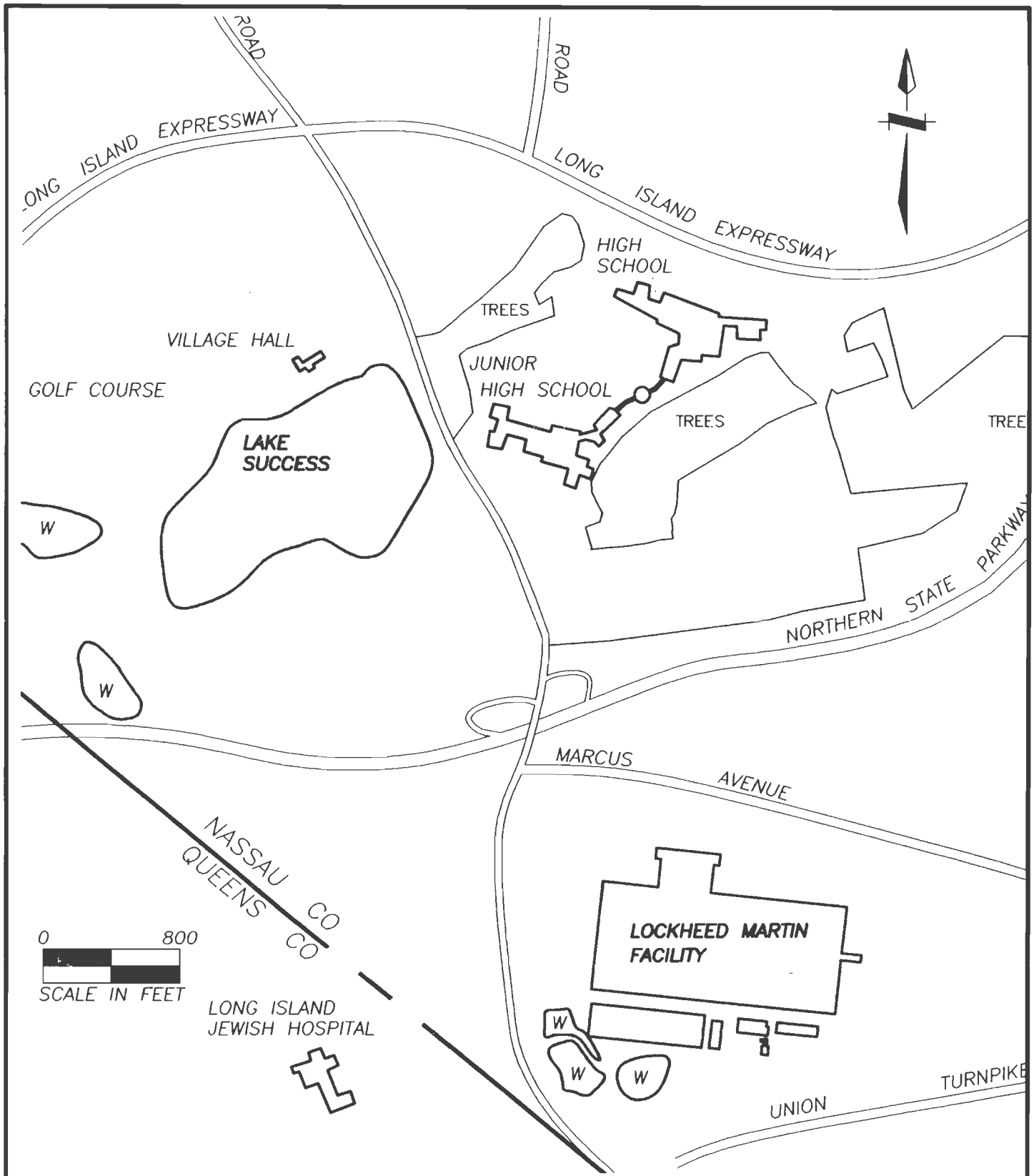


SOURCE: USGS QUADRANGLES
SEA CLIFF & LYNBROOK, N.Y.

MAP No. 1
LOCKHEED MARTIN
SITE LOCATION MAP

SCALE: 1" = 2000'

H2MGROUP
ENGINEERS · ARCHITECTS · PLANNERS · SCIENTISTS · SURVEYORS
MELVILLE, N.Y.
TOTOWA, N.J.



MAP No. 2
LOCKHEED MARTIN
SITE MAP

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H2MGROUP
ENGINEERS · ARCHITECTS · PLANNERS · SCIENTISTS · SURVEYORS
MELVILLE, N.Y.
TOTOWA, N.J.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Building 40 - SUNY, Stony Brook, New York 11790-2356

John P. Cahill
Commissioner

PROJECT FACT SHEET

Lockheed Martin Corporation
NYSDEC Site ID #130045

September 1997

DRAFT FINAL REMEDIAL INVESTIGATION/FEASIBILITY STUDY (RI/FS) WORK PLAN OPERABLE UNIT 2

PURPOSE

The purpose of this fact sheet is to provide you with a description of the upcoming activities which will be conducted by Lockheed Martin Corporation (LMC) off site to its facility located between the Village of Lake Success and the Town of North Hempstead, New York (see Map No. 1). This work will be conducted under the oversight of the New York State Departments of Environmental Conservation and Health (NYSDEC, NYSDOH).

Before discussing the work to be conducted off-site, we include information on the work completed to date, as well as a brief description of the history of the site.

CURRENT STATUS

In 1995, the NYSDEC divided its management of environmental investigation and remediation associated with the LMC site (formerly Unisys Corporation) into two operable units consisting of Operable Unit 1 (OU-1), the 94-acre on-site project area owned by LMC (see Map No. 2), and Operable Unit 2 (OU-2) which includes the off-site areas immediately surrounding the site. This fact sheet focuses on work which will be conducted related to OU-2.

SITE DESCRIPTION

The LMC site consists of 94 acres located at the intersection of Marcus Avenue and Lakeville Road between the Village of Lake Success and the Town of North Hempstead in Nassau County, New York (see attached Map No. 2). The site was an active manufacturing facility from its startup in 1941 until approximately 1995, when the majority of manufacturing activities ceased. Presently, engineering design and administrative activities are conducted at the facility. Additionally, some assembly, integration, prototype development and testing are conducted on the site.

The facility was originally designed and built by the U.S. Government and was operated under a contract with Sperry Gyroscope Company from 1941 through 1951. In 1951, the property was sold to Sperry, which merged with Burroughs in 1986 to form Unisys Corporation. In 1995, Loral Corporation (Loral) acquired the assets of Unisys Defense Systems, a division of Unisys Corporation. In early 1996, the electronics and systems integration businesses of Loral were purchased by LMC, which currently owns and occupies the property.

The site has a main manufacturing building, and six smaller buildings located immediately south of the main building, which total approximately 1.5 million square feet. In the past, the facility manufactured

various defense and government related products. Chemicals used in that manufacturing included plating chemicals, halogenated and non-halogenated solvents, cutting oils, paints and fuel oils.

The site (under the ownership of Unisys Corporation) was placed on the NYSDEC Registry as an inactive hazardous waste site due to the presence of contaminants in the subsurface environment (both soil and groundwater). On December 13, 1991, Unisys entered into a Consent Order issued by the NYSDEC for Remedial Investigation/Feasibility Study (RI/FS) and Interim Remedial Measures (IRMs) at the site. The purpose of conducting the RI was to define the nature and extent of soil and groundwater contamination related to the site (both on and off the facility property).

SUMMARY OF OU-1 ACTIONS

Interim Remedial Measures

With the approval of the NYSDEC, Unisys Corporation implemented interim remedial measures (IRMs) to minimize any risk to public health and the environment during the performance of RI/FS activities and prior to NYSDEC's Record of Decision (ROD). IRM activities at this site consist of:

- Groundwater recovery and treatment using granular activated carbon and air strippers and on-site reinjection of treated groundwater. The groundwater IRM has been in operation since April 1993, and to date has removed over 15,000 pounds of contaminants.
- Soil remediation in the area of the inactive drywells using Soil Vapor Extraction (SVE) technology. The soil IRM has been in operation since January 1994, and to date has removed a total of over 36,000 pounds of contaminants.
- Investigation and repair of Public Supply Well N1802.

The soil and groundwater IRMs are still on going at the site.

Remedial Investigation/Feasibility Study

Two on-site RIs (Phase I RI and Supplemental RI) were completed and approved by the NYSDEC. The results of the two RIs were presented to the public in a NYSDEC fact sheet dated December 1996.

A Baseline Human Health Risk Assessment (Risk Assessment) was completed in which the potential health risks from site-related contamination were assessed. A Feasibility Study (FS) was also completed in which various remedial alternatives for OU-1 were evaluated using NYSDEC criteria.

The NYSDEC prepared a Record of Decision (ROD) in March 1997 presenting the selected remedies for OU-1. Prior to finalizing the ROD, the NYSDEC prepared a proposed remedial action plan (PRAP) which was presented to the public in a fact sheet dated January 1997 and a public meeting which was held during January of 1997. Based upon the OU-1 work to date, the NYSDEC has selected the following remedies for OU-1:

- Continued operation of the Soil Vapor Extraction (SVE)/Catalytic Oxidizer System, supplemented with soil and sludge removal.
- The groundwater treatment system will be expanded to treat 1,800 gallons per minute of groundwater. Groundwater will be treated with air strippers and vapor-phase carbon for emission control.
- A deed restriction will be placed on the portion of the site where the three recharge basins are located to restrict future land use. A security fence will be constructed around the basins to limit access to the basins.
- A remedial design program will be instituted to verify the components of the conceptual design and to provide appropriate details for the construction, operation and maintenance, and monitoring of the remedial program.
- Monitoring the performance of the remediation system to ensure that the remedial goals are met.

Some of the off-site activities which have already been completed during Phase I RI and Supplemental RI include:

- Installation of 12 off-site monitoring wells.
- Sampling and analysis of off-site monitoring wells.
- Collection and analysis of samples from Lake Success.
- Investigation and repair of Public Supply Well N1802.
- Completion of a well survey and data review of domestic, industrial and municipal wells located within 1.5 mile radius of the site.

LMC will be conducting additional actions to evaluate the nature and extent of groundwater impact from site-related sources. The additional work will be conducted following the procedures outlined in the OU-2 RI/FS work plan The objectives of the OU-2 RI/FS are as follows:

1. Determine the nature and extent of groundwater contamination off site of the Lockheed Martin property in the Upper Glacial and Magothy aquifers.
2. Evaluate the pathways of contaminated groundwater migration.
3. Characterize any potential risks posed by contaminated groundwater off the site.
4. Gather sufficient data so that the areas off site can be evaluated through the FS process.

To characterize the nature and extent of off-site groundwater contamination, additional groundwater monitoring wells will be installed at locations cross- and downgradient to the site (e.g., to the north, south, east and west). The wells will be completed at various depths within the aquifer to provide for both a horizontal and vertical delineation of groundwater contamination. The wells will be sampled for the presence of LMC site related chemicals of concern.

As part of the OU-2 RI/FS, an evaluation of the regional groundwater quality and hydrogeology will be conducted, utilizing publicly available data, in order to obtain a full understanding of complex hydrogeologic conditions and the effects of periodic pumping of high-capacity water supply wells and irrigation wells located throughout the project area.

Additionally, to develop a better understanding of regional issues relating to groundwater flow and contaminant transport, the groundwater model developed for the Nassau County Department of Public Works (NCDPW) which includes areas of Nassau, Queens and western Suffolk County will be utilized. The objective of the model is to simulate the migration of contaminants under existing regional conditions (including the periodic pumping of high-capacity water supply wells) and to evaluate the effects of pumping wells on contaminant transport.

The OU-2 RI report will be prepared subsequent to completion of the OU-2 RI field and groundwater modeling work. The OU-2 RI report will include summaries of the data collected under the regional evaluation, groundwater quality data from the newly installed monitoring wells, and the results of the groundwater modeling. The OU-2 Risk Assessment will expand upon the findings of the OU-1 Risk Assessment and its conclusions will be used to help support the development of the OU-2 FS.

Data collected as part of the OU-2 RI will be reviewed to evaluate potential remedial technologies to address contamination in groundwater off of the site. The FS report will include a proposed plan of action which will satisfy environmental constraints and meet regulatory standards. The NYSDEC will evaluate the RI and FS reports and issue an OU-2 ROD.

CITIZEN PARTICIPATION

A Citizen Participation Program (CPP) is being carried out to ensure that the public is informed about, and can provide information concerning, the investigation and clean-up of this site. Public meetings have been held in August 1993 and January 1997 to present the results of the studies and proposed remedial action plans to date to concerned citizens. In addition, information repositories have been established where copies of project-related documents are available for the public to read.

There are continuing opportunities for public involvement associated with this project. Two additional fact sheets, discussing the results of the OU-2 RI/FS and the NYSDEC Proposed Remedial Action Plan (PRAP), will be mailed to you. The PRAP fact sheet will also contain a meeting invitation, inviting you to attend a public meeting on the above. The public will be notified of this meeting through a NYSDEC press notice to the media.

INFORMATION REPOSITORIES

These are places people can go to read the relevant public documents associated with the sites. The repositories are located at the:

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2. Region 1 - NYSDEC
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   New Hyde Park, NY 11040
   (516) 466-8055
   9:00 AM to 6:00 PM - Mondays, Fridays, & Saturdays
   9:00 AM to 9:00 PM - Tuesdays & Thursdays
   10:00 AM to 6:00 PM - Wednesdays
   1:00 PM to 5:00 PM - Sundays

FOR FURTHER INFORMATION

If, at any time, you have questions or comments regarding these projects, please feel free to contact the individuals listed below:

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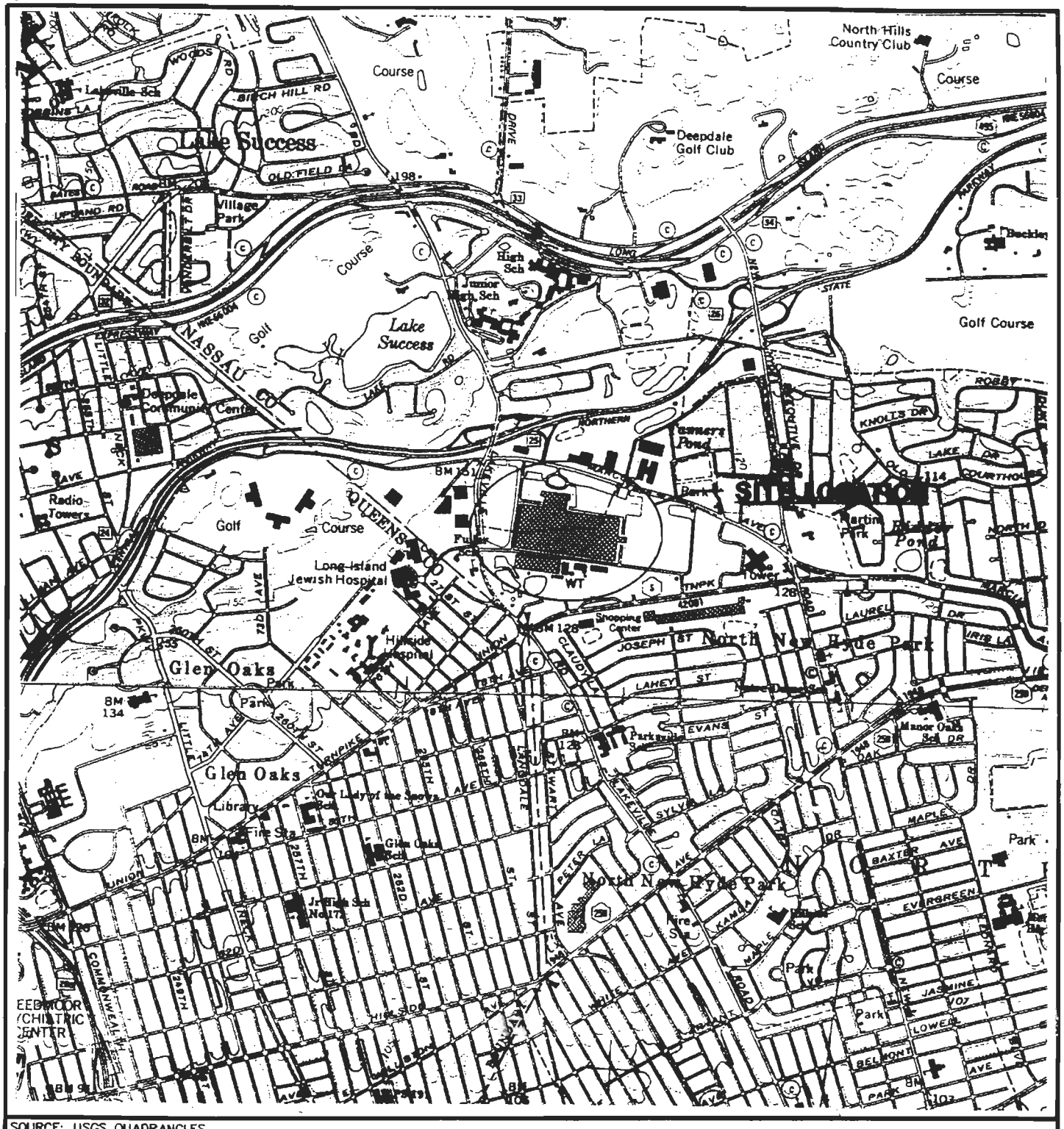
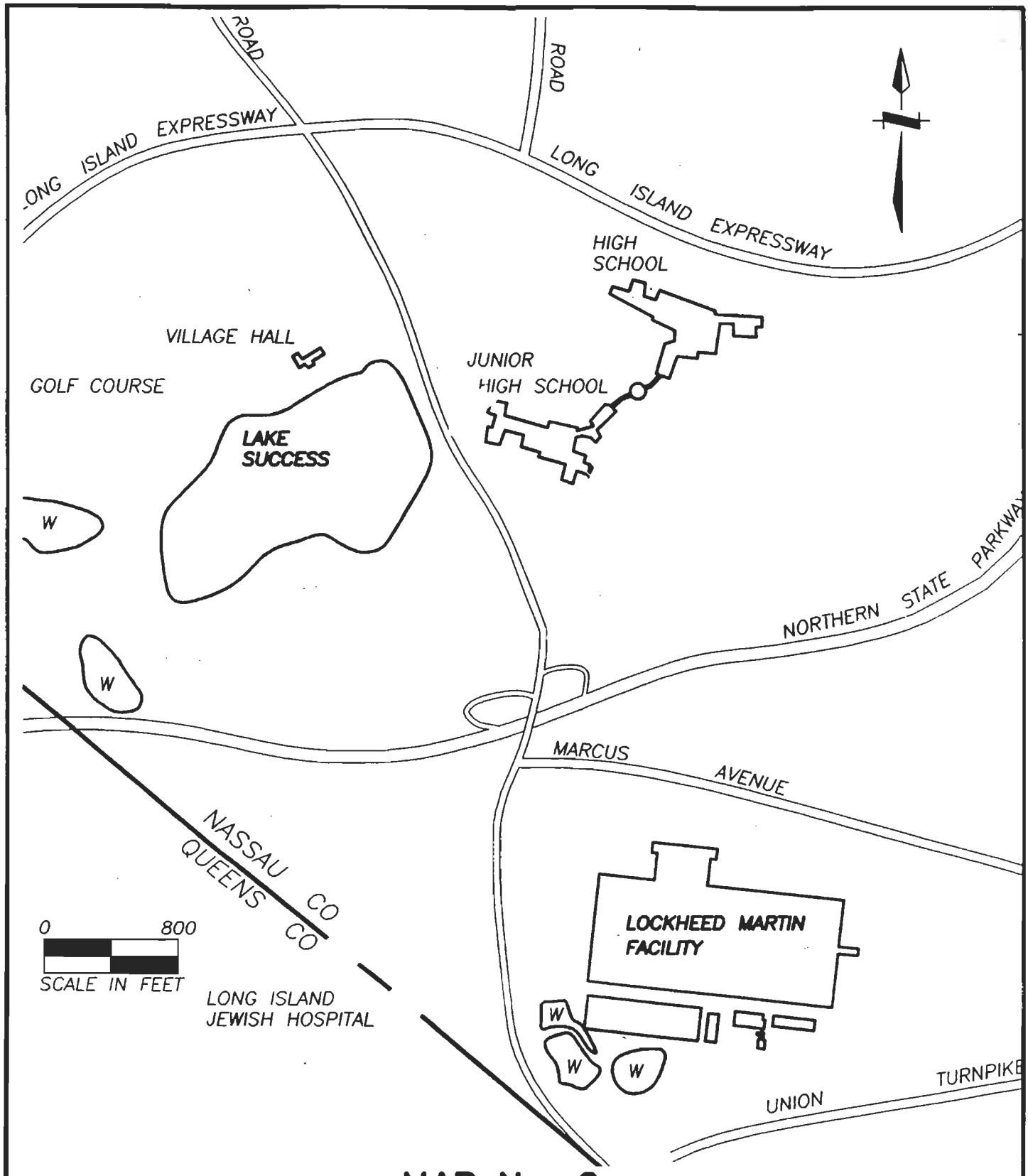


SOURCE: USGS QUADRANGLES
SEA CLIFF & LYNBROOK, N.Y.

MAP No. 1
LOCKHEED MARTIN
SITE LOCATION MAP

SCALE: 1" = 2000'

H2MGROUP
ENGINEERS · ARCHITECTS · PLANNERS · SCIENTISTS · SURVEYORS
MELVILLE, N.Y.
TOTOWA, N.J.



MAP No. 2
LOCKHEED MARTIN
SITE MAP

M:\CADD\LORL\9606\CPPMAP2 12-12-96 1:24:28 pm

H2MGROUP
ENGINEERS · ARCHITECTS · PLANNERS · SCIENTISTS · SURVEYORS
MELVILLE, N.Y.
TOTOWA, N.J.

NEW YORK STATE
DEPARTMENT OF

ENVIRONMENTAL
CONSERVATION

Meeting Date and Location:

December 16, 2002
7:30 p.m.
Baker Elementary School
69 Baker Hill Road
Great Neck

Public Comment Period

November 27, 2002
through January 21, 2003

Send Written Comments to:

Girish Desai
Project Manager
NYSDEC
SUNY Bldg. 40
Stony Brook NY
11790-2356

Local Document Repositories

Hillside Public Library
1950 Hillside Avenue
New Hyde Park, NY 11040
(516) 488-3316

Parkville Branch Library
10 Campbell Street
New Hyde Park, NY 11040
(516) 466-8055

INTERIM REMEDIAL MEASURE PLAN MEETING INVITATION AND FACT SHEET November 2002

Former Unisys Site
Inactive Hazardous Waste Disposal Site (130045)

Project Update

Former Unisys Site Operable Unit 1 Remedial Actions and Operable Unit 2 Interim Remedial Measure

This fact sheet will provide an update on implementation of the former Unisys site Operable Unit 1 (onsite) remedial actions and development of plans for Operable Unit 2 (offsite) interim remedial measures. As will be explained below, the New York State Department of Environmental Conservation (DEC) is proposing the construction of two interim remedial systems north of the former Unisys site. One of these systems will be located south of the Long Island Expressway. Construction of this system is of the highest priority to DEC and will be the primary focus of a public information and comment meeting to be held on December 16, 2002. (See sidebar for meeting details.)

Site History

The 94-acre property and buildings, located on Marcus Avenue in Lake Success, New York, were originally owned by the U.S. Government and operated under contract with Sperry Gyroscope Company from 1941 through 1951. In 1951, the U.S. Government sold the property to Sperry, which merged with Burroughs in 1986 to form the Unisys Corporation. In 1995, Loral Corporation acquired the assets of Unisys Defense Systems, a division of Unisys Corporation. In early 1996, Lockheed Martin Corporation purchased the electronics and systems integration businesses of Loral and elected to close down the Lake Success facilities in 1998. The site is on the DEC's Registry of Inactive Hazardous Waste Disposal Sites due to the presence of contaminants in the subsurface soil and groundwater.

Remediation History

From the late 1970s through the early 1980s, several remedial actions were conducted at the Unisys site. These actions included a Nassau County Department of Health investigation of underground dry wells used to dispose of rinse waters containing cleaners and degreasers used during manufacturing operations. The lines leading to these dry wells were sealed and the liquids within the wells were pumped out to prevent further migration of contaminants. Other remedial actions have included the removal of several above-grade and underground storage tanks.

Between 1988 and 1992, Unisys Corporation conducted a large-scale subsurface environmental investigation to evaluate the nature and extent of onsite soil and groundwater contamination. In 1991, Unisys entered an

administrative order on consent with DEC requiring onsite interim remedial measures for soil and groundwater, and the completion of a remedial investigation and feasibility study (RI/FS).

While the RI/FS process was underway, Unisys/Loral built and operated two interim remedial systems. A soil vapor extraction system removed volatile organic compounds (VOCs) from the soils surrounding the dry wells, and a groundwater treatment system removed VOCs from the groundwater.

In 1995, the DEC created two remedial projects at the site. Operable Unit 1 (OU-1) addresses the remediation of soil and groundwater within the 94-acre facility boundary; Operable Unit 2 (OU-2) addresses the contamination that has moved beyond the facility's boundary.

Status of OU-1 Remedial Actions

DEC issued a record of decision (ROD) for OU-1 in March 1997. This ROD documented DEC's final decision on a remedial plan for onsite contamination and followed public review of a proposed remedial action plan. The ROD required the removal of contaminated soil and sludge from three onsite drywells, an upgrade of the soil vapor extraction system that had been installed by Unisys/Loral as an interim remedial measure, and installation of a system to pump and treat contaminated groundwater from beneath the site.

Lockheed Martin completed removal of contaminated soils from the three drywells in 1998. From 1993 to early 2002, an interim soil vapor extraction system operated in the dry well area where VOCs had been discharged historically. During the past year the above ground components of the SVE system were moved from the southeast corner of the building to the northeast corner of the property, adjacent to the new OU-1 groundwater treatment system. Lockheed Martin has enhanced the soil vapor extraction system, and it continues to operate at full capacity, removing VOCs from the deep soils. The system will continue to run until the DEC determines it can no longer efficiently remove contaminants. It is expected that approximately two more years of system operation will be required.

As required by the OU-1 record of decision, the deed restrictions for the three storm water recharge basins located on the site have been recorded with the appropriate authorities. A fence has been constructed around the basins, and warning signs have been posted at the basins and on the fence. All ROD required monitoring has been completed. The results of the OU-1 monitoring have been summarized and are available in the public repositories.

The OU-1 groundwater treatment plant consists of three extraction wells that pump contaminated groundwater from beneath the site to an onsite treatment plant at which air strippers remove VOCs by passing a stream of air through water as it falls through a series of baffles. The VOCs evaporate into the air, and the air is passed through activated carbon in an off-gas treatment unit. The activated carbon and special potassium permanganate media capture the VOCs before the air is discharged to the atmosphere. During the summer of 2002, the OU-1 groundwater treatment system was shut down to allow for a complete upgrade of the off-gas treatment unit. Lockheed Martin also added two additional reinjection wells to the two that were already in place along the Northern State Parkway during the summer of 2002. These wells return clean water to the aquifer. The entire system was restarted at the end of August and is operating at a full capacity of 730 gallons per minute. The four reinjection wells at OU-1 are effectively handling the discharge.

Any contamination that has migrated south of the site will now travel north-northwest and be captured by the new OU-1 treatment system. No decision has been made to install additional monitoring wells south of the Unisys site at this time for the following reasons:

- The overall direction of groundwater flow across the site in the Upper Glacial and Magothy aquifers is north-northwest. The groundwater plume has migrated primarily north/northwest of the site. The groundwater plume has traveled a few hundred feet to the south of the property

line due to the historical use of onsite diffusion wells located on the south side of the site. No further southward migration is expected because the use of onsite diffusion wells was discontinued in the summer of 2001. The treated water from the OU-1 groundwater system is now discharged through offsite diffusion wells located northeast of the site along Northern State Parkway.

- Groundwater modeling, conducted to simulate the hydraulic effects of the operation of the OU-1 groundwater system with offsite recharge, shows complete capture of all onsite groundwater. In addition, the southward migration of groundwater contamination from the site also was shown to be captured by the OU-1 groundwater system.

- The efficacy of such hydraulic control of the OU-1 groundwater remediation system will be tested and proved by the existing system of monitoring wells.

Operable Unit 2

Lockheed Martin, under DEC and State Department of Health (NYSDOH) oversight, has conducted an extensive investigation into the groundwater contamination that has migrated off the site. In January 2001, DEC held a public meeting to provide community members with an opportunity to learn about this investigation. At that meeting, staff presented the initial results of the offsite groundwater investigation to help the public better understand the nature and extent of the groundwater contamination. The information presented will provide the basis for the remedial investigation (RI) report that Lockheed Martin is preparing for DEC.

Based on preliminary RI results, DEC and NYSDOH asked Lockheed Martin to obtain additional groundwater, soil gas, and air data to ensure that the most recent data are used in the remedial investigation and feasibility study and in the update of the groundwater model. These additional data are being included in the RI report that will be finalized in early to mid-2003. The data from the RI will be used to prepare a feasibility study (FS) that will include evaluations of various cleanup alternatives for the offsite groundwater contamination.

Following the assessment of the cleanup alternatives, DEC will prepare a proposed remedial action plan (PRAP). The PRAP will describe DEC's preferred remedy for the offsite groundwater contamination. DEC will hold a public meeting to discuss the PRAP and offer the PRAP for public review and comment. DEC may modify its preferred remedy or select a different remedial alternative based on comments received during the public review. DEC will document its final decision on the selected remedy in a record of decision.

<u>OU-2 Interim Remedial Measure</u>

As the data from the RI were being evaluated and groundwater models prepared to understand the nature and extent of contamination, it became apparent that VOCs north of the former Unisys site are at a location where a large proportion of the contaminants could be removed by an interim remedial measure (IRM). An IRM is a discrete action that can be taken without extensive investigation to remove or isolate a source of contamination. It has also become apparent that VOCs north of the site threaten public supply wells and the North Hills Special Groundwater Protection Area (SGPA).

DEC has directed Lockheed Martin to implement two interim remedial measures to protect the drinking water resources and the SGPA from further contamination from the groundwater plume. One of these systems will be located south of the Long Island Expressway. Construction of this system is of the highest priority to DEC and will be DEC's immediate focus. A second IRM will be located north of the Long Island Expressway and is in the initial planning stages.

DEC and Lockheed Martin considered several cleanup scenarios for the OU-2 South IRM; all involve extraction and treatment of contaminated groundwater, and recharge of the clean water to

the aquifer. During consideration of remedial scenarios it became clear that the movement of the contaminant plume is such that only an extraction well placed in the area of the Great Neck School District maintenance yard will be effective at capturing a substantial portion of the contamination. DEC has requested that the Great Neck School District grant permission for the installation of such a well.

In June 2002, officials from Lockheed Martin, Lockheed Martin's environmental consultant, ARCADIS, and DEC met with the Great Neck Board of Education to request permission to place the OU-2 South extraction well on the school's property. These officials also sought permission to install pipelines necessary to carry contaminated water from the extraction well to a treatment plant and to carry clean water from a treatment plant to reinjection wells proposed to be located on State Department of Transportation (NYSDOT) property along the Long Island Expressway, immediately east of the school district property.

Since the June 2002 meeting, Lockheed Martin has reached an agreement-in-principle with the Manhasset-Lakeville Water District (MLWD). This agreement will allow Lockheed Martin to use the treatment system already in place at the MLWD Parkway Station to treat the contaminated water in the OU-2 South IRM. Completion of the agreement between Lockheed Martin and MLWD is expected by the end of December 2002. Lockheed Martin has also applied to NYSDOT for permission to install the proposed reinjection wells.

Locating the treatment system at the existing MLWD plant ensures the shortest possible route by which groundwater extracted by a well in the school district maintenance yard would be transported for treatment, and minimizes the construction necessary to provide an efficient and protective treatment system. It will also reduce the time required to design and construct the IRM. Due to the significance of this development, Lockheed Martin and DEC requested a second meeting with the Great Neck Board of Education so that board members would have this information before making a decision on Lockheed Martin's request for permission to install the proposed extraction well. That meeting occurred on November 6.

No Exposure to Students, Staff, Community

Today, the contamination is approximately 200 feet below land surface under the school district property. It is about 150 feet from land surface to the groundwater. There is then a layer of approximately 60 feet of clean water above the contaminated groundwater. This layer of clean water and the distance between the dissolved contamination and the land surface ensure that no contaminant vapors can make their way to the surface where humans could be exposed.

The proposed extraction well on the school district property would present no exposure to the students, faculty, staff or community. The well would be in a vault completely below ground. The only ground surface indication of the well would be a small concrete pad with a "manhole" cover that will be locked.

The extraction well will not release vapors to the air. The treatment facility will not be located on school property, and the pipes carrying the extracted water will be underground. Contaminated groundwater will be piped directly from the extraction well to the treatment plant in double-walled pipes. The double-walled pipes will be equipped with leak detection systems. In the unlikely event of a pipe rupture, the extracted groundwater will be contained by the outer wall, and the extraction well will be shut down by the leak detection system.

As a further precaution, the entire system will be equipped with a second system to detect a decrease in water pressure. A pressure decrease, as would occur with a leak, will cause the system to shut down automatically. Even if both automatic shutdown systems failed simultaneously it is unlikely that a leak would result in direct exposure to contaminated water as the pipeline will be four to five feet below ground surface. However, even transient direct exposure to water with the current levels of contamination would not be a cause for human health concern.

Lockheed Martin proposes to use a portion of an existing single-walled pipeline to move treated water from the treatment plant to the reinjection wells. This pipeline had been used to carry water from public supply wells north of the Long Island Expressway to the MLWD Parkway Station treatment plant. It is designed to carry 1000 gallons per minute; it would only be used to carry 500 gallons per minute in the proposed treatment. This single-walled pipeline would present no more risk than any public water supply main.

Lockheed Martin proposes to remove VOCs from the contaminated groundwater by using either two existing air strippers at the MLWD Parkway Station facility. The air strippers would be designed to remove approximately 99.6% of the VOC contamination, leaving undetectable levels of contaminants in the water to be returned to the aquifer.

Like the OU-1 air strippers described on Page 2, The Parkway Station air strippers would be fitted with two activated carbon off-gas treatment unit to remove VOCs from the air before it is released to the atmosphere. Even without the off-gas treatment unit, contaminants in air emissions from the strippers would be below applicable standards and would have no measurable effect on ambient air quality in the area.. A single off-gas treatment unit would ensure even lower contaminant levels in the air emissions. Lockheed Martin is proposing to add a second off-gas treatment unit to the system to ensure the lowest possible emissions of VOCs.

Why an IRM?

The contamination should be captured now to prevent contamination of public water supply wells and further contamination of the special groundwater protection area. There are no available locations between the southern boundary of the school property and the Long Island Expressway appropriate for an extraction well and the related equipment, piping and diffusion wells.

The remainder of the RI and FS process will take time to complete, probably two to three years. Following the formal RI/FS process, it would be an additional two years before the treatment systems could be operational due to the time it takes to obtain access agreements, prepare work plans, obtain permits, construct the facilities, etc. Implementation of the proposed IRM now, including placement of an extraction well in the school district maintenance yard, will prevent contamination from further intrusion into the aquifer and will protect drinking water wells north of the site.

IRM Tasks

DEC has requested that the Great Neck Board of Education permit installation of the IRM extraction well in the maintenance yard. The board is currently considering that proposal. Upon the board's approval, DEC and Lockheed Martin will move immediately to finalize the draft IRM work plan. DEC will present the draft work plan at the public meeting on December 16, and a public comment period will be held through January 21. After review of public comments, DEC expects to approve a final work plan. Once DEC approves a work plan, Lockheed Martin will obtain access agreements, permits, finalize design of the facilities, and begin installaion of the extraction well and pipelines.

Formal RI/FS Process to Continue

As work progresses on the IRM, the RI report will be completed and submitted to DEC. Also, work will continue on the FS. Even if an interim remedial measure is implemented, the formal remedial process will continue, resulting in a record of decision and a consent order between DEC and Lockheed Martin. The proposed IRM will likely be a significant part of the final offsite remedy.

Citizen Participation

A citizen participation program is being carried out to ensure that the public is informed about the remediation activities at the former Unisys site. Public meetings, site tours, briefings, and informational fact sheets have been offered since 1993. Information repositories where reports, fact sheets, and pertinent documents on this project are

kept for public access were established in August 1993. A copy of the citizen participation plan has been placed in the repositories.

The draft OU-2 South IRM workplan will be available in the repositories for public review by December 9, 2002. DEC will accept public comments on the draft workplan at the December 16 meeting and, in writing to Girish Desai (address below) until January 21, 2003.

Additional Document Repository

Region 1 - DEC
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Project Fact Sheet
Operable Unit 2 South Interim Remedial Measure

June 2003
NYSDEC Site ID # 130045
Former Unisys Site • 365 Lakeville Road • Great Neck, New York

This fact sheet provides an update on plans for the offsite interim remedial measure, or IRM, known as Operable Unit 2 (OU-2) South. The New York State Department of Environmental Conservation (DEC) has approved the construction of an interim remedial system to be located south of the Long Island Expressway. Construction of this system is of the highest priority to DEC. The construction of this system begins in June 2003 and is described below.

Site History

The 94-acre property and buildings, located on Marcus Avenue in Lake Success, New York, were originally owned by the U.S. Government and operated under contract with Sperry Gyroscope Company from 1941 through 1951. In 1951, the U.S. Government sold the property to Sperry, which merged with Burroughs in 1986 to form the Unisys Corporation. In 1995, Loral Corporation acquired the assets of Unisys Defense Systems, a division of Unisys Corporation. In early 1996, Lockheed Martin Corporation purchased the electronics and systems integration businesses of Loral and elected to close down the Lake Success facilities in 1998. The site is on the DEC's Registry of Inactive Hazardous Waste Disposal Sites due to the presence of contaminants in the subsurface soil and groundwater.

Remediation History

From the late 1970s through the early 1980s, several remedial actions were conducted at the Unisys site. These actions included a Nassau County Department of Health investigation of underground dry wells used to dispose of rinse waters containing cleaners and degreasers used during manufacturing operations. The lines leading to these dry wells were sealed and the liquids within the wells were pumped out to prevent further migration of contaminants. Other remedial actions have included the removal of several above-grade and underground storage tanks.

Between 1988 and 1992, Unisys Corporation conducted a large-scale subsurface environmental investigation to evaluate the nature and extent of onsite soil and groundwater contamination. In 1991, Unisys entered an administrative order on consent with DEC requiring onsite interim remedial measures for soil and groundwater, and the completion of a remedial investigation and feasibility study (RI/FS).

While the RI/FS process was underway, Unisys/Loral built and operated two interim remedial systems. A soil vapor extraction system removed volatile organic compounds (VOCs) from the soils surrounding the dry wells, and a groundwater treatment system removed VOCs from the groundwater.

In 1995, the DEC created two remedial projects at the site. Operable Unit 1 (OU-1) addresses the remediation of soil and groundwater within the 94-acre facility boundary; Operable Unit 2 (OU-2) addresses the contamination that has moved off-site beyond the facility's boundary.

OU-1 Remedial Actions

DEC issued a record of decision (ROD) for OU-1 in March 1997. This ROD documented DEC's final decision on a remedial plan for onsite contamination and followed public review of a proposed remedial action plan. The ROD required the removal of contaminated soil and sludge from three onsite drywells, an upgrade of the soil vapor extraction system that had been installed by Unisys/Loral as an interim remedial measure, deed restriction for the three on-site recharge basins, and installation of a system to pump and treat contaminated groundwater from beneath the site.

Lockheed Martin completed removal of contaminated soils from the three drywells in 1998. From 1993 to early 2002, an interim soil vapor extraction system operated in the dry well area where VOCs had been discharged historically. During 2002 the above ground components of the SVE system were moved from the southeast corner of the building to the northeast corner of the property, adjacent to the new OU-1 groundwater treatment system. Lockheed Martin has enhanced the soil vapor extraction system, and it continues to operate at full capacity, removing VOCs from the shallow and deep soils. The system will continue to run until the DEC determines it can no longer efficiently remove contaminants. It is expected that approximately one to two more years of system operation will be required.

As required by the OU-1 record of decision, the deed restrictions for the three storm water recharge basins located on the site have been recorded with the appropriate authorities. A fence has been constructed around the basins, and warning signs have been posted at the basins and on the fence. All ROD required monitoring has been completed. The results of the OU-1 monitoring have been summarized and are available in the public repositories.

In 2002 the OU-1 groundwater treatment system was transitioned from its interim remediation system to the ROD compliant facility. The new system consists of three extraction wells that pump contaminated groundwater from beneath the site to an onsite treatment plant where air strippers remove VOCs by passing a stream of air through water as it falls through a series of baffles. The VOCs evaporate into the air, and the air (or off-gas) is passed through an off-gas treatment unit, consisting of activated carbon and special potassium permanganate media, to capture the VOCs before the air is discharged to the atmosphere. Four reinjection wells are located along the Northern State Parkway and return clean water to the aquifer. The entire system operates at a full capacity of 730 gallons per minute.

Operable Unit 2

Lockheed Martin, under DEC and State Department of Health (NYSDOH) oversight, has conducted an extensive investigation into the groundwater contamination that has moved off the site. In January 2001, DEC held a public meeting to provide community members with an opportunity to learn about this investigation. At that meeting, staff presented the initial results of the offsite groundwater investigation to help the public better understand the nature and extent of the groundwater contamination. The information presented provides the basis for the remedial investigation (RI) report that Lockheed Martin is preparing for DEC.

Based on preliminary RI results, DEC and NYSDOH asked Lockheed Martin to obtain additional groundwater, soil gas, and air data to ensure that the most recent data are used in the remedial investigation and feasibility study and in the update of the groundwater model. These additional data will be included in the final RI. The data from the RI will be used to prepare a

feasibility study (FS) that will include evaluations of various cleanup alternatives for the offsite groundwater contamination.

Following the assessment of the cleanup alternatives, DEC will prepare a proposed remedial action plan (PRAP). The PRAP will describe DEC's preferred remedy for the off - site groundwater contamination. DEC will hold a public meeting to discuss the PRAP and offer the PRAP for public review and comment. DEC may modify its preferred remedy or select a different remedial alternative based on comments received during the public review. DEC will document its final decision on the selected remedy in a record of decision (ROD).

OU-2 Interim Remedial Measure

As the data from the RI were being evaluated and groundwater models prepared to understand the nature and extent of contamination, it became apparent that VOCs in the groundwater north of the former Unisys site are at a location where a large proportion of the contaminants could be removed by an interim remedial measure (IRM). An IRM is an action that can be taken without extensive investigation to remove or isolate a source of contamination. It has also become apparent that VOCs in the groundwater north of the site threaten public supply wells and the North Hills Special Groundwater Protection Area (SGPA).

DEC has directed Lockheed Martin to implement an interim remedial measure to protect the drinking water resources and the SGPA from further contamination from the groundwater plume. This IRM system will be located south of the Long Island Expressway, and is being called the OU-2 South IRM. Construction of this system is of the highest priority to DEC and is DEC's immediate focus. In December 2002, DEC held a public meeting to provide the community an opportunity to learn about proposed work plans. The need for a second IRM, possibly located north of the Long Island Expressway is currently under evaluation by Lockheed Martin and the DEC.

OU-2 South Interim Remedial Measure

DEC and Lockheed Martin considered several cleanup scenarios for the OU-2 South IRM; all involved extraction and treatment of contaminated groundwater, and recharge of the clean water to the aquifer. During consideration of remedial scenarios it became clear that the movement of the contaminant plume is such that only an extraction well placed in the area of the Great Neck School District maintenance yard will be effective at capturing a substantial portion of the contamination. DEC requested that the Great Neck School District grant permission for the installation of such a well.

Officials from Lockheed Martin, Lockheed Martin's environmental consultant, ARCADIS, and DEC have worked closely with the Great Neck Board of Education to obtain permission to place the OU-2 South extraction well on the school's property and to install pipelines necessary to carry contaminated groundwater from the extraction well to an existing treatment plant, and the treated water from the treatment plant to reinjection wells. The reinjection wells will be located on State Department of Transportation (NYSDOT) property along the Long Island Expressway, immediately east of the school district property. The agreement specifies extra precautions to satisfy the school board' s concerns for safety of the staff, students, and public.

The Manhasset-Lakeville Water District (MLWD) has agreed to allow Lockheed Martin to use its treatment system located at the MLWD Parkway Station to treat the contaminated water in the OU-2 South IRM. Lockheed Martin has also applied to NYSDOT for permission to install the proposed reinjection wells.

Locating the treatment system at the existing MLWD plant ensures the shortest possible route by which groundwater extracted from a well in the school district maintenance yard would be transported for treatment, and minimizes the construction necessary to provide

an efficient and protective treatment system. It also reduces the time required to design and construct the IRM.

No Exposure to Students, Staff, Community
Today, the contamination is approximately 200 feet below land surface under the school district property. It is about 150 feet from land surface to the groundwater. There is then a layer of approximately 60 feet of clean water above the contaminated groundwater. This layer of clean water and the distance between the dissolved contamination and the land surface ensure that no contaminant vapors can make their way to the surface where humans could be exposed.

The extraction well in the maintenance yard on the school district property will present no exposure to the students, faculty, staff or community. The well will be located within a vault completely below ground surface. The only ground surface indication of the well would be a small concrete pad with a "manhole" cover that will be locked.

The extraction well will not release vapors to the air. The treatment facility will not be located on school property, and the pipes carrying the extracted water will be underground. Contaminated groundwater will be piped directly from the extraction well to the treatment plant in double-walled pipes. The double-walled pipes will be equipped with leak detection systems. In the unlikely event of a pipe rupture, the outer wall will contain the extracted groundwater, and the extraction well will be automatically and immediately shut down by the leak detection system.

As a further precaution, the entire system will be equipped with a second system to detect a decrease in water pressure. A pressure decrease, as would occur with a leak, will also cause the system to shut down automatically. Even if both automatic shutdown systems failed simultaneously, it is unlikely that a leak would result in direct exposure to contaminated water as the pipeline will be four to five feet below ground surface. However, even short-term direct exposure to water with the current levels of contamination would not be a cause for human health concern.

Lockheed Martin plans to use a portion of an existing single-walled pipeline to move treated water from the treatment plant to the reinjection wells. This pipeline had been used to carry water from public supply wells north of the Long Island Expressway to the MLWD Parkway Station treatment plant. It is designed to carry 1000 gallons per minute; it would only be used to carry 500 gallons per minute in the treatment system. This single-walled pipeline would present no more risk than any public water supply main. Up to four diffusion wells will reinject clean water into the aquifer outside the area of groundwater contamination.

The treatment plant will remove contaminants, known as volatile organic compounds, or VOCs, from the groundwater by using the two existing air strippers at the MLWD Parkway Station facility. The air strippers will be designed to remove the VOC contamination, leaving undetectable levels of contaminants in the water to be returned to the aquifer.

Like the OU-1 air strippers, the Parkway Station air strippers will be fitted with two activated carbon off-gas treatment units to remove VOCs from the air before it is released to the atmosphere. Even without the off-gas treatment unit, contaminants in air emissions from the strippers would be below applicable standards and would have no measurable effect on ambient air quality in the area. A single off-gas treatment unit would ensure even lower contaminant levels in the air emissions. However, to ensure the lowest possible rate of emissions of VOCs, Lockheed Martin will add a second off-gas treatment unit to the system which will ensure undetectable levels of contaminants in air emissions.

The treatment system will run continuously and automatically, with weekly site inspections and an on-call operator available 24 hours a day.

Why an IRM?
The contamination should be captured now to prevent contamination of public water supply wells and further contamination of the special groundwater protection area. There are no available locations between the southern boundary of the school property and the Long Island Expressway appropriate for an extraction well and the related equipment, piping and diffusion wells.

The remainder of the RI and FS process will take time to complete, probably two to three years. Following the formal RI/FS process, it would be an additional two years before the treatment systems could be operational due to the time it takes to obtain access agreements, prepare work plans, obtain permits, construct the facilities, etc.

IRM Schedule
Work schedules are being coordinated with the Great Neck school board. The project is expected to be completed by the end of the first quarter 2004. Drilling of the extraction well and pipeline installation is scheduled to begin mid to late June 2003.

Formal RI/FS Process to Continue
As work progresses on the IRM, the RI report will be completed and submitted to DEC. Also, work will continue on the FS. While the interim remedial measure is being implemented, the formal remedial process will continue, resulting in a record of decision and a consent order between DEC and Lockheed Martin. The IRM will likely be a significant part of the final offsite remedy.

Citizen Participation
A citizen participation program is being carried out to ensure that the public is informed about the remediation activities at the former Unisys site. Public meetings, site tours, briefings, and informational fact sheets have been offered since 1993. Information repositories where reports, fact sheets, and pertinent documents on this project are kept for public access were established in August 1993. A copy of the citizen participation plan has been placed in the repositories.

The final OU-2 South IRM work plan, dated May 29, 2003, which has been approved by DEC is available in the document repository.

Document Repositories
Hillside Public Library
1950 Hillside Avenue
New Hyde Park, NY 11040
(516) 488-3316
10 a.m. to 9 p.m. Weekdays
10 a.m. to 5 p.m. Saturdays
12 noon to 4 p.m. Sundays, except Summer

Parkville Branch Library
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10 a.m. to 9 p.m. Wednesdays
9 a.m. to 6 p.m. Sat.
1 p.m. to 5 p.m. Sundays

Region 1 – DEC
Hazardous Waste Remediation Unit
Stony Brook, NY 11790-2356
(631) 444-0240
8:30 a.m. to 4:45 p.m. Weekdays

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New York State
Department of Environmental Conservation
Division of Public Affairs & Education
SUNY Bldg. 40
Stony Brook NY 11790-2356

Mr. Girish Desai
Environmental Engineer
New York State Department of Environmental Conservation
Building 40, SUNY Stony Brook
Stony Brook, NY 11790-2356

11790/9999

NEW YORK STATE
DEPARTMENT OF

ENVIRONMENTAL
CONSERVATION

Former Unisys Site
365 Lakeville Rd.
Great Neck, NY
Site No. 1-30-045
******

Public availability session will be held August 23, 2000, 6 p.m. - 9 p.m.
Clinton G. Martin Park
Union Turnpike and
New Hyde Park Rd.,
New Hyde Park
******

Documents related to the environmental remediation of this site may be viewed at local repositories and the DEC Region 1 Office. See page 4 for addresses and phone numbers of the public repositories.

FACT SHEET

Former Unisys Site
Great Neck, Nassau County, NY
August, 2000

Former Unisys Site OU-1 Groundwater Treatment

The New York State Department of Environmental Conservation (DEC) in cooperation with New York State Department of Health (NYSDOH) will hold a public availability session to provide community members with the opportunity to discuss Lockheed Martin Corporation's plans to construct a groundwater treatment system at the former Unisys site in Great Neck, New York. The informal session will be held from 6 to 9 p.m. on Wednesday, August 23 at the Clinton G. Martin Park meeting room in the Town of North Hempstead.

Representatives from the DEC, NYSDOH and Lockheed Martin will be available to go over the construction plans, schedule, and planned operations of the on-site groundwater treatment system. No formal presentation will be given during this session. This session will provide an opportunity for the public to meet with project representatives individually or in small groups to discuss questions and concerns regarding the upcoming construction of the on-site groundwater treatment system.

For more information on this public availability session, contact Mark Lowery, DEC, at 631-444-0350.

History of the Former Unisys Site

The 94-acre property and buildings were originally owned by the U.S. Government and operated under contract by Sperry Gyroscope Company from 1941 through 1951. In 1951, the property was sold to Sperry, which merged with Burroughs in 1986 to form Unisys Corporation. In 1995, Loral Corporation acquired the assets of Unisys Defense Systems, a division of Unisys Corporation. In early 1996, Lockheed Martin purchased the electronics and systems integration businesses of Loral and elected to close down the Great Neck facilities in 1998. The site has been placed on the DEC's Registry of Inactive Hazardous Waste Disposal Sites due to the presence of contaminants in the subsurface soil and groundwater.

During the plant's 57-year history, the facility was used to manufacture a wide range of defense related products. Past operations included casting, etching, degreasing, plating, painting, machining, and assembly.

Remediation History

From the late 1970s through the early 1980s, several remedial actions were conducted at the Unisys Site. These actions include the NCDOH's investigation of the dry wells (underground waste disposal areas) at the southeast corner of the facility. The dry wells had been used to dispose of rinse waters containing cleaners and degreasers used during manufacturing operations. As a result of the health department's investigation, the lines leading to the dry wells were sealed and the liquids within the wells were pumped out to prevent further migration of contaminants. Other remedial actions taken include the removal of several above-grade and underground storage tanks.

Between 1988 and 1992, Unisys Corporation conducted a large scale subsurface environmental investigation in which the nature and extent of on-site soil and groundwater contamination were evaluated. In 1991, Unisys signed an Administrative Order on Consent with the DEC requiring interim remedial measures for on-site soil and groundwater, and the completion of a remedial investigation and feasibility study (RI/FS).

While the RI/FS process was underway Unisys/Loral built and operated two interim remedial systems. A soil vapor extraction (SVE) system removed volatile organic compounds (VOCs) in the soils surrounding the dry wells, and a groundwater treatment system removed VOCs from the groundwater.

In 1995, the DEC created two remedial projects (Operable Units) at the site. Operable Unit 1 (OU-1) addresses the remediation of soil and groundwater within the 94-acre facility boundary. Operable Unit 2 (OU-2) addresses the investigation and remediation of contaminated groundwater that is beyond the facility boundary. The DEC issued the record of decision (ROD) that defines the remedies for OU-1 on March 31, 1997.

Components of the OU-1 Record of Decision

The record of decision was finalized following public review of the remedial plans. There are three components of the OU-1 selected remedies:

- Soil contamination
  - Excavate contaminated soil from the three drywells.
  - Continue operation of the soil vapor extraction (SVE) interim remedial system currently cleaning soils in the dry well area.

- Groundwater contamination
  - The goal of the groundwater remedial alternative is to achieve the remedial action objectives and to prevent constituent plume migration and reduce organic compound concentrations in groundwater.
  - The record of decision for OU-1 included an estimated extraction rate of 1,800 gpm based on modeling results at the time, and required Lockheed Martin to conduct a remedial design program to verify the components of the conceptual design and provide sufficient details to design, construct, operate, maintain and monitor the selected remedies. Any uncertainty identified during the RI/FS will be resolved.
  - Extract, treat, and reinject on-site groundwater, and monitor water quality to determine effectiveness of the selected remedy.

- Sediments in the stormwater recharge basins
  - Implement a deed restriction for the three stormwater recharge basins and install a fence with appropriate warning signs to discourage trespassers from accessing the basins. Groundwater

monitoring will be performed to evaluate effectiveness of this remedy.

Status of OU-1 Remedial Actions

Groundwater

The interim groundwater treatment system continues to operate at the site. The DEC is currently reviewing the design plans and specifications for the OU-1 groundwater remediation system. The plans will be available at the public availability session on August 23, 2000.

Soil Contamination

Removal of contaminated soil from the three drywells was completed in the summer of 1998. The SVE system continues to operate, and enhancements have been made to the system to improve performance. It is expected to operate for an additional 18 months to two years.

Sediments

The deed restrictions for the three stormwater recharge basins have been recorded with the appropriate authorities, a fence has been constructed around the basins, and warning signs have been posted at the basins and on the fence. The results of three rounds of groundwater samples collected from the downgradient monitoring wells showed no impact to the groundwater from the metals in sediments contained in the recharge basins.

OU-1 Groundwater Treatment System Design

The objectives of the OU-1 groundwater treatment system are:

- Capture contaminated groundwater and prevent further off-site migration.
- Reduce organic compound concentrations in the groundwater.
- Intercept the downward migration of organic compounds.

A groundwater treatment system consisting of on-site groundwater extraction wells, treatment of extracted groundwater utilizing air stripping technology, and reinjection of treated groundwater into the aquifer system via off-site or on-site diffusion wells has been recommended by Lockheed Martin.

Since the record of decision for OU-1 was issued in March 1997, the groundwater model has been substantially refined, improved and calibrated based on the Nassau County Groundwater Model prepared by Camp, Dresser & McKee. The improved modeling, which was done as part of the predesign studies, now shows that an extraction rate of 730 gpm would be expected to meet the requirements of the selected remedy for OU-1 groundwater.

In accordance with the ROD, this system will target the Glacial Aquifer and the Upper and Intermediate portions of the Magothy Aquifer for hydraulic control, and will capture groundwater down to at least 270 feet below grade. The remediation system will also serve to intercept further downward migration of contaminants.

Groundwater will be extracted from three recovery wells located near the northern property line of the former Unisys site, at approximately 730 gallons per minute (gpm). As groundwater flows north-northwest, these wells will capture contaminated water at the site boundary and cut off the migration of contaminants from the site.

Monitoring will be conducted after startup to verify that the system performs as designed. Contaminated groundwater that has already migrated off the site will be managed by the OU-2 remediation system.

The water will be piped from the wells to the treatment facility located on the northeastern boundary of the property where contaminated water will be pumped through two air strippers operating in series to remove VOCs. The system will have a maximum treatment capacity of 900 gpm.

The treatment system is also equipped with vapor phase granular activated carbon vessels that will be used to treat the air discharge from the strippers prior to discharge to the atmosphere.

Lockheed Martin plans to reinject the treated

water to the Upper Glacial or Magothy Aquifer through diffusion wells located north of the site on state owned property just south of the Northern State Parkway.

Construction Activities and Schedule

Construction activities include the installation of extraction and reinjection wells, trenching and laying of pipelines, treatment building construction, process equipment installations (air strippers, carbon vessels), and electrical installation.

Work will begin immediately upon receipt of DEC approval. Lockheed Martin expects to begin by September 1, 2000 and to complete the major construction activities by the end of the year. During first quarter of 2001, start-up activities, testing, etc. will be performed.

Citizen Participation

A citizen participation program is in place to ensure that the public is informed about the remediation activities at the former Unisys site. Public meetings, site tours, briefings, and informational fact sheets have been conducted or prepared since 1993. Information repositories were established in August 1993 where reports, fact sheets, and pertinent documents on this project are kept for public access.

A copy of the OU-1 Citizen Participation Plan has been placed in the repositories and mailed to those included in the plan's contact list. If you would like to receive a copy, please call Mark Lowery, DEC, at 631-444-0350.

Operable Unit 2 consists of the off-site areas immediately surrounding the site. A public meeting regarding the OU-2 remedial investigation is planned for late 2000.

Document Repositories

Hillside Public Library
1950 Hillside Avenue
New Hyde Park, NY 11040
(516) 488-3316
10 a.m. to 9 p.m. weekdays
10 a.m. to 5 p.m. Saturdays
12 Noon to 4 p.m. Sundays

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NYSDEC
Hazardous Waste Remediation Unit
SUNY Building 40
Stony Brook, NY 11790-2356
(631) 444-0240
8:30 a.m. to 4:45 p.m. Weekdays

DEC and NYSDOH Contact Personnel

The contacts for the former Unisys site remediation project at DEC can be reached by writing to the address found at the beginning of this fact sheet or by calling them at the numbers listed below:

Girish Desai
Project Manager
(631) 444-0243

Mark Lowery
Regional Citizen Participation Specialist
(631) 444-0350

The contacts for the New York State Department of Health can be reached by writing to them at:

New York State Department of Health
Center for Environmental Health
Flanigan Square
547 River Street, Troy, N.Y. 12180-2216

Mark VanDeusen
Outreach Coordinator
(800) 458-1158, ext. 27530

John Olm
Public Health Specialist
(800) 458-1158, ext. 27880

New York State Department of Environmental Conservation
Building 40 – SUNY, Stony Brook, New York 11790-2356
Division of Environmental Remediation
Telephone: (631) 444-0240
Fax: (631) 444-0248

Project Fact Sheet – Update
Operable Unit 2 (OU-2) Off-site Interim Remedial Measure and Project Status

April 2004
NYSDEC Site ID # 130045
Former Unisys Site • 365 Lakeville Road • Great Neck, New York

This fact sheet provides an update on the off-site construction activities of the interim remedial measure, or IRM, known as the Operable Unit 2 (OU-2) IRM groundwater treatment system and the Unisys activities. The last project update was provided in a fact sheet dated June 2003. The New York State Department of Environmental Conservation (DEC) approved the construction of this interim remedial system, located south of the Long Island Expressway, in June 2003. The construction of the system began in late June 2003 and is scheduled for completion during the summer of 2004.

Remediation activities associated with the former Unisys site have been underway since the early 1990's. The investigation and subsequent remedial activities were divided into two remedial projects (Operable Units) – the on-site operable unit (OU-1) and the off-site operable unit (OU-2). A brief history of the site and related remediation follows.

Site History
The 94-acre property and buildings, now known as the former Unisys site, is located on Marcus Avenue in Lake Success, New York. The site was originally owned by the U.S. Government and operated under contract with Sperry Gyroscope Company from 1941 through 1951. In 1951, the U.S. Government sold the property to Sperry, which merged with Burroughs in 1986 to form the Unisys Corporation. In 1995, Loral Corporation acquired the assets of Unisys Defense Systems, a division of Unisys Corporation. In early 1996, Lockheed Martin Corporation purchased the electronics and systems integration businesses of Loral and elected to close down the Lake Success facilities in 1998. The site is on the DEC's Registry of Inactive Hazardous Waste Disposal Sites due to the presence of contaminants in the subsurface soil and groundwater.

Remediation History
From the late 1970s through the early 1980s, several remedial actions were conducted at the Unisys site. These actions included a Nassau County Department of Health investigation of underground dry wells used to dispose of rinse waters containing cleaners and degreasers used during manufacturing operations. The lines leading to these dry wells were sealed and the liquids within the wells were pumped out to prevent further migration of contaminants. Other remedial actions have included the removal of several above-grade and underground storage tanks.

Between 1988 and 1992, Unisys Corporation conducted a large-scale subsurface environmental investigation to evaluate the nature and extent of onsite soil and groundwater contamination. In 1991, Unisys entered into an administrative order on consent with DEC requiring onsite interim remedial measures for soil and groundwater, and the completion of a remedial investigation and feasibility study (RI/FS).

While the RI/FS process was underway, Unisys/Loral built and operated two interim remedial systems. A soil vapor extraction system removed volatile organic compounds

(VOCs) from the soils surrounding the dry wells, and a groundwater treatment system removed VOCs from the groundwater.

In 1995, the DEC created two remedial projects at the site. Operable Unit 1 (OU-1) addresses the remediation of soil and groundwater within the 94-acre facility boundary; Operable Unit 2 (OU-2) addresses the contamination that has moved off-site beyond the facility's boundary.

OU-1 Remedial Actions

DEC issued a record of decision (ROD) for OU-1 in March 1997. This ROD documented DEC's final decision on a remedial plan for onsite contamination and followed public review of a proposed remedial action plan. The ROD required the removal of contaminated soil and sludge from three onsite drywells, an upgrade of the soil vapor extraction system that had been installed by Unisys/Loral as an interim remedial measure, deed restriction for the three on-site recharge basins, and installation of a system to pump and treat contaminated groundwater from beneath the site.

Lockheed Martin completed removal of contaminated soils from the three drywells in 1998. From 1993 to early 2002, an interim soil vapor extraction system operated in the dry well area where VOCs had been discharged historically. During 2002 the above ground components of the SVE system were moved from the southeast corner of the building to the northeast corner of the property, adjacent to the new OU-1 groundwater treatment system. Lockheed Martin has enhanced the soil vapor extraction system, and it continues to operate at full capacity, removing VOCs from the shallow and deep soils. The system will continue to run until the DEC determines it can no longer efficiently remove contaminants.

As required by the OU-1 record of decision, the deed restrictions for the three storm water recharge basins located on the site have been recorded with the appropriate authorities. A fence has been constructed around the basins, and warning signs have been posted at the basins and on the fence. All ROD required groundwater monitoring has been completed. The results of the OU-1 groundwater monitoring have been summarized and are available in the public repositories.

In 2002 the OU-1 groundwater treatment system was transitioned from its interim remediation system to the ROD compliant facility. The new system consists of three extraction wells that pump contaminated groundwater from beneath the site to an on-site treatment plant where air strippers remove VOCs by passing a stream of air through water as it falls through a randomly packed media in a tower structure. The VOCs evaporate into the air, and the air (or off-gas) is passed through an off-gas treatment unit, consisting of activated carbon and special potassium permanganate media, to capture the VOCs before the air is discharged to the atmosphere. Four reinjection wells are located along the Northern State Parkway and return clean water to the aquifer. The entire system operates at a full capacity of 730 gallons per minute.

OU-1 Accomplishments as of April 2004

- The groundwater treatment has recovered approximately 35,000 pounds of contaminants since 1991.
- Approximately 2,438,205,000 gallons of water has been treated. That's enough to fill approximately 3,483 Olympic size swimming pools.
- The Soil Vapor Extraction (SVE) systems have recovered approximately 42,000 pounds of contaminants since 1993.

Operable Unit 2

Lockheed Martin, under DEC and State Department of Health (NYSDOH) oversight, has conducted an extensive RI investigation into the groundwater contamination that has moved off the site. In January 2001, DEC held a public meeting to provide community members with an

opportunity to learn about this investigation. At that meeting, staff presented the initial results of the offsite groundwater investigation to help the public better understand the nature and extent of the groundwater contamination.

Based on these preliminary results, DEC and NYSDOH asked Lockheed Martin to obtain additional groundwater, soil gas, and air data to ensure that the most recent data are used in the remedial investigation and feasibility study and in the update of the groundwater model. These additional data will be included in the final RI report. The data from the RI will be used to prepare a feasibility study (FS) that will include evaluations of various cleanup alternatives for the offsite groundwater contamination.

Following the assessment of the cleanup alternatives, DEC will prepare a proposed remedial action plan (PRAP). The PRAP will describe DEC's proposed remedy for the off - site groundwater contamination. DEC will hold a public meeting to discuss the PRAP and offer the PRAP for public review and comment. DEC may modify its preferred remedy or select a different remedial alternative based on comments received during the public review. DEC will document its final decision on the selected remedy in a record of decision (ROD).

OU-2 RI/FS Schedule

3rd Quarter 2004
Install approximately seven new offsite monitoring wells.
4th Quarter 2004
Conduct RI sampling of offsite monitoring wells.
1st Quarter 2005
Lockheed Martin to submit Draft RI/FS and Risk Assessment to DEC.
2nd Quarter 2005
Distribute RI/FS fact sheet to public.
3rd Quarter 2005
Conduct public meeting for the Preliminary Remedial Action Plan (PRAP). A public comment period will be held for the PRAP. DEC will issue a final Record of Decision.

OU-2 Offsite Interim Remedial Measure

As the data from the RI were being evaluated and groundwater models prepared to understand the nature and extent of contamination, it became apparent that VOCs in the groundwater north of the former Unisys site are at a location where a large proportion of the contaminants could be removed by an interim remedial measure (IRM). (An IRM is an action that provides a quick solution to a defined problem to remove or isolate a source of contamination.)

DEC and the public agreed that the contamination should be captured now to prevent contamination of public water supply wells north of the Expressway as well as prevent further contamination of the special groundwater protection area.

There were no available locations for an extraction well and related equipment for an IRM between the southern boundary of the Great Neck South School property and the Expressway except for the school district's maintenance yard. This location was also the most effective at capturing a substantial portion of the contamination. DEC requested that the Great Neck School District grant permission for the installation of such a well.

Officials from Lockheed Martin, Lockheed Martin's environmental consultant, ARCADIS, and DEC worked closely with the Great Neck Board of Education to obtain permission to place the offsite extraction well on the school's property and to install pipelines necessary to carry contaminated groundwater from the extraction well to an existing treatment plant, and the treated water from the treatment plant to reinjection wells. The reinjection wells are located on State Department of Transportation (NYSDOT) property along the Long Island Expressway, immediately east of the school district property. The agreement between the School District and Lockheed Martin specifies extra precautions to satisfy the school board's concerns for safety of the staff, students, and public.

The Manhasset-Lakeville Water District (MLWD) agreed to lease Lockheed Martin its

Parkway Station treatment system to treat the contaminated water in the OU-2 Offsite IRM.

Locating the treatment system at the existing MLWD plant ensures the shortest possible route by which groundwater extracted from a well in the school district maintenance yard would be transported for treatment, and minimizes the construction necessary to provide an efficient and protective treatment system. It also reduced the time required to design and construct the IRM.

Lockheed Martin will spend approximately $10 million for the OU-2 Offsite IRM and an additional $500,000 per year in operating and maintenance expenses for the duration of the project.

No Exposure to Students, Staff, Community

Today, the contamination is approximately 200 feet below land surface under the school district property. It is about 120 feet from land surface to the groundwater. There is then a layer of approximately 60 feet of clean water above the contaminated groundwater. This layer of clean water and the distance between the dissolved contamination and the land surface ensure that no contaminant vapors can make their way to the surface where humans could be exposed.

The extraction well in the maintenance yard on the school district property presents no exposure to the students, faculty, staff or community. The well is located within a vault completely below ground surface. The only ground surface indication of the well is a small concrete pad with a "manhole" cover that is locked.

Once the IRM system is operational, the contaminated groundwater will be piped underground from the extraction well directly to the treatment plant in double-walled pipes. The double-walled pipes are equipped with leak detection systems. In the unlikely event of a pipe rupture, the outer wall will contain the extracted groundwater, and the extraction well will be automatically and immediately shut down by the leak detection system.

As a further precaution, the entire system is equipped with a second system to detect a decrease in water pressure. A pressure decrease, as would occur with a leak, will also cause the system to shut down automatically. Even if both automatic shutdown systems failed simultaneously, it is unlikely that a leak would result in direct exposure to contaminated water as the pipeline will be four to five feet below ground surface. However, even short-term direct exposure to water with the current levels of contamination would not be a cause for human health concern.

The treatment plant will remove the VOCs from the groundwater by using the two existing air strippers at the MLWD Parkway Station facility. These air strippers are being upgraded to ensure removal of the VOCs to undetectable levels in the water to be returned to the aquifer.

Like the OU-1 air strippers, the Parkway Station air strippers are being fitted with four activated carbon off-gas treatment units to remove VOCs from the air before it is released to the atmosphere.

The treatment system will run continuously and automatically, with weekly site inspections and an on-call operator available 24 hours a day.

OU-2 IRM Construction Update

- Upgrades to the MLWD Parkway Station treatment plant are currently underway.
- The extraction well on the school district property has been completed.
- The reinjection (also called diffusion) wells on DOT property have been installed.
- Installation of all associated pipelines, from the extraction well to the treatment plant, and from the treatment plant to the diffusion wells, has been completed.

Start-up scheduled for Summer 2004

Citizen Participation
A citizen participation program has been underway to ensure the public is informed about the remediation activities at the former Unisys site. Public meetings, site tours, briefings, and informational fact sheets have been offered since 1993 and Lockheed Martin continues to provide such opportunities. A citizens' liaison committee was also formed to provide input into the remediation decision process along with public comment periods for the general public.

Public Information Repositories, where reports, fact sheets, and pertinent documents on this project are kept for public access, were established in August 1993. A copy of the citizen participation plan has been placed in the repositories.

The final DEC-approved OU-2 Offsite IRM work plan, dated May 29, 2003, is available in the document repository.

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New Hyde Park, NY 11040
(516) 488-3316
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New York State Department of Environmental Conservation, Region 1
Hazardous Waste Remediation Unit
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Rebecca G. Mitchell
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New York State Department of Health
547 River Street, Room 300
Troy, NY 12180-2216
(800) 458-1158 ext. 27880

FIGURE 1
SITE LOCATION

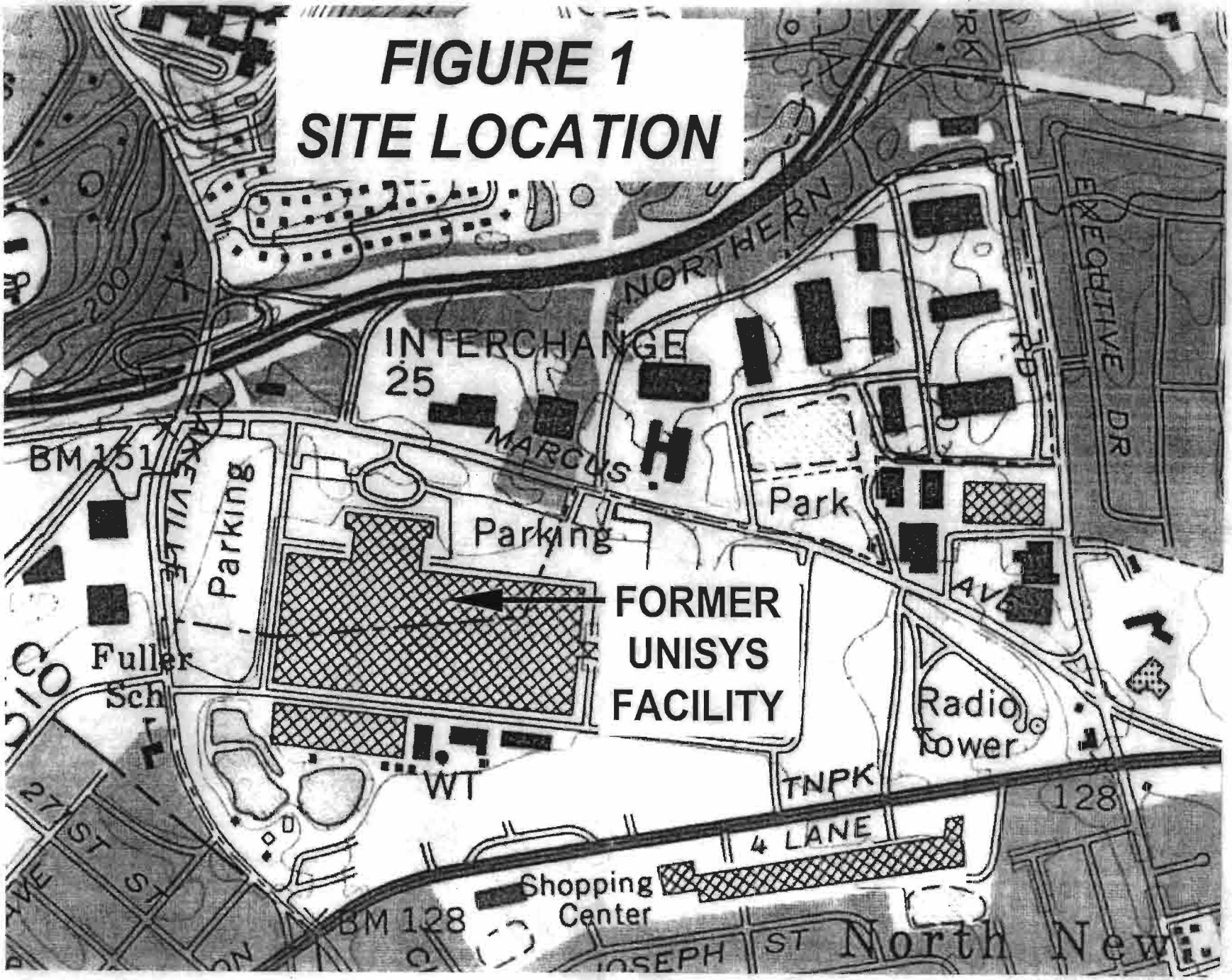
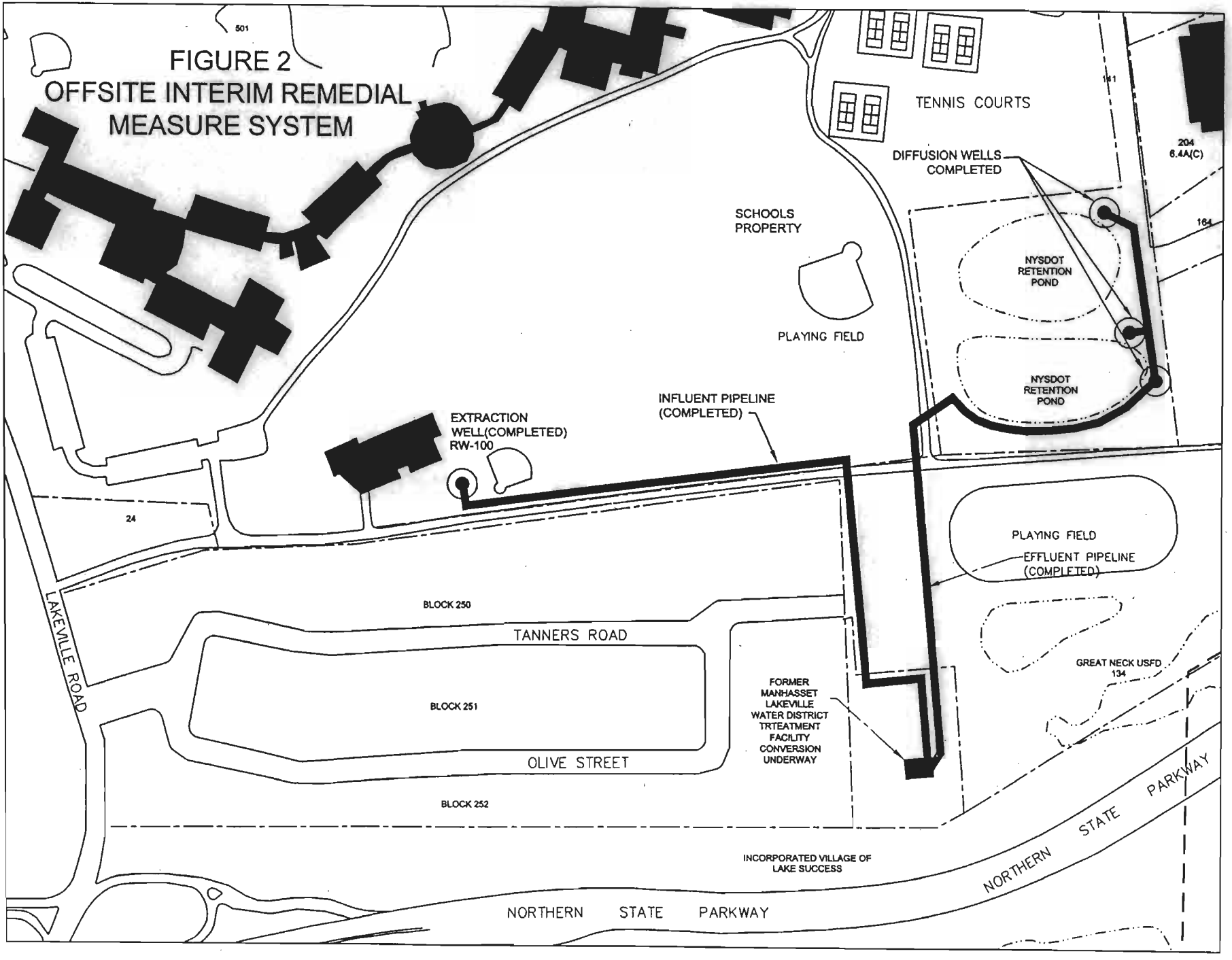


FIGURE 2
OFFSITE INTERIM REMEDIAL MEASURE SYSTEM



New York State Department of Environmental Conservation
Division of Environmental Remediation, Region One
Stony Brook University
50 Circle Road, Stony Brook, New York 11790 – 3409
Phone: (631) 444-0240 • **FAX:** (631) 444-0248
Website: www.dec.ny.gov

Alexander B. Grannis
Commissioner

UNISYS SITE
NYSDEC Site ID # 130045
SOIL VAPOR INTRUSION INVESTIGATION
1111 Marcus Ave, Lake Success, New York
February 2009

Purpose

The purpose of this fact sheet is to provide you with information regarding the soil vapor intrusion (SVI) investigation being conducted at the Unisys Site by Lockheed Martin Corporation under the oversight of the New York State Departments of Environmental Conservation and Health (NYSDEC, NYSDOH).

Background and Site History

The 94-acre property and buildings, currently known as the former Unisys Site, is located at 1111 Marcus Avenue in Lake Success, New York. Between 1941 and 1998, activities at the site involved the design and manufacturing of a wide range of defense-related products. Ownership of the property has changed hands since the U.S. Government first built the facilities in 1941. Sperry Gyroscope Company bought the property and operations from the Government in 1951. Sperry merged with Burroughs in 1986 to form the Unisys Corporation, hence the name, "the former Unisys Site." In 1995, Loral Corporation acquired the assets of Unisys Defense Systems and, in early 1996, Lockheed Martin purchased the electronics and systems integration businesses of the Loral Corporation. Lockheed Martin elected to close down the Lake Success facilities in 1998. The site is on the NYSDEC's Registry of Inactive Hazardous Waste Disposal Sites due to the presence of contaminants in the subsurface soil and groundwater. In 1991, Unisys entered into an administrative order on consent with the NYSDEC requiring on-site interim remedial measures for soil and groundwater contamination, and a remedial investigation and feasibility study (RI/FS) for the entire site. In March 1997, the NYSDEC issued a Record of Decision (ROD) for Operable Unit One which covered the entire site. Lockheed Martin sold the site in 2000 and it is now the home of a large office complex. Lockheed Martin has retained responsibility for the environmental cleanup activities.

Actual clean up of the soil and groundwater at the former Unisys Site has been underway for a number of years. Additional groundwater investigation has been ongoing beyond the property boundaries to determine the nature and extent of off-site groundwater contamination. There are currently two groundwater treatment systems operating in the Great Neck area to clean up the volatile organics in the groundwater associated with the site. Groundwater is the water beneath the ground surface which fully saturates the space between soil particles and moves around the soil and rock particles at very slow rates. Groundwater in the area is found nearly 100 feet or more below the ground surface. There is also a soil vapor extraction system operating on the former Unisys Site to extract vapors from the contaminated soil located at the southeast corner of the main building.

Soil Vapor Intrusion

The phrase "soil vapor intrusion" refers to the process by which volatile chemicals move from a subsurface source into the indoor air of overlying buildings. Soil vapor, or soil gas, is in the air found in the pore spaces between soil particles. Because of a difference in pressure, soil vapor enters buildings through cracks in slabs or basement floors and walls, and through openings around sump pumps or where pipes and electrical wires go through the foundation. Heating, ventilation or air conditioning systems may create a negative pressure that can draw soil vapor into the building. This intrusion is similar to how naturally occurring radon gas seeps into buildings. Soil vapor can become contaminated when chemicals evaporate from subsurface sources and enter the soil vapor. Chemicals that readily evaporate are called

"volatile chemicals." Volatile chemicals include volatile organic compounds (VOCs). Subsurface sources of volatile chemicals may include contaminated soil and groundwater. If soil vapor is contaminated and enters a building as described above, indoor air quality may be affected.

Soil Vapor Intrusion Investigation at the former Unisys Site

Over the past three years, the New York State Department of Health (NYSDOH) has established indoor air quality guidelines and testing recommendations for sites where volatile chemicals were used and entered into the soils and/or groundwater. In June 2005, the NYSDEC directed Lockheed Martin to conduct a soil vapor intrusion investigation at the former Unisys Site in conformance with the NYSDOH guidelines for evaluating soil vapor intrusion. As part of the ongoing soil vapor intrusion investigation at the former Unisys Site, Lockheed Martin conducted indoor air and sub-slab soil gas sampling to determine if there were any impacts to the indoor air from soil vapors below the slab.

Lockheed Martin conducted several rounds of indoor air and sub-slab sampling in the buildings at the former Unisys Site, in a grid pattern across the entire space. Based on this sampling, Lockheed Martin, NYSDEC and NYSDOH assessed air quality and sub-slab vapor conditions that were above the NYSDOH guidelines for mitigations. In response, where indoor air quality had been impacted, immediate actions were taken to mitigate the levels. These actions included increasing fresh air intake volumes to the ventilation systems within separate leaseholds, sealing potential pathways such as cracks in the foundation, and installing sub-slab depressurization systems. A sub-slab depressurization system (or SSDS) creates negative pressure under the foundation preventing the vapors from migrating into the indoor air space. This preferentially draws vapors from under the foundation into the system.

Lockheed Martin is developing plans for expanding the sub-slab depressurization throughout the building to mitigate sub-slab vapors. There are elevated levels of trichloroethene (TCE), tetrachloroethene (PCE) and carbon tetrachloride under the building. Installation of a building wide SSDS will mitigate the potential for soil vapor intrusion.

At this time, the source of the carbon tetrachloride at the former Unisys Site has not been identified. Under the direction of NYSDEC, Lockheed Martin is conducting an investigation at the site to determine the possible source and location of the carbon tetrachloride in the soil.

Health Concerns

Indoor air monitoring in several of the leaseholds in the former Unisys facility has detected carbon tetrachloride, trichloroethene (TCE) and tetrachloroethene (PCE) at levels that exceed those we typically expect to find in indoor air. Some of the monitoring results show levels that exceed the NYS DOH air guidelines for TCE (5 ug/m3) and PCE (100 ug/m3). The NYS DOH recommends that reasonable and practical actions be taken to reduce exposure to air contaminants when indoor air levels are above those typically found in indoor air. The urgency to take action increases as indoor air levels increase, especially when air levels are above the available guidelines. The possibility of health effects occurring is low even at air levels slightly above the guidelines or slightly above levels typically found in indoor air.

Since the areas where indoor air has been impacted by soil vapor involve different chemicals having different types of toxicity, people are referred to the NYSDOH fact sheets for more specific information. The NYSDOH Guidance document, as well as fact sheets for carbon tetrachloride, TCE and PCE, are available at:
http://www.health.state.ny.us/environmental/indoors/air/contaminants/

If you have specific questions relating to the soil vapor intrusion investigation at this facility, please contact Sharon McLelland of the NYSDOH at 1-800-458-1158 ext. 2-7880.

Public Information Repositories

Public Information Repositories, where reports, fact sheets, and pertinent documents on the former Unisys Site Remediation Project are kept for public access, were established in August 1993. The final NYSDEC-approved documents are available in these public information repositories. Lockheed Martin provides copies of the SVI

investigation results to Winthrop Management and lease holders and these documents are also available at the following repositories:

Hillside Public Library
155 Lakeville Road
New Hyde Park, NY 11040
(516) 355-7850
10 a.m. to 8:45 p.m. Mon-Fri
10 a.m. to 4:45 p.m. Saturdays
12 p.m. to 3:45 p.m. Sundays

NYSDEC Region One Office
50 Circle Road
SUNY@ Stony Brook,
Stony Brook, New York 11790-3409
(631) 444-0240
8:30 a.m. to 4:45 p.m. Mon-Fri

Contacts:

For additional information:
Girish Desai
Project Manager
NYSDEC Region One Office
50 Circle Road
SUNY @ Stony Brook
Stony Brook, NY 11790-3409
(631) 444-0243

For health related questions:
Sharron McLelland
NYSDOH
547 River Street, Rm 300
Troy, NY 12180-2216
(800) 458-1158 ext. 2-7880

For additional information:
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(631) 444-0350