B. Surface and Subsurface Environmental Conditions

1. Existing Conditions

The Environmental Condition Report ("the ECR") included in the Appendix to this DEIS details the current condition of environmental media (i.e., soil, sediment, ground water surface water and/or soil vapor) at the properties within the proposed development area, as well as at the adjacent properties. The ECR describes the regulatory status of the properties and the available data, as well as identifies data gaps, which need to be addressed as part of the redevelopment. Information from the ECR has been used to prepare this summary section of the DEIS.

The proposed Project Site consists of multiple properties having known or potential environmental impacts. These properties are identified on **Exhibit III.B-1.** They are summarized, as follows:

1) Li Tungsten (Federal Superfund & New York State {NYS} Superfund Site)
2) Captain's Cove (NYS Superfund Site including a delisted portion)
3) Anglers Club Site (Environmental Restoration Program {ERP} site)
4) Gladsky Site (ERP site)
5) City of Glen Cove Sewage Pumping Station Site
6) Doxey Site
7) The Gateway Properties (consisting of seven tax lots including Windsor Fuel and Nassau Ready-mix, Brilliant Electric and Air, and an office building)

A number of the properties within the proposed development have undergone remediation under, and are subject to, ongoing United States Environmental Protection Agency (EPA) and New York State Department of Environmental Conservation (DEC) environmental regulatory programs. The agencies identified remedial or cleanup goals for the specific contaminant of concern, affected environmental media (e.g., soil, sediment, surface water, ground water and/or soil vapor), and proposed future land use for each property in question. Other properties within the proposed development have been subject to indirect (Phase I Environmental Site Assessment {ESA}) and/or direct (Phase II ESA) investigation, which have identified potential or known environmental conditions. Such conditions could impact future development. Indeed, the proposed development will involve disturbance of environmental media at the properties during construction. Residual environmental impacts will need to be managed during and after construction.

The Applicant and City of Glen Cove Industrial Development Agency (IDA) need to have a coordinated approach to handle residual environmental issues at the properties during the course of the development. The EPA, DEC, New York State Department of Health (DOH), and Nassau County Department of Health (NCDH) must consider the Project Site suitable for the proposed land uses. The properties may require further investigation, cleanup and/or implementation of institutional controls or engineering controls (IC/ECs).

The Applicant and the IDA believe that the best method for accomplishing these goals is a multi-agency accord among the various regulatory agencies, the Applicant, and the IDA, and/or entry of certain properties into an appropriate regulatory program (e.g., NYS Brownfield Cleanup Program, Spill Response). Such a multi-agency accord would, among other things, assign expectations and responsibilities to the agencies and developer. This accord would identify the regulatory programs, which would be used to administer, manage or oversee any further investigations, remediation and/or property restrictions. It would also establish appropriate cleanup standards.

Exhibit III.B-2 (Site Use and Remedial Status) summarizes the current status of on-site environmental conditions at properties within the proposed development. The status is based on the current environmental conditions at the properties based on various reports. As indicated in this exhibit, residual environmental conditions may not meet the cleanup standards necessary to allow residential use. The multi-agency accord would also establish a framework to provide for the filings of Environmental Easements (EEs). The EEs would run with the land in favor of the State, subject to the provisions of Environmental Conservation Law (ECL) Article 71, Title 36, and contain use restriction(s) and/or any prohibition(s) on the use of land in a manner inconsistent with engineering controls. The placement of an easement provides an effective and enforceable means of encouraging the reuse and redevelopment of a controlled property, at a level that has been determined to be safe for a specific use, while ensuring the performance of operation, maintenance, and/or monitoring requirements. The EEs would also identify the process for the adoption of consistent cleanup standards and/or implementation of ICs/ECs to accommodate the intended land use. The components of these processes would be described in a Site Management Plan (SMP), a draft of which is included in this DEIS.

Properties Within the Project Site

The majority of the proposed development area is occupied by the Li Tungsten and Captain's Cove sites. These two sites occupy approximately 90 percent of the project area. EPA conducted remediation at the Li Tungsten site, which consists of various parcels, under the federal Superfund Program. The goal of the cleanup was to restore the overall Li Tungsten site for commercial use. The cleanup of certain Li Tungsten parcels was subsequently determined by EPA to meet a standard sufficient for residential use. Those Li Tungsten parcels not yet meeting a standard sufficient for residential use, or which require institutional or engineering controls (IC/EC), will be subject to further cleanup prior to or during construction.

The Captain's Cove site was the subject of remediation under the NYS Inactive Hazardous Waste Remediation Program. This site contains a "commercial use" designation. Such designation will remain until such time as DEC reclassifies the site pursuant to an EE, and an approved SMP that defines the IC/ECs appropriate for the proposed land use.

The Applicant and the IDA believe that any further remediation, and implementation of IC/EC, would be best accomplished through a multi-agency accord, as described above.

In addition to Li Tungsten and Captain's Cove, the proposed development area consists of properties commonly known as Gladsky, Angler's Club, City of Glen Cove Sewage Pumping Station site, Doxey, and the Gateway Properties. The Gladsky, Angler's Club, and Sewage Pumping Station parcels are within the NYS ERP. These sites have been subject to an investigation of environmental conditions. Based upon this investigation, a remedial plan for Gladsky has been adopted. The City will be implementing this plan prior to construction.

The Angler's Club and Sewage Pumping Station were excluded from any remediation requirements at the time the Phase I and Phase II reports were accepted. However, the data show that chemicals in the soil exceed the restricted residential standards; and groundwater contains dissolved VOCs. The need for additional investigation and remediation will be reviewed after the multi-agency accord described above is in place, and if required based on the proposed land uses, will be handled as explained in the next paragraph.

The Angler's Club, City of Glen Cove Sewage Pumping Station site, Doxey, and the Gateway Properties have all been subject to either indirect (Phase I) and/or direct (Phase II) investigations. Phase I and Phase II ESAs have shown that the Doxey parcel has environmental impacts. These will need to be remediated prior to or during construction in accordance with the standards for the intended land use. The remaining parcels have had varying degrees of indirect (Phase I) studies, Based upon those parcels' prior industrial uses, those studies suggest that there is a reasonable likelihood that environmental impacts will need to be addressed prior to or during construction. Subject to DEC acceptance, the Applicant and the IDA plan to be joint applicants, requesting eligibility of these three sites under the NYS Brownfield Cleanup Program (BCP) to manage future investigation and remediation. The previously mentioned SCOs are expected to apply to these properties for the intended land use.

Subject to NYSDEC acceptance, the Applicant and the IDA plan to be joint applicants requesting eligibility under the NYS Brownfield Cleanup Program (BCP) to manage future investigation and remediation. The previously mentioned SCOs are expected to apply to these properties for the intended land use.

These environmental issues are summarized in **Exhibits III.B-2** and **Table III.B-1**. **Exhibit III.B-2** depicts the remaining environmental issues that the Applicant and the IDA believe would best be addressed through a future multi-agency accord before the proposed development can occur. The Table summarizes the remedial status of each site, the chemicals of concern, the regulatory program that the site was or will likely be cleaned up under, an expected remedial schedule, and the parties likely to perform the additional cleanup activities.

Adjacent Properties

There are also properties adjacent to the Project Site containing environmental impacts, which have been subject to EPA and DEC regulatory programs. As shown in **Exhibit III.B-2**, the Mattiace Petrochemical site is a Federal Superfund Site, and the Crown Dykman site is a NYS Inactive Hazardous Waste site. These properties are the source of plumes of

contaminated groundwater, which may have impacted the Project Site groundwater. Additional adjacent properties known as Konica Minolta/Powers Chemco, and Slantfin, (**Exhibit III.B-1**), also have documented on-site groundwater contamination.

The following is a summary of existing environmental information pertaining to the properties within and adjacent to the proposed development area.

Table III.B-1
REMEDIAL STATUS OF ONSITE AND OFFSITE PROPERTIES

	Site	Proposed Uses	Remedial Status	Chemicals of Concern	Regulatory Program	Expected Date For Cleanup Approval	Responsible Party
ONSITE	Captain's Cove	Residential, Hotel	Remediated to Commercial Use standard. NYSDEC suggests suitable for Restricted Residential use with environmental easement and restrictions.	SVOCs/ metals/ arsenic/ lead	Consent Order	Commercial cleanup approved 2003. Residential standards are being discussed.*	Developer
	Angler's Club	Open Space	Remediation not required for non-residential use.	SVOCs/ metals	ERP**	Meets current anticipated use.	Developer
	Gladsky	Open Space	Remedial action plan (RAP) approved by NYSDEC. Cleanup out to bid.	SVOCs/ metals/ PCBs/ asbestos	ERP**	2010	IDA
	Pump Station	Open Space	Remediation not required for non-residential use.	SVOCs/ metals	ERP**	Meets current anticipated use.	Developer
	Doxey	Open Space	Phase II completed. RAP needs to be approved and implemented.	SVOCs/ metals/ pesticides	TBD***	TBD	IDA/Developer
	Li Tungsten	Residential, Office	EPA considers the site remediated to federal standards for residential use; would still require engineering controls. Certain contaminaton unable to be remediated will be monitored during development.	SVOCs/ arsenic/ lead/ PCBs[4]	CERCLA	USEPA considers the site suitable for residential use if engineering and institutional controls are implemented. These will be determined after understandings are reached with the agencies. NYSDEC expects environmental easements with cover, SMP and restrictions.	IDA/ Developer
	Gateway Properties	Retail	Phase I environmental site assessement has been performed. Report is in the Appendix. It concluded that there is a potential for contamination to exist based on historical and present uses of some of the parcels. Additonal investigation will be needed to determine the actual conditons and, if needed, remediation.	TBD	TBD	TBD	Developer

Table III.B-1
REMEDIAL STATUS OF ONSITE AND OFFSITE PROPERTIES

	Site		Remedial Status	Chemicals of Concern	Regulatory Program	Expected Date For Cleanup Approval	Responsible Party
OFFSITE	Crown Dykman	NA	Drycleaning chemicals were released historically, causing soil and groundwater contamination. Source has been removed. Downgradient groundwater movement has created a plume of contaminated groundwater under Li Tungsten.	Perchloroethylene (PCA)	State Inactive Hazardous Waste Site	TBD	NYSDEC
	Mattiace Petrochemical	NA	Former drum cleaning and rehabilitation business resulted in contaminated soil and groundwater. Plume of contaminated groundwater has affected the area from (and including) Captains Cove to Li Tungsten. EPA has implemented the cleanup activities. Extensive soil removal has occurred. Additonal cleanup has been implemented. Onsite groundwater is being remediated. Offsite groundwater has been continuing to travel towards the creek contaminating groundwater along its flow path. Eventual mitigation of the offsite groundwater will occur now that the source has been contained.	VOCs, pesticides	CERCLA	30-year program that began in 2001.	USEPA
	Konica Minolta	NA	An onsite release occurred in the 1980's. It is still under remediation. Existing information indicates the contaminated groundwater is being contained and treated onsite.	VOCs	DEC Consent Order	TBD	Konica Minolta

* The entire development site consists of properties that were/will be cleaned up under various regulatory programs [NYS Consent Order; EPA CERCLA; NYS Environmental Restoration Program (ERP); Brownfield Cleanup Program (BCP)]. These programs are administered by the NYSDEC/NYSDOH, and the USEPA. Also, the Nassau County Department of Health has cleanup requirements that must be met.

It is essential that all properties meet consistent cleanup criteria and that the various regulatory agencies agree on the standards and approaches for achieving the final cleanup standards and long term management of the property from the environmental and public health protection perspectives. The goal is to reach a multi-agency accord. The accord would assign expectations and responsibilities to the agencies and developer to manage or oversee any remediation, what standards will need to be achieved and how they will be reached; who will perform the work; and when that work will be performed.

** ERP is the Environmental Remediation Program, a NYS cleanup program for municipalites in which the DEC provides grants to the municipality for investigation and cleanup of publically-owned property.

*** TBD- to be determined: ERP monies are currently unavailable and the existence of other cleanup programs that can be accessed by the City/IDA is unclear. Therefore, the vehicle that will be used to clean up the Doxey site is not known at this time. Cleanup of Doxey and additional potential cleanup of Captains Cove and Li Tungsten (and possibly the Angler's Club and Pump Station) will need to be performed under the auspices of the DEC. How this will be accomplished will be determined in concert with the agencies, in order to achieve the objectives.

[4] Not all of the listed chemicals are found throughout the Li Tungsten property. More detail can be found in the "Surface and Subsurface Environmental Conditons" section.

INSERT EXHIBIT
III.B-1
ENVIRONMENTAL SITES MAP

INSERT EXHIBIT
III.B-2
SITE REMEDIATION STATUS

a) Phase I Summary of Properties that have not Been Acquired by the City or Applicant (the Gateway Properties)

The Gateway Properties are shown in **Exhibit III.B-3**. These properties are not yet owned by the Applicant or any of the municipal entities (the City of Glen Cove, IDA or CDA). Given their location at the eastern end of the creek and adjacent to the Downtown, the Gateway Properties are critical to the success of the waterfront development. The Applicant has commenced negotiations with the majority of the owners of the Gateway Properties to purchase the properties. The Gateway Properties are located east of Li Tungsten Parcel A, and include the following tax lots in Section 21, Block A:

Lots 220, 320 and 659 – These lots comprise 1.21 acres, are utilized by Windsor Fuel Facility, and are located at 45 Charles Street.
Lot 661 and 662 - These lots comprise 0.69 acres, are utilized as an office building, and are located at 45 Herbhill Road.
Lot 664 - This lot comprises 1.71 acre, is utilized by Nassau Ready Mix, and is located at 47 Herbhill Road.
Lot 667 - This lot comprises 0.44 acres, is utilized by Brilliant Electric and Air, and is located at 49 Herbhill Road.

A Phase I Environmental Site Assessment (ESA) of the Gateway Properties was performed in January 2009 (see Appendix). A Phase 1 ESA is part of a two-phase approach developed by the American Society of Testing and Materials (ASTM) to provide consistent, comprehensive and reliable information describing the environmental conditions of property. The purpose of a Phase I is to identify potential Recognized Environmental Conditions (RECs), which may exist at a property. (A Recognized Environmental Condition {REC}, as defined in ASTM E 1527-05, is "the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property, excluding de minimis conditions." If potential RECs are found, then additional investigation is performed in the Phase II ESA. The Phase II investigation involves taking samples of environmental media (i.e., soil , sediment, surface water, ground water, subsurface vapor) for laboratory analyses in the areas where the RECs are suspected. The results are evaluated and compared to the relevant guidelines or standards to determine whether additional cleanup and/or IC/ECs are required to permit the intended land use

The Phase I ESA for the Gateway Properties found RECs, and recommended a Phase II ESA to determine soil and groundwater quality. Specifically, the Phase I ESA identified the following:

<u>45 Charles Street (Lots 220, 320, and 659)</u>
A portion of the subject site is operated as a fuel oil storage facility. Historic spills are present related to this use. Based upon this current and historic site use, there is potential for the subject site to have been impacted by petroleum spills.

47 Herbhill Road (Lot 664)
This portion of the subject site was identified as a RCRA-Small Quantity Generator (SQG) with respect to operations by former operator Lightning Autobody. Improper chemical handling related to current operations could also lead to impacts at the subject site. The site was identified as a solid waste facility related to receiving construction and demolition debris as part of the site's current concrete manufacturing operations. These operations may have resulted in site impacts.

A portion of the subject site has a LTANK listing related to a failed tank test of a 4,000 gallon diesel tank. The tank was removed and no signs of impact were noted. The spill was closed by the NYSDEC. However, often spills are closed and the subsurface impacts were not addressed. Therefore, this portion of the site should be investigated to confirm that no impacts from the tank are present.

45 Herbhill Road (Lots 661 and 662)
An adjoining lot was operated as a coal fired power plant / electrical substation. Portions of the power plant operation extended onto the subject site (Lot 661 and 662). The operations on the subject site included an electrical storage building and a portion of the electrical substation transformer pad, and transformer storage. Based upon this historic use, there is potential for the site to have been impacted by coal ash semi-volatile organic compound (SVOC) contamination and PCBs from the transformers.

49 Herbhill Road (Lot 667)
Less is known about the historic uses on this lot, but the lot may be impacted by off-site groundwater plumes and should be investigated given its location.

Potential Existing Issues Related to Gateway Properties

The Gateway Properties are located in the direct vicinity of several superfund, state hazardous waste sites, and spill sites. Based upon the proximity of these off-site spills and their magnitude, there is potential for the groundwater beneath the Gateway Properties to have been impacted by solvents, petroleum, SVOCs, and metals. Creek sediments to the south of these Properties may also be impacted by those compounds, as well as radionuclides as a result of historic migration.

The Phase I ESA recommended that additional investigation and sampling be performed. Specifically, the Phase I ESA recommended the following:

All Gateway Properties

- Since no direct Site inspection was performed on any of the Gateway Properties, a detailed site inspection should be performed on each lot to locate potential additional on-Site areas of concern. Such areas should be inspected / sampled as appropriate.

- Sample creek sediments to the South of the Gateway Properties for VOCs, SVOCS, Metals, PCBs and Pesticides for disposal purposes. In addition, due to potential for impacts from the LI Tungsten site, sampling for radionuclides will also be performed.

Insert
Exhibit III.B- 3
Gateway Properties

45 Charles Street (Lots 220, 320, and 659)

- Sampling of soil and groundwater for VOCs and SVOCs in the vicinity of the active and historic fuel oil tanks associated with the Windsor Fuels property.

45 Herbhill Road (Lots 661 and 662)

- Sampling of soils and groundwater in the western portion of the property associated with the former power plant / electrical substation. Sampling at a minimum will be for SVOCs, metals, and PCBs.
- Groundwater samples will be collected along the western and northern property lines to screen for impact migrating from off site upgradient sources, such as Li Tungsten, Powers Chemco/Konica Minolta, and Crown Dykman sites.

47 Herbhill Road (Lot 664)

- Investigate the area used by Lightning Autobody. If there is evidence of spills or the potential for spills to have occurred, soil and groundwater samples will be collected as appropriate.

49 Herbhill Road (Lot 667)

- Sample soil and groundwater to confirm whether historic or off-Site impacts have occurred.

Recommended Phase II ESA activities will likely be performed by the developer prior to acquiring the Gateway Properties, and prior to development of the Project. Based on historic site use, one or more of the Gateway Properties will likely need remediation and the developer suggests it be managed under the BCP.

b) Status and Remediation of Properties Controlled by the municipal entities or developer

Site assessments and remediation have occurred on parcels owned by the municipal entities, or additional work has been recommended, as summarized below. The prior cleanups performed under the oversight of federal or state regulatory authorities at the properties controlled by municipal entities or the developer were carried out under separate administrative agreement (e.g., Records of Decision, Consent Decrees, etc). Though the cleanups were intended to limit future uses of these properties to commercial endeavors, the chemical/constituent specific cleanup goals in soil adopted by the federal and state agencies occasionally differed. The primary reason for any difference in soil cleanup goals were either due to a NYS guideline (unrestricted use) or cleanup goal derived from risk assessment, which contemplated potential exposures under various land uses. The performance of environmental cleanups at certain properties within the Site were subsequently determined to achieve a degree sufficient to allow residential use. The residual environmental conditions at these and other properties within the Site can, with further cleanup and/or implementation of IC/ECs, be delivered for residential use.

Moreover, the promulgation by NYS of soil cleanup objectives (SCOs) pursuant to 6 NYCRR Part 375 offers a consistent set of soil standards that are linked to various land uses. Those SCOs linked to restricted residential can be relied upon to guide future soil cleanup prior to or during construction. These SCOs also provide a basis for defining specific IC/ECs, which might be applicable to certain areas and properties. (Of note, NYS regulation defines "restricted residential" as the land use category which shall only be considered when there is common ownership or a single owner/managing entity of the site. As stated in 6 NYCRR §375-1.8(g)(2)(ii), restricted-residential use, at a minimum, shall include restrictions which prohibit: (1) any vegetable gardens on a site, although community vegetable gardens may be considered with Department approval; and (2) single family housing; and (b) includes active recreational uses, which are public uses with a reasonable potential for soil contact).

The Applicant has reviewed the findings in pertinent environmental reports and available environmental media, and the available data was compared to the SCOs set forth in 6 NYCRR Part 375 for restricted residential use to identify the areas that need or potentially need additional cleanup. The figures in the ECR compare the soil data not only to the SCOs, but also to the former NYSDEC soil guidance values referred to as Recommended Soil Cleanup Objectives (RSCOs). These guidance RSCOs were published in Technical Administrative Guidance Memorandum (TAGM) 4046. These RSCOs were guidance values for unrestricted use, hence, they were not tied to any specific land use category.

(1) Li Tungsten

Current Physical Site Conditions

Currently no site operations are being performed on any of the parcels. Parcel A is currently void of any structures that may have been associated with the facility, with the exception of the Lounge Building, located in the southeast portion of the parcel. The remedial investigation determined that this building was not contaminated. The site is occupied with non-radioactive dredge spoils that were excavated from the Creek in 2006-2007. The spoils were screened for radioactive ore residuals resulting from the Li Tungsten operations, which were removed and disposed. Based upon site plans in previous reports, Parcel A had five buildings, numerous (approximately 40 or more) above ground storage tanks (ASTs) and underground storage tanks (USTs) and other supporting features. It is understood that the tanks have been removed and the concrete slabs and foundations associated with the buildings are still in place. Therefore, contamination may still exist under the slabs and foundations.

Parcel B is fenced, has been recently excavated, and contains new vegetative growth cover. The remedial effort on Parcel B was conducted between July and November 2006. It included the excavation of 16,315 cubic yards (cy) of non-hazardous metals impacted soil, 2000 cy of hazardous metals (lead and arsenic) impacted soil, 835 cy of PCB impacted soil, and 1,965 cy of radiological

impacted soil. The property is sloped and has not been fully re-graded. No structures exist on the site.

According to the *Li Tungsten Draft Final Remedial Investigation Report, May 1998* (RI-LT), Parcel C is divided into three sections: Lower C, Upper C, and C Prime. Lower C is approximately four acres in size and contained surface impoundments such as Mud Pond (lined), Mud Holes (unlined used for waste storage and disposal and a scarred vegetation area), a 500,000 gallon AST, and two additional ASTs that contained hydrogen and propane. Currently, the Lower C area is void of above-grade structures. Since the foundations of the tanks are still present, contamination may be present under these foundations. The remaining area is unpaved or covered with aggregate. Materials, equipment and debris are currently staged on the property.

The southern edge of the Dickson Warehouse is the boundary between the Lower/Upper C areas. Upper C is a sloped property that includes the Dickson Warehouse and Benbow Building. Both buildings are in extreme disrepair with the Benbow building being unsafe to enter. Although sampling was done under the Dickson Warehouse the possibility of undiscovered contamination exists under the slab. No sub-slab sampling was done under and inside the Benbow Building and it is possible that contamination will be found there during construction or pre-closing sampling.

C Prime is to the west of Upper C and was separated as an area that did not require remedial action by the EPA based upon the results of the RI-LT. C Prime is undeveloped and undisturbed.

Summary of Regulatory Involvement

The Site was listed on the EPA's National Priority List (NPL) as a federal Superfund Site, on October 14, 1992, and the EPA identification number is NYD986882660. After the remedial investigation a Record of Decision (ROD) was issued in 1999. The ROD established the following three Operable Units (OU):

- OUI Li Tungsten Facility;
- OUII Captain's Cove (The portions of the Captain's Cove site where Li Tungsten radioactive ore residuals were disposed);
- OUIII Building Survey and Remediation; and
- OUIV Creek (this OU was established in 2005).

OUIII was deleted in December 1998 after a fire occurred in the Dice Buildings on Parcel A. The EPA decided to raze the buildings, thus rendering OUIII unnecessary. EPA sampled under the slabs of buildings in Parcel A at locations where they thought a potential for seepage through the slab could occur. Some material was removed from areas that had contamination present. The Applicant

sampled below the slabs on Parcel A and found chemicals that met the EPA cleanup goals, but exceeded the SCOs for restricted residential.

At the time of the 1999 ROD, the projected future use of the Li Tungsten site was commercial development. More recently, the City of Glen Cove revised its Master Plan and re-zoned the property to include residential development. In May 2005, the EPA issued an Explanation of Significant Difference (ESD), which amended the ROD. Based upon the ESD, the site is appropriate for residential use with restrictions and further evaluation necessary for Parcel A, prior to a decision. At the request of the City in the late fall 2008, the EPA is performing this evaluation.

The May 2005 ESD also added the Glen Cove Creek as OUIV due to radioactive ore residuals identified in the sediments in September of 2000.

At the end of 2008 the EPA has stated the remedial activities to satisfy the ROD and ESD have been completed allowing for restricted residential use. These activities are discussed in detail in Section 2.1.4 of the ECR.

In addition to the IC/ECs EPA requires to eliminate contact with the soil, groundwater, and soil vapor, EPA is also asking that groundwater quality be monitored for a period of 5 years (see ahead).

The site is also listed in the State Superfund Program by the NYSDEC, Site No. 130046. The state has reviewed and concurred with actions performed by the EPA and has concluded the site can be reused for restricted residential use, with the exception of Parcel A that is still being evaluated. The EPA has been and will continue to be the lead agency for the Li Tungsten site. However, the State will need to be satisfied that its SCOs for the intended land use are met.

Based on the ROD and the ESD, the EPA deemed all of the property except for Parcel A suitable for residential development after the restrictions listed below are implemented. The DEC is also requiring that these restrictions run with the real property and will be binding on parties who acquire the real property in the future. They include:

- complete prohibition on groundwater use;
- soil gas vapor mitigation for volatile organic compounds (VOCs) and radon. The purpose of the soil gas mitigation would be to minimize the potential for exposure to the presence of VOCs or radon still present in the subsurface soil and groundwater that might have the potential to adversely affect indoor air quality in building structures;
- a site-wide composite cover system, including 2 feet of clean soil in all vegetated areas of the site,
- a ground water monitoring system; and
- further evaluation of Parcel A for residential use, which is currently being done by EPA at the request of the City in the late fall 2008.,

Investigations & Remedial Activities Previously Conducted

The EPA conducted a remedial investigation at the site from 1993 to 1998, which is documented in the RI-LT Report. The RI-LT Report concluded that the primary contaminants for the site are heavy metals and radionuclides. Based upon the RI results, EPA issued the ROD in 1999. The ROD required excavation and off-site disposal of contaminated soil and additional remedial actions.

In the 1999 ROD, the EPA evaluated the Site using federal Site-Wide Cleanup Levels (SWCLs) developed to be protective of human health and the environment for commercial use, which was in accordance with the City's development plan at that time. Subsequent to the 1999 ROD, the City of Glen Cove adopted a mixed use residential development plan. As a result of the change in use, the EPA re-evaluated the SWCLs to allow for restricted residential use, which resulted in a modification to the radiological criteria (no change in the SWCLs for metals), which is documented in the May 2005 ESD. The federal restricted residential SWCLs for Li Tungsten are as follows:

Table III.B-2
EPA Site-Wide Cleanup Levels

PARAMETER	EPA SITE-WIDE CLEANUP LEVELS
Arsenic	24 mg/Kg
Lead	400 mg/Kg
Thorium-230 + Thorium 232	<5 pCi/g + background *
Radium-226 + Radium-228	<5 pCi/g + background *
PCBs (Parcel B)	1 mg/Kg in the top 2 feet
PCBs (Parcel B)	10 mg/Kg below the top 2 feet

Notes:
mg/Kg = Parts per million (ppm)
pCi/g = picocuries/gram
Background is approximately 1 pCi/g for each isotope

By contrast, as shown in the ECR the SCOs for restricted residential use are higher than the previously-used standards.

Based on the SWCL, EPA has determined that the remediation performed to date is protective of residential use. However, because New York State's restricted residential use RSCO is stricter than the federal SWCL, certain of the remaining soil exceeds applicable RSCO standards. Areas of impact, including residual soils in excess of RSCOs, will be re-evaluated once project-wide criteria are established by regulatory agencies. The developer and IDA believe that any further remediation and implementation of IC/ECs would be best accomplished through a multi-agency accord. Additionally, the SMP will detail any

requirements for soil management, including management of residual soils to the extent these may exceed applicable RSCOs for restricted residential use. The SMP will also detail any required IC/ECs.

As part of the May 2005 ESD, the EPA evaluated the cleanup already performed prior to the ESD and subsequently found the prior results to be protective for residential use for the following reasons that are stated in the ESD:

1. The lead cleanup level was 400 PPM, which is already the residential standard.
2. The arsenic cleanup level of 24 PPM is consistent with other federal superfund sites and the 2-ft of clean fill will be further protective at this concentration.
3. The remedy of excavation with clean backfill makes radionuclides an issue only at the margins of the excavation. Post excavation sampling has shown the levels to meet the modified standard.
4. Parcel A requires further evaluation.

EPA further states that these levels are protective of a residential use after reviewing the risk assessment performed as part of the Remedial Investigation Report (RIR) for the Li Tungsten Site. However, other than the ESD no written information regarding the review of the risk assessment was provided for the change in SWCLs.

As documented in the 1999 ROD, the selected remedy for groundwater contamination was no action, as it was anticipated that source removal will improve groundwater quality beneath the site. Post remediation groundwater monitoring will be performed by the PRP, under the direction of the EPA for a period of 5 years. However, in order to safely redevelop the site, the ECR recommends the developer perform a round of groundwater sampling in order to be able to properly design and develop the vapor mitigation system. For example, even though Prime C had no known historic onsite manufacturing activities, onsite buildings are still likely to need vapor mitigation due to groundwater contamination

Sections 2.1.4.1 through 2.1.4.5 of the ECR contain a description of the remedial activities and O&M activities conducted at each Operable Unit comprising the Li Tungsten site.

(2) Captain's Cove Site

Site Location and History

The 10 acre Captain's Cove New York State Superfund Site is located on the western end of Garvies Point Road in Glen Cove, New York. The site is bordered by Glen Cove Creek to the south, City-owned property (beach) to the west, the

Garvies Point Road and Garvies Point Preserve to the north, and the Glen Cove Angler's Club to the east. The total Captain's Cove Site encompasses approximately 23 acres, including an estimated 4 acres of tidal wetlands along the site's southern boundary bordering Glen Cove Creek.

Historically, the land at the Captain's Cove property was used as a port and for recreation including boating, fishing and swimming. Prior to the 1960s, two tidal channels and an associated marsh were prominent at the site. One narrow channel extended from Garvies Point Road (near what is currently the west gate) to the northwest portion of the wetland. The second tidal channel was broad and extended from Glen Cove Creek to just south of Garvies Point Road, on the east side of the site. Based on aerial photographs, the tidal channels were filled between 1966 and 1969 and the site became essentially flat.

Beginning in the late 1950s, and continuing until approximately the late 1970's, the Captain's Cove Site was predominantly used as a "community dump" by the City of Glen Cove for the disposal of incinerator ash, sewage sludge, rubbish, household debris, and creek sediments. The site was also used by local industry, including the former Li Tungsten operation for the disposal of industrial wastes. Low levels of radioactive ore residuals from the Li Tungsten facility were disposed of on the western and eastern ends of the property.

Captain's Cove was purchased by Village Green Realty at Garvies Point, Inc. (Village Green Realty) in 1983 with the intention of developing a residential complex at the site. Redevelopment efforts were abandoned in 1986 when the NYSDEC designated the property as a Class 2 Inactive Hazardous Waste Site (State Superfund Site) as a result of organic and inorganic contamination in soil and groundwater at the site. Several condominium structures (condo shells) were partially constructed on-site prior to the State Superfund designation, and were never completed. These structures were demolished by the City of Glen Cove prior to the start of the remedial action.

A portion of the Captain's Cove site was delisted as detailed in an October 8, 1998 NYSDEC letter. The delisted area is located along the western and northern perimeter of the Captain's Cove Site. The delisting occurred as a result of a request by the City of Glen Cove based upon information gathered during the RI of the Site. Refer to Figure 3 for a plan view of the different areas of the site.

In 1995, the EPA added select portions of Captain's Cove as part of the Li Tungsten site where radioactive ore residuals had been deposited (OUII).

Captain's Cove is partially a State Superfund site (approximately 10 acres of the 23 acre site), a delisted State Superfund site area on the western side of the Site and portions to the east and west of the State Superfund site that were designated as a Federal Superfund site, associated with the Li Tungsten facility due to the disposal of residual radioactive tungsten ore (collectively for purposes of this DEIS all of these areas constitute the "Captain's Cove Site").

Summary of Regulatory Involvement and Remedial Activities Previously Conducted

The remedial investigation (RI) of Captain's Cove was performed at the site from May 1997 through December 1997. The purpose of the RI was to define the extent and nature of any contamination resulting from previous site activities. The results are documented in the *Captain's Cove Final Remedial Investigation Report, January 1999* (CC-RI). The RI identified four areas of environmental concern (AECs) detailed below:

- Elevated levels of metals in the groundwater in the western third of Captain's Cove, down gradient of Li Tungsten tailings;
- Elevated levels of VOCs in the groundwater in the northeastern corner of Captain's Cove, down gradient of the Mattiace Petrochemical Site;
- Elevated levels of VOCs and methane (from decomposition of waste) in soil gas as a result of municipal waste and fill in the central portion and the leaching of metals and VOCs through the soil and waste material; and
- Elevated levels of metals and organic compounds in the wetland sediments.

Of these four AECs, only the buried waste was directly associated with former municipal landfill operations at Captain's Cove, therefore, the subsequent feasibility study (FS) performed for the site focused only on this AEC. The FS included a test pit program designed to refine the boundaries of the buried waste. However, some test pits and analytical data for locations that fell outside of the excavated areas did contain waste material, including areas within the portion of the Site eventually delisted without any remediation.

The remedial action (RA) mandated by the ROD for the State Superfund portion of the Site was conducted from May 1, 2001 to September 20, 2001 and consisted of excavation with off-site disposal of contaminated soil as well as post-excavation backfilling.

Excavated materials were segregated, screened, stockpiled into 86 piles on-site. Of the 86 stockpiles, soil samples from 8 stockpiles exceeded the cleanup criteria for the site, and were shipped off-site as non-hazardous waste. Seventy-eight stockpiles were approved by the NYSDEC for on-site reuse as backfill material, and a review of the data reveals all of the stockpiles had concentrations in excess of the Recommended Soil Cleanup Objectives (RSCOs) contained in the NYSDEC Technical and Administrative Guidance Memorandum (TAGM) No. 4046 for metals (copper and zinc) and as many as 76 stockpiles exceeded the semi-volatile organic compound (SVOC) objectives. Off-Site waste disposal volumes were: 8,121 tons of non-hazardous waste, and 44,079 tons of bulky waste/construction and demolition (C&D) landfill debris.

In addition 6,117 tons of recycled concrete aggregate (RCA) were produced from

the demolition of the former on-site condominium shells and reused on Site. Approximately 26,388 tons of imported RCA was brought on-site and placed in locations where the excavation extended below the water table. An estimated 41,334 tons of imported fill material was utilized as the 2-foot thick surface cover layer, over the reused site soils. A plastic construction fence was installed below this cover layer as a marker for future activities. The imported fill came from a variety of sources and up to 22 samples were analyzed for metals, pesticides, VOCs, and SVOCs. No exceedances of RSCOs were reported for the imported cover fill, although the sampling protocol and frequency was not identified in the NYSDEC ROD or the project reports. Dredged sediments from Glen Cove Creek were also used as backfill within an area approximately 50 feet by 50 feet, along the south corner of the west retention pond. The NYSDEC later requested radiation screening of this area and it was reported below acceptable background level at the surface. However, it is possible that radioactive material is present in deeper reused dredge spoils. Remedial activities are documented in the 2004 Remedial Action Completion Report (RACR).

Radiological contamination at Captain's Cove, which originated from the Li Tungsten site, was investigated by EPA as OU 2 of the Li Tungsten site, and the EPA mobilized to Captain's Cove in January, 2001 to perform the removal of the radioactive wastes from Area A, Area G, two ancillary areas known as Area A Prime and Area G Prime and a few small contaminated areas described in the 1999 Li Tungsten ROD.
Wastes disposed fell into the following categories:

- 86,482 tons of naturally occurring radiological material ("NORM")
- 36,170 tons of non-hazardous
- 236 tons of hazardous waste
- 524 tons of mixed waste (NORM and hazardous)
- 1,317 tons of concrete and demolition type debris

Excavated areas were backfilled to pre-existing conditions. Details on backfill material were not contained in the *Remedial Action Report for Operable Unit 2 (Captain's Cove Property) Excavation and Offsite Disposal of Contaminated Soil,* September 2006 (RAR-OU2).

As a result of the City's post-ROD decision to allow for future residential development of the Li Tungsten and Captain's Cove properties, the EPA issued the May 2005 ESD, slightly revising the radioactive SWCLs but maintaining the lead and arsenic SWCLs by requiring IC/ECs to be implemented to permit residential use. However, residual soil conditions do not meet the NYS SCOs for restricted residential. Hence, the developer, in cooperation with applicable government agencies, intends to develop site-wide, consistent end point sampling results during the construction project. This will assure that the soil at the Li Tungsten and Captain's Cove Sites are ultimately remediated to levels that are protective, and that all surface soils meet the new regulatory cleanup criteria for restricted residential use.

(3) Angler's Club Site

Site Location and Historic Uses

The Anglers Club property is located on Garvies Point Road, in the City of Glen Cove, New York. The site is owned by the City of Glen Cove. The 0.9 acre site is utilized as a clubhouse and a marina and is bordered by Garvies Point Road to the north, Glen Cove Creek to the south, the Captain's Cove property to the west, and the Gladsky property to the east. Anglers Club, along with the Gladsky property and the pumping station is identified as Section 21, Block A, Lot 12.

Summary of Regulatory Involvement

A *Phase I Environmental Site Assessment (ESA), May 2000*, and a *Phase II ESA, December 2000* were performed for the site at the request of the City of Glen Cove Community Development Agency, under the EPA-funded Brownfields Assessment Demonstration Pilot Program.

Environmental Investigations Previously Conducted

A Phase II Environmental Site Assessment was performed in April 2000 (report dated December 2000), and consisted of soil and groundwater samples. Areas of concern that were identified in the Phase I ESA, and investigated in the Phase II ESA, include the underground fuel oil storage tank (UST), areas of chemical storage, a metal-lined pit, the backflow prevention system discharge pipe, and the bulkhead area. The Phase 1 Report stated that the UST was identified in the Glen Cove City Building Department records. No mention was made of the UST being in the Tank Registry database.

Soil, sediment and groundwater samples were submitted for various analyses, based upon the ESA findings, and included VOCs, SVOCs, PCBs/Pesticides, TAL Metals (total and dissolved for groundwater), and cyanide. Additionally, soil samples were submitted for asbestos analysis. However, no samples were reported to be from the area of the UST. Nor was any other information reported on the UST's status.

Analytical results were compared to the NYSDEC TAGM 4046 Recommended Soil Cleanup Objectives (RSCOs) for soil and sediment, which were the cleanup criteria at this time, and the NYSDEC Groundwater Quality Standards. Soil and sediment results were also compared to the EPA Region III Risk-Based Concentrations (RBCs) for Industrial Land Use. The Phase II noted that the groundwater salinity across most of the site meets the definition of saline water (Class GSA), for which there are no chemical specific standards.

Soil: SVOCs were detected above the NYSDEC RSCOs, but below the EPA Industrial RBCs in one surface and two subsurface samples. Compounds detected

above the RSCOs include benzo(a)anthracene, chrysene, benzo(a)pyrene and dibenzo(a,h)anthracene.

Metals including arsenic, barium, beryllium, cadmium, cobalt, copper, iron, lead, mercury, nickel, selenium, and zinc were detected above the NYSDEC RSCOs in two surface soil samples, the sediment sample, and three subsurface soil samples. Additionally, arsenic was detected above the EPA Industrial RBC in five soil samples. Soil sample locations and results are shown in the ECR.

Groundwater: VOCs, including bromomethane, 1,1-dichloroethene, 1,1-dichloroethane, 1,2dichloroethane, 1,1,1-trichloroethane, trichloroethene, and tetrachloroethene were detected above the NYSDEC Groundwater Quality Standards in one of the four groundwater samples collected.

Metals were also detected in all four groundwater samples above the NYSDEC RSCOs. Metal concentrations generally decreased in filtered samples, with the exception of antimony, magnesium, and sodium. Groundwater sample locations and results are shown in the ECR.

The Phase II ESA indicated that the Angler's Club Site is possibly hydraulically downgradient of Mattiace and Li Tungsten, which may account for the VOCs detected in groundwater. Environmental conditions of Mattiace are discussed in Section 3.1 of the ECR.

Based upon the findings of the investigation, the Phase II ESA concluded that the levels of SVOCs and metals in the soils did not warrant remediation since the planned development for the site at that time did not include residential use. No remedial activities have been conducted at the Angler's Club Site.

While residential buildings are not proposed for this Site, it will likely be part of the park and esplanade that will connect the Captain's Cove Site to the Li Tungsten Site. As explained in the above paragraphs, areas of impacted soils and groundwater exist on the Angler's Club site and closure of the tank was not documented, nor were soil samples collected from the UST vicinity to indicate if a release had occurred. The impacted areas contain concentrations of SVOCs, exceeding NYSDEC Part 375 RSCO's for restricted residential use and metals in the soils exceeding NYSDEC Part 375 RSCO's for restricted residential use and elevated concentrations of VOCs in the groundwater. Areas of impact are shown on Figure 4A and 4B. This area is slated for an esplanade connecting the Captains Cove and Li Tungsten sites, and as such may only require remediation in the form of adding 2-ft of clean fill and possibly removing existing soil to make room for the fill without raising the land surface elevation. However, if any buildings are constructed in this area, soil vapor mitigation will also be required. The developer and the IDA plan to apply jointly for eligibility of this property under the NYS BCP but will, at a minimum, seek to meet the same degree of soil cleanup as required under NYS Part 375 regulations for the intended land use, including the implementation of appropriate IC/ECs based on the existing

environmental conditions.

The areas of impact will be re-evaluated once project-wide criteria are established by regulatory agencies. The developer and IDA believe that any further remediation and implementation of IC/ECs would be best accomplished through a multi-agency accord. Additionally, the SMP will detail any requirements for soil management, including management of residual soils to the extent that these soils may exceed applicable RSCOs for restricted residential use. The SMP will also detail any required IC/ECs.

(4) Gladsky

Site Location and Historic Uses

The Gladsky property is located on Garvies Point Road, within the City of Glen Cove, New York. The site is owned by the City of Glen Cove. The approximately 0.8 acre site was utilized as a boat maintenance and repair facility and is bordered by Garvies Point Road to the north, Glen Cove Creek to the south, the Angler's Club Site to the west, and the City of Glen Cove Sewage Treatment Plant Pumping Station to the east. The Gladsky Site, along with the Angler's Club Site and the pumping station are all located on the same tax lot, Section 21, Block A, Lot 12.

According to the Phase I ESA (May 2000), the site was developed between 1947 and 1950 and has been owned by the City of Glen Cove since at least 1956. In 1957, the property was used as a sand/gravel facility with a mixing tower and stockpiles. Gladsky Marine occupied the site from the 1970s to 1999, at which time the existing building was constructed. The building is a one-story 396 square foot office, which was reported to be connected to the municipal water and sanitary sewer systems. The site plan is shown on Figure 4A of the ECR.

Current Site Status

The tax lot contains three buildings; one on each of the properties mentioned above. Only the building on the Gladsky property is currently vacant.

Summary of Regulatory Involvement

A *Phase I Environmental Site Assessment (ESA), May 2000*, a *Phase II ESA, December 2000*, and a *Supplemental Phase II ESA, September 2002*, were performed for the site at the request of the City of Glen Cove Community Development Agency, under the EPA-funded Brownfields Assessment Demonstration Pilot Program. The Phase I ESA and Phase II ESA were performed in conjunction with Angler's Club Site. The supplemental Phase II ESA was performed on the Gladsky property only. Based upon the investigation results, the Gladsky site was admitted into the NYSDEC 1996 Bond Act

Environmental Restoration Program (ERP) for remediation funding. A Proposed Remedial Action Plan (PRAP) was prepared for the Gladsky property in January 2006. A Record of Decision was finalized in March 2006. The site number is E1-30-152.

Environmental Investigations Previously Conducted

According to the Phase I ESA, an Environmental Assessment (EA) was performed by Impact Environmental in 1992 for the Gladsky Site. The focus of the EA was an asbestos investigation. Thirteen soil samples were collected from the fill material throughout the site since friable asbestos was suspect. Eight samples were submitted for analysis; six of the samples were positive for asbestos. The conclusion of the investigation stated that a "…large area of the property has been contaminated with asbestos containing building materials".

A Phase II Environmental Site Assessment was performed in April 2000 (dated December 2000), and consisted of soil and groundwater samples. Areas of concern that were identified in the Phase I ESA, and investigated in the Phase II ESA included topographically low areas, oil stained areas, soil containing ash and rusted metal flakes, the sewer pipe, and the bulkhead area. A total of seven surface, four subsurface, and five groundwater samples were collected. Soil boring logs indicate that the soil consists primarily of silt and sand. Trace brick and asphalt were noted at two boring locations, which are indicative of fill material.

Soil and groundwater samples were submitted for various analyses, based on identified concerns and included VOCs, SVOCs, PCBs/Pesticides, TAL Metals (total and dissolved for groundwater), and cyanide. Additionally, six soil samples were submitted for asbestos analysis.

Analytical results were compared to the NYSDEC TAGM 4046 RSCOs that existed at that time, and the NYSDEC Groundwater Quality Standards. Soil analytical results were also compared to the EPA Region III Risk-Based Concentrations (RBCs) for Industrial Land Use. Additionally, it was noted that the groundwater salinity across most of the site meets the definition of saline water (Class GSA), for which there are no chemical specific standards.

Soil: SVOCs were detected above the NYSDEC RSCOs in four surface samples and one subsurface sample. SVOCs were also detected above the EPA Industrial RBCs in one surface sample. SVOCs detected above the RSCOs include phenol, as well as polycyclic aromatic hydrocarbons (PAHs). The PAHs included benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(1,2,3cd)pyrene, and dibenzo(a,h)anthracene.

One PCB (Aroclor-1254) was detected above the NYSDEC RSCO, but below the EPA Industrial RBC in one surface sample.

Metals including arsenic, barium, beryllium, cadmium, cobalt, copper, iron, lead, mercury, nickel, selenium, and zinc were detected above the NYSDEC RSCOs in four surface, and three subsurface soil samples. Additionally, arsenic was detected above the EPA RBC in five soil samples, with the high concentration of 3,380 mg/kg.

Asbestos was detected above 1% in four of the samples analyzed (two surface and two subsurface samples). Asbestos greater than 1% indicates an asbestos containing material.

A Supplemental Phase II Environmental Site Assessment was performed in 2002 at the Gladsky Site to delineate the vertical extent of surface soil contamination. Twenty-one soil samples were collected from eight locations to a total depth of two feet, and submitted for PAH and metal analyses. The PAH compounds and metals identified in the Phase II ESA were also detected above the RSCOs and EPA RBCs throughout the property. Conclusions indicate that contaminants are present above the standards to a depth of at least two feet below grade. Subsurface samplings performed from depths 4-6 feet appear to limit the extent of impact to this depth interval. Soil sample locations and results are shown on Figure 4A of the ECR.

Groundwater: VOCs, including vinyl chloride, 1,1-dichloroethane, 1,2-dichloroethane, and trichloroethene, were detected above the NYSDEC Groundwater Quality Standards in one of the four groundwater samples collected.

Metals were also detected in all four groundwater samples above the NYSDEC Groundwater Quality Standards. Metal concentrations generally decreased in filtered samples, with the exception of antimony, magnesium, manganese, and sodium. Groundwater sample locations and results are shown on Figure 4B of the ECR.

The Phase II ESA indicated that the Gladsky property is possibly hydraulically downgradient of Mattiace and Li Tungsten, which may account for the VOCs detected in groundwater. Environmental conditions of Mattiace are discussed in Section 3.1.

Summary/Restrictions

Areas of impacted soils and groundwater are documented relative to the Gladsky site. These include areas containing elevated concentrations of SVOCs, PCBs and metals in the soils exceeding NYSDEC, Part 375 RSCO's for restricted residential use and elevated concentration of VOCs in the groundwater. Areas of impact are shown on Figures 4A and 4B of the ECR.

NYSDEC issued a Preliminary Remedial Action Plan ("PRAP") in January 2006 and a ROD in March 2006 for the Gladsky property. The selected remedy includes:

- A radiological contamination survey due to the site's proximity to Li Tungsten and Captain's Cove;
- The excavation of contaminated soil above NYSDEC RSCOs (minimum of 2 feet across site) and off-site disposal;
- A site management plan which addresses residual contaminated soils that may be excavated as part of future redevelopment and the evaluation of vapor intrusion for any proposed buildings;
- Institutional control in the form of an environmental easement which restricts the use of groundwater and ensures compliance with the site management plan; and
- Periodic certification of the institutional controls by a Professional Engineer

Remedial activities have not yet begun. However, the City has been approved to perform the remedial activities under the NYSDEC ERP Program.

(5) Pumping Station

Site Location and Historic Uses

The City of Glen Cove Sewage Pumping Station property is located on Garvies Point Road, in Glen Cove, New York. The site is owned by the City of Glen Cove. The approximately 0.2 acre site is utilized to transfer municipal wastewater across the Glen Cove Creek to the City of Glen Cove Sewage Treatment Plant located to the south. The Pumping Station is bordered by Garvies Point Road to the north, Glen Cove Creek to the south, Gladsky to the west, and Doxey to the east. The Pumping Station, along with the Anglers Club and the Gladsky property is identified as Section 21, Block A, Lot 12.

According to the Phase I ESA (May 2000), the site was developed between 1947 and 1950 and has been owned by the City of Glen Cove since at least 1956. In 1957 the property was used as a sand/gravel facility with a mixing tower and stockpiles. The pump house was constructed in 1966.

Current Physical Site Conditions

This Site contains a small pump house building.

Summary of Regulatory Involvement

A *Phase I Environmental Site Assessment (ESA), May 2000*, was performed for the Site at the request of the City of Glen Cove Community Development Agency, under the EPA-funded Brownfields Assessment Demonstration Pilot Program. In addition, a Phase II ESA was also performed for the Pumping Station

in January 2005.

Environmental Investigation Previously Conducted

Only several pages of the Phase II Environmental Assessment were provided. They contained the results of soil and groundwater samples. The Phase II ESA indicates that the soil consists primarily of silt and sand, with lenses of clay.

The report indicated that six soil samples were collected from four locations, and two groundwater samples were collected. Soil and groundwater samples were submitted for VOCs, SVOCs, PCBs/Pesticides, and metals (total and dissolved for groundwater) analyses. In addition, soil samples were submitted for asbestos analysis.

Analytical results were compared to the NYSDEC TAGM 4046 RSCOs for soil that existed at that time, and the NYSDEC Groundwater Quality Standards. Additionally, it was noted that the groundwater salinity across most of the site meets the definition of saline water (Class GSA), for which there are no chemical specific standards. Figures identifying sample locations were not included in the part of the Phase II ESA that was provided.

Soil: SVOCs (benzo(a)anthracene and benzo(a)pyrene) were detected above the NYSDEC TAGM RSCOs in one surface sample and one subsurface sample.

Metals including arsenic, copper, iron, mercury, and zinc were detected above the NYSDEC TAGM RSCOs in five samples (both surface and subsurface). Soil sample locations and results are shown on Figure 4A of the ECR.

The concentrations of SVOCs and metals also exceed the RSCO's for restricted residential use established by NYSDEC under 6 NYCRR Part 375, and currently in effect.

Groundwater: VOCs, including vinyl chloride, cis-1,2-dichloroethene, and trichloroethene, were detected above the NYSDEC Groundwater Quality Standards in one groundwater sample collected.

Metals were also detected in two groundwater samples above the NYSDEC RSCOs. Metal concentrations generally decreased in filtered samples. Groundwater sample locations and results are shown on Figure 4B of the ECR.

The Phase II ESA indicated that the Pumping Station is possibly hydraulically downgradient of Mattiace and Li Tungsten, which may account for the VOCs detected in groundwater. Environmental conditions of Mattiace are discussed below.

Summary/Restrictions

As explained in the above paragraphs, areas of impacted soils and groundwater exist on the Pumping Station site. These include areas containing elevated concentrations of SVOCs and metals in the soils and VOCs in the groundwater. It is also possible that contaminants associated with sanitary wastes may be present in the subsurface. Although residential building structures are not proposed for this site, should development plans change, soil vapor mitigation is warranted at a minimum and the Site contamination should still be properly handled for a park/ esplanade reuse.

There has not been an evaluation for radiological contamination at the site. Due to the site's proximity to Li Tungsten and Captain's Cove, a radiological survey is warranted. A list of contaminants and cleanup goals, and a schedule for additional testing will be prepared along with identifying who will do the additional testing. The developer and the IDA believe that the best framework to incorporate these actions would be a multi-agency accord.

(6) Doxey Site

Site Location and Historic Uses

The so-called Doxey Site (Doxey Site) is owned by the IDA. It is located at 10 Garvies Point Road, in Glen Cove, New York. Prior to 1944 and until as late as 1992, the site was used as a tank farm for the storage and distribution of petroleum. The most recent property use includes the storage of construction equipment, vehicles and materials. The Doxey Site is bordered by Garvies Point Road and the Li Tungsten Site to the north, Glen Cove Creek to the south, the Gladsky Site and City of Glen Cove Sewage Treatment Plant Pumping Station to the west, and Li Tungsten to the east. A site plan is presented in Figure 5A of the ECR.

Current Physical Site Conditions

A Phase I performed for the property on behalf of the City of Glen Cove dated indicates two wood frame buildings, a one-story office building approximately 215 square feet and a garage that is 528 square feet remain on-Site. Three aboveground storage tanks are also present, but not currently in use and have been rendered unusable by cutting a doorway into each tank. Currently, the tanks are used for storage. A 500 gallon aboveground storage tank for heating oil is also present at the site and is still being used to heat the on-Site buildings.

Summary of Regulatory Involvement

The NYSDEC has included the Doxey Site in the NY Spills and Leaking UST

(LUST) databases as a result of site operations prior to 1999. According to previous environmental reports, the associated spill files were subsequently closed. However, information has been recently provided, that Spill File 92-09888 is still open. It is recommended that the status of this Spill and its location be determined. The developer and IDA intend to jointly apply for eligibility of future cleanup at this property under the NYS BCP but will, at a minimum, seek to meet the same degree of soil cleanup as required under NYS Part 375 regulations for the intended land use, including the implementation of appropriate IC/ECs based on the existing environmental conditions.

Environmental Investigation Previously Conducted

A Phase I ESA for the Doxey Site was completed in September of 1999. Based upon the findings, including historic spills, site uses, and proximity to other sites of potential concern, a Phase II ESA was recommended. The Phase II ESA was performed in two phases due to property access issues. A sampling program was initiated in October of 2000, which included the collection of surface soil, shallow subsurface soil and groundwater samples. This sampling program was not completed until property access was re-established in September of 2006.

Analytical results were compared to the NYSDEC TAGM 4046 RSCOs for soil applicable at this time, and the NYSDEC Groundwater Quality Standards. Several SVOCs, including benzo(a)anthracene, benzo(a)pyrene), benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene and dibenzo(a,h)anthracene, were detected above the NYSDEC RSCOs in ten of the twelve surface soil samples collected and one subsurface sample (6 to 8 ft below grade). In addition, 2-Methylnaphthalene was detected above the NYSDEC TAGM RSCO in one subsurface soil sample (6 to 8 ft below grade). SVOCs, including 4methylphenol, naphthalene, phenanthrene and benzo(b)fluoranthene, were detected above NYSDEC Groundwater Quality Standards in six of the eight groundwater samples collected.

Metals, including arsenic, beryllium, cobalt, copper, iron, mercury, nickel, selenium and zinc were detected above the NYSDEC TAGM RSCOs in all of the surface and subsurface soil samples.

One pesticide, aldrin, was detected above its NYSDEC TAGM RSCO in one surface soil sample, however, total pesticides in the sample were well below the associated standard. No pesticides were detected above RSCOs in any of the subsurface soil samples. PCBs were not detected at concentrations above RSCOs in any of the surface or subsurface soil samples. Neither PCBs nor pesticides were detected above NYSDEC Groundwater Standards in any of the groundwater samples at the Doxey Site.

A total of nine metals (antimony, barium, copper, iron lead, magnesium, manganese, selenium and sodium) were detected above NYSDEC Groundwater

Quality Standards in seven of the eight groundwater samples collected at the Doxey Site.

VOCs, including acetone and 2-butanone, were detected above NYSDEC TAGM RSCOs in two subsurface soil samples; however, VOCs were not detected above RSCOs in any of the surface soil samples. Several VOCs, including acetone, 2-butanone, benzene, isopropylbenzene, ethylbenzene, toluene and total xylenes, were detected above the NYSDEC Groundwater Quality Standards in five of the eight groundwater samples collected, including a sample collected at the northern border of the Doxey Site, which suggests the migration of contaminants from upgradient sources.

However, concentration of certain VOC's, SVOC's and metals in the soil exceed the RSCO's subsequently established by NYSDEC under 6 NYCRR Part 375, and currently in effect.

Asbestos was not detected in any of the surface or subsurface soil samples. Soil sample locations and results are shown on Figure 5A of the ECR, while groundwater sample locations and results are shown on Figure 5B.

Summary/Restrictions

Areas of impacted soils and groundwater exist on the Doxey Site that require remediation before the Site can be redeveloped for residential and/or recreational use. These include areas containing elevated concentrations of SVOCs, pesticides and metals in the soils and VOCs in the groundwater. Areas of impact are shown on Figure 5A and 5B in the ECR. Additional delineation of contaminated soil is warranted so that the extent of remediation can be determined. In addition, it is recommended that the status of NYSDEC Spill File 92-09888 be determined.

Additional investigation and subsequent remediation will likely have to be performed. An evaluation for radiological contamination at this Site is also warranted due to its proximity to Li Tungsten and Glen Cove Creek. The Applicant and the IDA plan to jointly apply for eligibility of this site under the BCP.

Based on the age of the buildings, the potential for asbestos containing material (ACM) and lead based paints exists. The demolition of these structures will be handled in accordance with federal, state and local ACM and LBP regulations.
The existence of VOC groundwater contamination beneath the Doxey Site may present a vapor intrusion issue that should be evaluated if buildings are proposed.

c) Adjacent Properties

The adjacent commercial/industrial parcels that have the potential to impact the

environmental integrity of the Project site include: Mattiace, Crown Dykman, Powers Chemco/Konica Minolta, and Slantfin. Their locations are shown on Exhibit III.B-1. Other entities are responsible for investigating and cleaning up these properties under federal and state regulatory programs. The Applicant has monitored their status, as Mattiace and Crown Dykman affect the Site through movement of contaminated groundwater from these properties to the Site.

The information presented ahead and in the ECR, describes the issues at the adjacent sites and what is being done to correct them. The only potential impact from these adjacent sites would arise from the migration of contaminated ground water to subsurface areas beneath the Site. Since the contaminated ground water includes, among other things, VOCs, there is a potential for off-gassing, causing VOCs to impact subsurface soil vapor. Subsurface soil vapor that is impacted by VOCs beneath the Site could potentially create a vapor intrusion problem for the structures built on the Site. Therefore, mitigation measures in the form of ECs will be incorporated into the proposed construction.

Cleanup of the adjacent sites is proceeding under responsibility of other parties. The removal of the source material not only on the adjacent sites but also on the project site will produce a beneficial effect on the groundwater under the project site. Changes to the long term groundwater quality and the cessation of the SVI systems operation will be determined from monitoring procedures in the SMP. At some point the groundwater will be remediated and the SVI systems will not need to be operated. However, at this time it is not feasible to reliably predict when this will occur.

(1) Mattiace

Site History/Location

The Mattiace Petrochemical Federal Superfund Site is located off of Garvies Point Road north of the proposed ferry terminal. The Mattiace Site is bordered to the north by Li Tungsten (Parcel C Prime), to the south by industrial properties (Angler's Club/Pumping Station/ Gladsky beyond the industrial properties to the east by an industrial property (Li Tungsten Parcel C beyond that), and to the west by an industrial and vacant/undeveloped properties. The approximately 2-acre site is an inactive chemical distribution and drum cleaning facility that operated from the mid-1960's until 1987. During this period, the primary operations at the Mattiace Site were the storing, blending and repackaging of organic solvents. In addition, Mattiace operated the M&M Drum Cleaning Company on the site until 1982. Structures that existed on the Mattiace Site during the operational period included a Quonset hut, shed, concrete loading dock, 32 USTs and 24 ASTs.

Current Physical Site Conditions

The structures mentioned above that are related to historic site operations are no longer present at the Site. These structures were demolished in the late 1980's after chemical storage and distribution services were shut down. Currently, a soil

vapor and groundwater extraction and treatment system exists at the site. A large industrial building at the site is used to house the controls for the system. In addition, the treatment system includes a soil vapor extraction (SVE) system and wells, groundwater extraction wells, groundwater injection wells, groundwater monitoring wells, and associated piping. The SVE and groundwater treatment systems are still in operation.

Summary of Regulatory Involvement

Operations ceased at the Mattiace Site and the property was seized by the State of New York in 1987 after seven years of failed negotiations and litigation regarding multiple violations of environmental laws. An EPA letter, dated July 8, 1988, was sent to William, Otto, and Louis Mattiace, notifying them of their status as potentially responsible parties at the Mattiace Site. The letter also provided them with the opportunity to remediate the Site through an EPA Consent Order. After no good faith offers were received by the EPA in response to this notification, EPA placed a lien on the property in August, 1988. The EPA maintained control of the site until July of 2003, when a private company assumed responsibility for long-term operation of the facility under an agreement with the EPA and several potentially responsible parties.

The EPA continues to provide oversight of facility operations, including the ongoing remedial efforts detailed below.

Mattiace Remedial Activities Previously Conducted

In 1988, the EPA removed more than 120,000 gallons of hazardous liquids from the Mattiace Site, including 100,000 gallons of flammable liquids, 20,000 gallons of contaminated water and 1,800 gallons of liquids containing polychlorinated biphenyls (PCBs). Some cylinders and empty tanks were reclaimed by their owners. The remaining chemical containers and all other hazardous materials were transported to EPA-approved disposal facilities.

In February of 1988, the EPA performed a remedial investigation at the Site. A geophysical survey indicated that several areas in and around the Site should be investigated further due to the possibility of buried drums and hazardous waste. As a result, the EPA initiated a second operable unit (OUII) focused feasibility study (FFS) in December, 1989 to further delineate these findings. All other elements of the Mattiace Site investigation (i.e., groundwater investigations, etc.) were designated as first operable unit (OUI).

The excavation of test trenches and test pits, performed as part of the OUII FSS, identified an area containing approximately 25 buried drums and brake fluid containers along the Mattiace Site's northwest boundary. Sampled drum sludge was found to contain high concentrations of VOCs, including toluene (220,000 ppm) and 4-methyl-2-pentanone (1,600 ppm), as well as lesser concentrations of

SVOCs. Soil samples contained high concentrations of toluene (35,000 ppm), ethylbenzene (1,600 ppm), total xylenes (7,300 ppm) and lead (4,280 ppm).

As a result of the OUII FSS findings, the OUII Record of Decision (ROD) was signed in 1990 to specifically address the removal and off-site treatment and disposal of drums and contaminated soil in the drum burial area. The EPA completed the excavation and off-site disposal of approximately 400 buried drums and contaminated soil in the spring of 1992.

In June of 1991, the EPA completed a comprehensive remedial investigation and feasibility study (RI/FS) of soil and groundwater contamination at the Mattiace Site. Soil contamination was determined to be extensive across the entire Mattiace Site, with "hot spots" of contamination occurring in several locations. Soil contaminants of concern and their maximum concentrations included tetrachloroethylene (410 mg/kg), trichloroethylene (37 mg/kg), xylenes (2,600 mg/kg), and 1,4-alpha chlordane (9 mg/kg). Concentrations of VOCs were generally associated with seven groups of USTs.

The RI/FS also identified severe groundwater contamination in the Upper Glacial aquifer, including a localized layer of "floating product" at the top of the groundwater table. The "floating product" consisted of approximately 15,000 gallons of a mixture of organic chemicals, including total xylenes (6% by weight), trichloroethylene (12% by weight), tetrachloroethylene (10%), and toluene (12%). Excluding the "floating product", identified groundwater contaminants of concern and their maximum concentrations included tetrachloroethylene (100 mg/L), trichloroethylene (230 mg/L), chloroform (81 mg/L), ethylbenzene (370 mg/L), xylenes (422 mg/L), methylene chloride (750 mg/L), isophorone (57 mg/L) and 1,2-dichlorobenzene (5.3 mg/L). The direction of groundwater flow in the vicinity of the Mattiace Site was determined to fan out from the southeast to the southwest direction toward Glen Cove Creek, and essentially toward many of the project parcels.

The RI/FS findings were addressed in the OUI ROD, signed in June of 1991. The selected remedy included in-situ soil vapor extraction, limited excavation of soil contaminated with pesticides, removal of all USTs, ASTs, and cisterns, and groundwater pumping and treatment. The removal of all USTs, ASTs, cisterns and associated piping was completed in the fall of 1996. The EPA completed construction of on-Site groundwater treatment and SVE systems in August of 1998. Long-term operation for both systems began in September of 1999. The groundwater treatment system and SVE system were designated as OUIII and OUIV, respectively. In addition, a temporary extraction system (OUXI) was installed to remove the "floating product", or light non-aqueous phase liquid (LNAPL), prior to operation of the SVE and groundwater treatment systems in June of 1999. Some of the contaminants detailed above are considered dense non-aqueous phase liquids (DNAPL), and as such the temporary extraction system may not have removed these contaminants.

Remedial Activities Remaining

Remedial efforts, including operation, maintenance and monitoring of the SVE and groundwater treatment systems, is ongoing at the Mattiace Site. Contaminant concentrations in groundwater decreased substantially when the pump-and-treat system first became operational, but have leveled off during sampling events over recent years. TRC 2004 states that alternative remediation strategies are currently being investigated to meet remediation goals more efficiently. Some of the ideas being considered are:

- Change the soil vapor extraction program so it focuses on the wells producing higher VOC loads;
- Operate the most productive SVE wells at a lower rate;
- Replace the thermal oxidizer with vapor phase carbon;
- Evaluate alternative treatment technologies for groundwater, such as oxidation, reductive dechlorination, and phytoremediation to be used individually or in conjunction with each other;

Remaining Areas of Concern

Recent groundwater sampling events have shown elevated concentrations of site contaminants in monitoring wells on neighboring Project site properties both to the west and south of the Mattiace Site. Concentrations of tetrachloroethene, trichloroethene, ethylbenzene and xylenes have been detected at levels above their respective standards in off-Site wells, especially in wells immediately southwest of the Site. Considering recent groundwater data and the prevailing direction of groundwater flow, it is likely that groundwater contaminants have migrated from the Mattiace Site to the south and southwest toward Glen Cove Creek. Therefore, groundwater quality beneath the Gladsky Site, Angler's Club Site, and the eastern portion of Captain's Cove has likely been impacted from the Mattiace Site. Groundwater beneath these sites should be further assessed to determine concentrations of VOCs. The NYSDEC and EPA have already required vapor mitigation in future building construction on the Captain's Cove and Li Tungsten sites due partially to their concern over this off-Site migration of VOCs from the Mattiace Site. However, VOCs have not been the focus of investigation on these sites. Therefore, actual levels of VOC contaminants in groundwater are not fully understood.

(2) Crown Dykman

Site History/Location

The Crown Dykman Site is located at 66 Herb Hill Road across from the proposed East Great Lawn. The property is approximately one-acre in size and contains a one-story cinder block and brick building. The site is bordered by Li Tungsten, Parcel A to the south and Parcel B to the west. The Site is also bordered to the north by an industrial property and to the east by Konica Minolta.

Dykman Laundry and Cleaners operated at the site from 1932 to 1975. Crown Uniform Service operated at the site from 1975 to 1983 and used both Stoddard Solvent (a petroleum-based mixture also known as varnoline) and tetrachloroethylene (PCE) during this period. Several different commercial tenants occupied the site after 1983, including auto repair businesses (F.B. Filpse Auto and Northbound Motors), S&W Cleaners, and a woodworking shop (Proyarq 4-5, Inc.). The woodworking shop reportedly stored and used various lacquers and thinners.

Current Physical Site Conditions

The building at the Crown Dykman Site is currently occupied by an auto repair facility and a commercial (water-based) cleaner. According to the NYSDEC-approved *Proposed Project Management Work Plan, March 2007*, S&W Commercial Laundry does not use solvents in their operations, and occupies approximately 6,000 square feet of the northern end of the building. A Volvo auto repair business (ARAW) occupies approximately 5,500 square feet of the southern portion of the building. There are approximately six existing groundwater monitoring wells at the site (MW1, MW-1D, MW-2, MW-3, MW-4 and MW-5).

Summary of Regulatory Involvement

In 1987, the Nassau County Department of Health (NCDH) collected a soil sample from a two foot by four foot pit located within the northeastern interior of the building at the Crown Dykman Site. The associated analytical results showed detections of PCE, 1,1,1-trichloroethane (1,1,1-TCA), toluene and xylenes. The NYSDEC provided oversight for preliminary site investigations and remedial efforts in the early-1990's. As a result of these preliminary investigations, the NYSDEC listed the site as a New York State Superfund Site and performed the investigation. On April 16, 1996, Herbhill Associates entered into a Consent Order with the NYSDEC in which Herbhill Associates agreed to perform a RI/FS and an interim remedial measure (IRM). Currently, the NYSDEC continues to oversee investigations and remedial efforts at the Site.

Remedial Activities Previously Conducted

Between 1990 and 1991, two 2,000-gallon solvent USTs, two 550-gallon USTs (contents not specified), and a 1,000-gallon gasoline UST were closed and removed from the Site. In addition to the tanks, a drum labeled "PERK" and approximately 75 to 90 cubic yards of contaminated soil were removed from the site. A RI was completed between August 1997 and July 1999. The RI indicated that floor drains in the southwestern area of the building and the former solvent tank area were potential sources of contamination. A limited remedial action was performed at the site in 2000, which included excavation of soil beneath the building floor slab and within trench and drain areas located in the southwestern

corner of the building interior, as well as the installation of sub-slab piping for a depressurization system. Subsequent soil and groundwater samples collected beneath the building slab showed concentrations of PCE above applicable standards, criteria and guidance values. To date, remedial actions and previous environmental investigations at the Crown Dykman Site have focused on the presumed contaminant source area at the southwestern corner of the building.

Remedial Activities Remaining

A Proposed Project Management Work Plan (PMWP) for Phase I of the Crown Dykman RI/FS was approved by the NYSDEC on March 14, 2007. According to the NYSDEC Project Manager for the site, the scope of work specified in the PMWP is ongoing.

The scope of work includes an on-Site and off-Site groundwater monitoring program, a soil sampling program, a vapor intrusion study, a site survey and the development of the final remedial investigation and feasibility program. Due to the proximity of the Crown Dykman Site to the former Li Tungsten Superfund Site, a radiological survey is also planned to assess the presence of low level radioactive material in the top foot of soil.

The groundwater monitoring program will include developing a monitoring well network that will potentially consist of the six on-Site monitoring wells identified in Section 3.2.2, as well as two monitoring wells located on Li Tungsten Parcel A (MP20 and GM-1) and two monitoring wells located on Li Tungsten Parcel B (GM-7 and GM-9). The PMWP also proposed installing three additional on-Site monitoring wells and one monitoring well at the entrance to Li Tungsten Parcel A, located on Herbhill Road opposite of the Crown Dykman Site.

Upon completion of the RI/FS, the NYSDEC will develop a PRAP and hold a public hearing to communicate project plans and gather public comments. Subsequently, the NYSDEC will issue a ROD describing the final remedy for the Crown Dykman Site. Recent groundwater quality data collected as part of the Crown Dykman groundwater sampling program is contained in Appendix A of the ECR. Chlorinated compounds such as PCE, TCE, DCE, vinyl chloride were reported in excess of NYSDEC GWQS in three monitoring wells west and southwest of the site. Based upon the detection in the well to the west of the site, there may be other on-Site sources of groundwater contamination in the northwest portion of Crown Dykman.

Remaining Areas of Concern

The primary area of concern relative to the Project site is the migration of groundwater contaminants, including PCE and related breakdown products, from the Crown Dykman Site to the Li Tungsten Site (specifically Parcels A and B). Although localized groundwater flow direction will be better defined during the

ongoing RI activities, the groundwater is generally flowing to the south from Crown Dykman, toward Parcel A of the Li Tungsten Site. The potential exists for VOC vapor intrusion into buildings constructed on Parcels A and B.

(3) Powers Chemco/Konica Minolta

Site History/Location

The Konica Minolta Site, also known as the former Columbia Ribbon and Carbon Manufacturing Company disposal site/Powers Chemco Site, is located at 71 Charles Street in Glen Cove, New York. The Site is bordered to the west by Li Tungsten Parcel B and is approximately 650 feet north of Li Tungsten Parcel A. In addition, the site is bordered to the south by the Gateway Properties and to the north and east by residential properties. For an undetermined period prior to 1979, Columbia Ribbon and Carbon Company (Columbia) utilized the site for the disposal of wastes generated from the production of blue printing inks, carbon paper and typing ribbon. Fifty-five (55)-gallon drums containing waste were apparently dumped into open pits at the Site. Additionally, waste was pumped directly from the Columbia plant to the pits through a two-inch galvanized pipe. Waste pits at the site are visible in an aerial photograph taken between 1950 and 1960.

Powers Chemco, Inc. (Chemco) purchased land that included the Columbia waste disposal area in 1979. In 1983, Chemco discovered the subsurface contamination at the Site while excavating in the area. This discovery resulted in investigation and remedial efforts. Powers Chemco, Inc. was renamed Chemco Technologies, Inc. in the late 1980's. The company was subsequently sold and renamed Konica Imaging U.S.A., Inc. (Konica).

Current Physical Site Conditions

The Konica Minolta Site is currently closed and contains a soil and groundwater treatment system.

Summary of Regulatory Involvement

Upon discovery of the waste disposal pits, Chemco hired Fred C. Hart Associates (FCHA) to perform a site investigation, which took place during the period between November 30, 1983 and February 3, 1984. Based on the conclusions of the FCHA investigation, Chemco presented the NYSDEC with an interim remedial plan and entered into a voluntary Order on Consent on June 8, 1984. Representatives from the NYSDEC and NCDOH provided oversight of the initial remedial activities. In 1985, the site was listed in the New York State Registry of Inactive Hazardous Waste Disposal Sites (New York State Superfund Sites) with a classification of "2", denoting a significant threat to public health or the environment. Chemco entered into a second Order on Consent with the NYSDEC

on January 16, 1986 to better define environmental impact at the Konica Site. Based on the results, Chemco developed an RI/FS work plan to examine alternatives for remediation of the site. The agreement between Chemco and NYSDEC to perform the RI/FS was incorporated into a third Order on Consent signed on April 4, 1988. The RI/FS results were subsequently used to develop a ROD in March of 1991. A fourth Order on Consent pertained to the site remedy selected by the ROD.

Remedial Activities Previously Conducted

Based upon the first Order on Consent between Chemco and the NYSDEC, interim remedial actions began on June 19, 1984 at the Konica Site. Between the start date and August of 1984, fifteen overlapping trenches were excavated. A total of 4,645 tons of contaminated soil (primarily toluene, xylenes and ethylbenzene) and debris, along with 267 mostly empty drums were removed and disposed of at an approved off-Site facility. The average depth of these excavations was 5 feet, which did not extend to the groundwater table.

An RI/FS was performed during the summer of 1988 based upon the remedial action described above and a subsequent supplemental investigation. The primary contaminants detected in soil and groundwater samples included toluene, ethylbenzene, and xylenes. The RI/FS determined that groundwater contamination was isolated to a perched groundwater unit in the disposal area, with vertical and horizontal contaminant migration confined by layers of clay and silt. Concentrations of contaminants within the disposal area were stable during separate groundwater sampling events and contaminant concentrations decreased sharply outside of the disposal area.

The selected remedy specified by the ROD for the Konica Minolta Site included the installation and operation of SVE and groundwater pump-and-treat systems to treat soil and groundwater. The system design was approved by NYSDEC on June 29, 1993 and the system constructed.

Remedial Activities Remaining

Remedial efforts, including soil and groundwater treatment, are currently in an operation, maintenance and monitoring phase. Documents show that system shutdown was requested in September of 2000; however, recent detections of elevated VOCs in groundwater at the northern edge of the site have resulted in additional investigation efforts to further define the extent of groundwater contamination.

Remaining Areas of Concern

The primary area of concern relative to the project site is the migration of groundwater contaminants, including toluene, xylenes and ethylbenzene, from the

Konica Minolta Site to the Li Tungsten Site. Although historical documents, including the ROD, state that bulk of contamination is confined to a perched groundwater unit in the disposal area, the groundwater flow is generally to the south toward the Li Tungsten Site and Gateway Properties. Moreover, any effects from the rest of the industrial operation at the Site have not been studied and the possibility of groundwater contamination with resultant VOC vapor intrusion into buildings constructed on the Li Tungsten Site and Gateway Properties as a direct result of this potential contamination is likely. The NYSDEC and EPA have requested the Developers to install vapor mitigation systems in any of the on-Site Li Tungsten buildings due to the documented groundwater contamination and would make the same requirement if Konica Minolta has contaminated groundwater in other parts of the property with offsite movement potential. The agencies have not yet reached a conclusion in relation to the reuse of the Gateway Properties because these sites have not yet been investigated.

(4) Slantfin

The Slantfin Site is located at 40 Garvies Point Road in Glen Cove, New York, across from the proposed hotel. The property was formerly operated by Fabricare and was later bought by Slantfin, which manufactures boilers, baseboard and radiant heating products. According to an EDR database search, which identified the site as "Fabric Leather Corp," the site is registered as a RCRA-Small Quantity Generator (SQG) and had numerous related violations. Several tanks that were used for the storage of plasticizers, solvents and #2 fuel oil have been documented on the site. A spill file was opened in April of 1988 as the result of a tank test failure of a #2 fuel oil tank. The tank later passed and the spill file was closed. However, spill closure does not confirm this area of the Site does not contain contamination.

Although documentation as to the existence of a plume is not available or not documented, groundwater flow in the area would be to the south towards the Captain's Cove site. If a plume is identified to extend off-Site, it would reinforce the NYSDEC and EPA existing requirement to install soil vapor mitigation systems under all buildings.

2. Potential Impacts

Remediation and monitoring would continue on sites where remediation plans are in place or remediation has been completed. The following table provides a summary of identified areas of potential or known residual contamination, which the Proposed Action would address as appropriate.

Table III.B-3
Areas of Potential or Known Remaining Impact

Site	Contaminant	Media	Details
Li Tungsten Parcel A	Semi-volatile organic compounds (SVOCs)	Soil	Residual levels in excess of cleanup standards or NYS SCOs for restricted residential
	Arsenic/Lead	Saturated Soil (below ground water)	Residual levels in excess of cleanup standards or NYS SCOs for restricted residential but generally beneath the groundwater table
	Radiological	Saturated soil/sediment (below MLW)	Residual levels in excess of cleanup standards at depths greater than 11' in areas adjacent to bulkhead (in creek)
	Volatile organic compounds (VOCs)	Groundwater	Residual groundwater concentrations in excess of Maximum Contaminant Levels (MCLs) from upgradient source.
Li Tungsten Parcel B	Polychlorinatedbiphenyls (PCBs)	Soil	Residual levels in excess of cleanup standards or NYS SCOs for restricted residential for soil. Clean fill cover must be maintained
	Arsenic/Lead	Soil	Residual levels in excess of cleanup standards at one endpoint sample location and screening data indicated some metals hot spots (enclaves of soil containing chemical(s) at a concentration that exceeds the maximum regulatory levels for the anticipated site use).
	VOCs	Groundwater	Residual groundwater concentrations in excess of Maximum Contaminant Levels (MCLs) from upgradient source
Li Tungsten Upper Parcel C	Arsenic/Lead	Soil	Residual levels in excess of cleanup standards or NYS SCOs for restricted residential at one endpoint sample location, in soil west of Dickson Warehouse and screening data indicated some metals hot spots.
	Radiological	Soil	Residual levels in excess of cleanup standards or NYS SCOs for restricted residential in the Benbow Building
Li Tungsten Lower Parcel C	SVOCs	Soil	Visual petroleum impact beneath former AST slab
	Arsenic/Lead	Saturated Soil	Residual levels in excess of cleanup standards or NYS SCOs for restricted residential in soil generally beneath the groundwater table
	VOCs	Groundwater	Residual groundwater concentrations in excess of Maximum Contaminant Levels (MCLs) from upgradient source.
Captain's Cove	SVOCs/Metals	Soil	Residual levels in excess of cleanup standards or NYS SCOs for restricted residential in the in soil that were used as backfill from on-site soils and data for off-site sources of backfill used as part of the EPA remediation are not available
	Arsenic/Lead	Groundwater	Residual levels in excess of cleanup standards or NYS SCOs for restricted residential in soil generally beneath the groundwater table

Site	Contaminant	Media	Details
	Various	Sediment	Tidal flats, tidal wetlands, sediments directly behind the bulkhead, the Retention Ponds sediment were characterized as part of the RI; however conditions should be verified now that remediation has been completed
	Landfill Waste	Debris/Other	Areas not excavated may contain landfill wastes
	VOCs	Groundwater	Residual groundwater concentrations in excess of Maximum Contaminant Levels (MCLs) from upgradient source.
Angler's	SVOCs/metals	Soil	Residual levels in excess of cleanup standards or NYS SCOs for restricted residential for soil.
	VOCs	Groundwater	Residual groundwater concentrations in excess of Maximum Contaminant Levels (MCLs) from upgradient source.
Gladsky	SVOCs/metals/PCBs/asbestos	Soil	Residual levels in excess of cleanup standards or NYS SCOs for restricted residential but
	VOCs	Groundwater	Residual groundwater concentrations in excess of Maximum Contaminant Levels (MCLs) from upgradient source.
Pumping Station	SVOCs/metals	Soil	Residual levels in excess of cleanup standards or NYS SCOs for restricted residential but
	VOCs	Groundwater	Residual groundwater concentrations in excess of Maximum Contaminant Levels (MCLs) from upgradient source.
Doxey	SVOCs/metals/pesticides	Soil	Residual levels in excess of cleanup standards or NYS SCOs for restricted residential but
	VOCs	Groundwater	Residual groundwater concentrations in excess of Maximum Contaminant Levels (MCLs) from upgradient source.
Gateway Properties	Unknown	Various	Phase I ESA identified suspected sources of contamination at these properties.

*Elevated refers to exceeding the 2006 BCP Restricted Residential standards Table 375 (6.8-b).

Recommended Phase II activities would be performed by the developer on Gateway Properties prior to acquiring the properties and prior to development. Based on historic site use and the potential for impact, the developer and the IDA plan to apply jointly for eligibility of these properties under the BCP, to manage any remediation.

Recommended Phase II Activities for Gateway Properties with the Proposed Action

Since no site inspections have been performed on the Gateway Properties to date, a detailed site inspection should be performed to locate potential additional on-Site areas of concern. Such areas should be inspected / sampled as appropriate. If the Proposed Action does not move forward it is unlikely that the recommended sampling would occur.

Creek sediments in the vicinity of the Gateway Properties should be sampled for SVOCs, PCBs, pesticides, TAL metals and radionuclides for disposal characterization purposes.

45 Charles Street (Lots 220, 320, and 659)
Soil and groundwater should be sampled for VOCs and SVOCs in the vicinity of the active and historic fuel oil tanks associated with the Windsor Fuels property.

45 Herb Hill Road (Lots 661 and 662)
Soils and groundwater in the western portion of the property associated with the former power plant / electrical substation should be sampled (at a minimum) for SVOCs, metals, and PCBs.

Groundwater samples should be collected along the western and northern property lines to screen for impacts migrating from off-site upgradient sources, such as Li Tungsten, Crown Dykman, Powers Chemco/Konica Minolta.

47 Herb Hill Road (Lot 664)
Investigate the area used by Lightning Autobody. If there is evidence of spills or the potential for spills to have occurred, soil and groundwater samples should be collected as appropriate.

49 Herbhill Road (Lot 667)
Less is known about the historic uses on this lot but the lot may be impacting by off-site groundwater plumes and should be investigated given its location.

a) Ferry Related Soil Remediation

Soil in the area where the ferry is proposed has been cleaned up to the commercial standards as required in the Record of Decision according to the Captains Cove Remedial Action Completion report (Remedial Engineering, P.C. and Roux Associates, Inc., March 2004). This should be suitable for the ferry use if no undiscovered contamination is found during site preparation.

3. Mitigation Measures

a) Site Limitations, Mitigation and Protection Measures (including process for modifying any use restrictions)

Investigation and remedial activities have identified that residual soil and groundwater impacts exist on the project site. In many instances, concentrations do not meet the cleanup objective for Unrestricted Use nor Restricted Residential land use as specified by 6 N.Y.C.R.R. Subpart 375-6.8(a) and (b) of the NYSDEC soil cleanup objective (SCO). Regulations. In some instances the concentrations do not meet the cleanup objectives the agencies set when the projects were completed as documented in the ECR. As a result, the NYSDEC and the EPA indicated that an Environmental Easement (EE) may be granted to allow for residential development on all portions of the Project site. The EE will require that a series of engineering and institutional controls be established in order to protect residents and will be based upon site specific data, e.g. soil vapor results. However, as noted above, the EE and associated Site Management Plan (SMP) is not

intended to address any additional remediation if hot spots are uncovered during site excavation work or to deal with portions of the site that do not meet current standards. The City will participate in preparing the EE and SMP.

The City has entered into discussions with the government agencies responsible for approving the proposed use of the Site with respect to the environmental conditions. The City, IDA and applicant believe that the best mechanism for addressing these issues would be a multi-agency accord that details how potential remedial issues will be addressed including remedial requirements, O&M, reporting and restrictions for all of the subject properties, as well as the creek.

Li Tungsten

The EPA requires that certain restrictions be imposed on the Li Tungsten site. These restrictions run with the real property and unless modified will be binding on parties who acquire the real property in the future. These restrictions include:

- Complete prohibition on groundwater use;
- Soil gas vapor mitigation for volatile organic compounds (VOCs) and radon. The purpose of the soil gas mitigation would be to minimize the potential for exposure to the presence of VOCs or radon still present in the subsurface soil and groundwater that might have the potential to adversely affect indoor air quality in building structures;
- A site-wide composite cover system, including 2 feet of clean soil in all vegetated areas of the site;
- A groundwater-monitoring system;
- Further evaluation of Parcel A for residential use, which EPA has already begun at the request of the City.

Captain's Cove

Currently, the NYSDEC prohibits residential use of the Captain's Cove property. However, the NYSDEC has informally stated that it will change the Class 2 Superfund status of the site and will allow for restricted residential use providing appropriate engineering and institutional controls are implemented in an SMP and EE. Primarily, this pertains to mitigating the potential for vapor intrusion, and maintaining a site-wide composite cover system. The EPA has evaluated the site for residential use and has found that the cleanup that was undertaken by EPA of the parts of the site that were used for radioactive ore residues meets residential standards for arsenic, lead and radionuclides. The use of groundwater at the site is also prohibited and will continue to be prohibited.

Angler's Club

If the underground storage tank has not been properly abandoned or removed, registration and removal are recommended.

A radiological survey is recommended due to the site's proximity to Li Tungsten and Captain's Cove.

The migration of groundwater contamination beneath the Angler's Club Site from off-Site sources may present a vapor intrusion issue and should be evaluated if buildings are proposed.

Based on the age of the Angler's Club building, the potential exists for asbestos containing material (ACM) and lead based paints. The demolition of this structure will be handled in accordance with Federal, State and local ACM and LBP regulations. Soil vapor sampling will be performed by the developer to evaluate the potential for intrusion into proposed structures. If remedial actions to address impacted soils are required, the developer proposes that the site be considered eligible for the BCP.

Gladsky Site

Areas of impacted soils and groundwater are documented relative to the Gladsky site. These include areas containing elevated concentrations of SVOCs, PCBs and metals in the soils and VOCs in the groundwater. NYSDEC issued a Preliminary Remedial Action Plan ("PRAP") in January 2006 and a ROD in March 2006 for the Gladsky property. The selected remedy includes:

- A radiological contamination survey due to the site's proximity to Li Tungsten and Captain's Cove;
- The excavation of contaminated soil above NYSDEC RSCOs (minimum of 2 feet across site) and off-site disposal;
- A site management plan which addresses residual contaminated soils that may be excavated as part of future redevelopment and the evaluation of vapor intrusion for any proposed buildings;
- Institutional control in the form of an environmental easement which restricts the use of groundwater and ensures compliance with the site management plan; and
- Periodic certification of the institutional controls by a Professional Engineer

Remedial activities have not yet begun. However, the City of Glen Cove has been approved to perform the remedial activities under the NYSDEC ERP Program, which is slated to occur in Spring 2009.

Pumping Station

Areas of impacted soils and groundwater exist on the pumping station site. These include areas containing elevated concentrations of SVOCs and metals in the soils and VOCs in the groundwater. It is also possible that contaminants associated with sanitary wastes may be present in the subsurface. Building structures are not proposed for this site. Should development be proposed, evaluation for the potential of soil vapor intrusion is warranted.

There has not been an evaluation for radiological contamination at the site. Due to the site's proximity to Li Tungsten and Captain's Cove such evaluation is warranted. Since additional actions to address impacted soils may be required, the developer and the IDA plan to apply jointly for eligibility of this site under the BCP, to manage any required cleanup.

Doxey Site

Additional delineation of contaminated soil is warranted so that the extent of remediation can be determined. In addition, it is recommended that the status of NYSDEC Spill File 92-09888 be determined. An evaluation for radiological contamination at the site is warranted due to the site's proximity to Li Tungsten.

Based on the age of the building, the potential for asbestos containing material and lead based paints exists. The demolition of this structure will be handled in accordance with Federal, State and local ACM and LBP regulations.

The existence of VOC groundwater contamination beneath the Doxey Site may present a vapor intrusion issue that should be evaluated if buildings are proposed. Additional investigation and subsequent remediation may be performed by the developer under the Brownfield Cleanup Program since other state funding programs are unfunded at this time.

4. Data Gaps

Data gaps still remaining on the property are shown in the following table. Also listed next to each gap are the ECR's recommended activities to collect the required data. Any field work implemented to collect the recommended data will follow current practices and conform to the DEC requirements. The schedule and responsible party for filling the data gaps have not been presented herein but will be determined through coordination with all the agencies in determining a comprehensive approach to the entire as mentioned at the beginning of this chapter.

Table III.B-4
Data Gaps

Site	Data Gap/Require Remediation	Recommendation
Li Tungsten Parcel A	Soil quality beneath dredge spoil stockpiles	Perform soil sampling to determine soil quality after removal of stockpiles
	Opened NYSDEC Spill File 01-00419	Investigate and address to gain closure of spill file
Li Tungsten Parcel B	Potential for isolated metals "hot spots" in soils not removed as part of EPA remedial effort	Perform soil sampling to determine soil quality
Li Tungsten Upper Parcel C	Potential for isolated metals "hot spots" in soils not removed as part of EPA remedial effort	Perform soil sampling to determine soil quality
	Potential for radiological/metals impacts in and beneath Benbow Building	Perform soil sampling and radiological survey of building
Li Tungsten Lower Parcel C	Potential for impacts under Dickson warehouse slab	Perform soil sampling under the slab
Li Tungsten All Parcels	Quality of soil used as back fill	Perform soil sampling to determine soil quality
	Potential for soil vapor	Perform soil gas and groundwater sampling
	Quality of soil under tank pads	Perform soil sampling to determine soil quality
Captain's Cove	Wetlands, tidal flats, basins	Perform sediment sampling to verify not impacted by remedial efforts
	Quality of backfill material not known	Perform sampling in proposed areas of development
	Potential for soil vapor	Perform soil gas and groundwater sampling
Angler's Club	Potential for asbestos and lead based paints based on age of building	Perform survey to identify materials/handle demolition in accordance with regulations
	Potential for soil vapor	Perform soil gas and groundwater sampling
Gladsky	NYSDEC has approved a Preliminary Remedial Action Plan	Implement PRAP
	Potential for soil vapor	Perform soil gas and groundwater sampling
Pumping Station	Potential for asbestos and lead based paints based on age of building	Perform survey to identify materials/handle demolition in accordance with regulations
	Potential for sanitary wastes beneath system piping	SMP addresses how this material may be handled
	Potential for soil vapor	Perform soil gas and groundwater sampling
Doxey	Potential for asbestos and lead based paints based on age of building	Perform survey to identify materials/handle demolition in accordance with regulations
	Opened NYSDEC Spill File 92-09888	Investigate and address to gain closure of spill file

	Potential for soil vapor	Perform soil gas and groundwater sampling
Gateway Properties	Potential for impacts from property usage	Perform a Phase II ESA
	Potential for soil vapor	Perform soil gas and groundwater sampling

Protection of Human Health for Neighboring Occupants, Residents, Construction Workers, and Visitors

The Applicant, at present, will continue to review of the existing surface and subsurface environmental data that exists in numerous environmental reports to identify data gaps and to document the existing conditions throughout the project site. The purpose of the additional data updates and discussions is to:

- Ensure that requirements and standards of regulatory agencies are met with respect to protection of the environment, public health and safety.
- Examine environmental programs on the federal, state, and local level to facilitate redevelopment including but not limited to the New York State Brownfield Cleanup Program (BCP), New York Brownfield Opportunity Area Program (BOA), New York Environmental Restoration Program (ERP), Community Development Block Grant, etc.

This analysis to date, documented in the ECR and summarized above, identifies the need for additional site investigation to fill certain data gaps; and the potential remediation of areas with soil containing chemicals that were or may have not been removed during previous efforts. The goal is to investigate any final cleanup that may be required to establish a consistent baseline of environmental conditions that will support the intended uses along with any interim and/or permanent mitigation measures that would ensure the public that the project site will be safe for the planned mixed use, residential and recreation uses. While the bulk of the remediation has been accomplished on the vast majority of the project site during a period that spanned more than a decade, some of the planned uses have changed from commercial to residential. New York State cleanup standards have changed since inception of cleanup efforts on the site and as a result, some properties do not meet current NYS standards for the proposed uses.

The timing of the data-gap investigation depends on when any multi-agency accord, as recommended by the Applicant and the IDA, is finalized. However, an appropriate amount of sampling will be done in work zones not sufficiently characterized for the purpose of preparing the site specific health and safety plans for the workers and surrounding residents.

The U.S. Environmental Protection Agency ("EPA") Region II re-evaluated the cleanup levels that were originally proposed for a commercial use in light of the revised multi-use development plan permitted by the new zoning for the area in conjunction with the level of cleanup actually achieved and concluded that site would be safe for residential use under certain restrictions (that are described in detail in the ECR. However, the accepted federal cleanup restricted residential standards, are less conservative than the new 2006 New York State regulatory cleanup standards that have been developed for residential use.

The Applicant and the IDA believe that a multi-agency accord would be the best mechanism for achieving the stated goal of consistently protecting the environment and public health and safety.

The agencies involved in the discussions include but are not limited to, EPA, DEC, N.Y.S. Department of Health, Nassau County Department of Health, Glen Cove Industrial Development Agency, and Glen Cove Community Development Agency.

The NYSDEC and USEPA have indicated that an Environmental Easement and Site Management Plan are needed for the sites to be reclassified and eligibility into the BCP considered. These documents are explained in more detail in the following sections:

a) Environmental Easement

An "Environmental Easement" (EE) will directly benefit the NYSDEC as it gives them the power to enforce their environmental requirements.

An EE is defined under New York State Environmental Conservation Law ("ECL") §71-3603 as "an interest in real property, created under and subject to the provisions of this title which contains a use restriction and/or a prohibition on the use of land in a manner inconsistent with engineering controls." An Environmental Easement is an effective and enforceable means of ensuring the performance of maintenance, monitoring or operation requirements of the Institutional Controls (ICs) and Engineering Controls (ECs).

An IC is defined in ECL 27-1405(18) as "any non-physical means of enforcing a restriction on the use of real property that limits human or environmental exposure, restricts the use of groundwater, provides notice to potential owners, operators, or members of the public, or prevents actions that would interfere with the effectiveness of a remedial program or with the effectiveness and/or integrity of operation, maintenance, or monitoring activities at or pertaining to a brownfield site."

An EC is defined in ECL 27-1405(11) as "any physical barrier or method employed to actively or passively contain, stabilize, or monitor contamination, restrict the movement of contamination to ensure the long-term effectiveness of a remedial program, or eliminate potential exposure pathways to contamination. Engineering controls include, but are not limited to, pavement, caps, covers, subsurface barriers, vapor barriers, slurry walls, building ventilation systems, fences, access controls, and/or alternative water supplies via connection to an existing public water supply, adding treatment technologies to such water, supplies, and installing filtration devices on private water supplies."

The kinds of institutional and engineering controls that are usually considered in these documents are:

- soil on the property must be covered by a barrier layer approved by the

Department such as concrete, asphalt, structures, or a minimum two (2) foot clean soil cover underlain by a demarcation barrier (e.g. geotextile) for vegetated areas;

- intrusive activities, including building renovation/expansion, subgrade utility line repair/relocation, and new construction which will cause a disturbance of the soil below demarcation barrier (e.g. geotextile) must be conducted in accordance with the Department approved Site Management Plan (SMP);
- prohibited vegetable gardens and farming;
- prohibited the use of groundwater underlying the property without treatment to render it safe for use as drinking water or for industrial purposes, and the use must first notify and obtain written approval from the Department and the Nassau County Department of Health;
- install a vapor barrier with a sub-slab vapor extraction system along with a Soil Vapor Intrusion (SVI) Investigation, conducted in accordance with the applicable guidance in effect at the time of the investigation in every new building erected;
- monitor, maintain, and replace as necessary any on-site Groundwater Monitoring Wells, and sub-slab vapor extraction systems as set forth in the Department approved SMP.

Once an environmental easement has been placed on a site, it becomes the tool to enable the State to ensure the property will remain safe and protective of human health and the environment.

b) Site Management Plan

The EE will require certain procedures to be followed during and after construction if any disturbance to the soil is done. In addition, the ECs that will be installed during construction will need to be operated, monitored and maintained (OM&M). The document that describes these procedures is called the Site Management Plan (SMP). The SMP will be adopted along with the EE. It will be implemented during site construction and post construction to manage excavated soils and mitigate exposure to soil and groundwater through a cover system, and soil vapor mitigation measures in all onsite buildings requiring same as part of building and site design. The SMP will be required to be implemented by all current and future owners and operators of the property through the EE. The SMP explains how to manage the Site in perpetuity or until extinguishment of the EE in accordance with Article 71 Title 36 of the Environmental Conservation Law and applicable regulations in 6 NYCRR Part 375. The EE must be recorded and will run with the land requiring all future owners and operators to comply with the terms in the SMP and the easement.

c) Multi-Agency Accord

It is essential that all properties meet consistent cleanup criteria and that the various regulatory agencies agree on the standards and approaches for achieving the final cleanup standards and long term management of the property from the environmental and public health protection perspectives. The Applicant and the IDA believe that the best mechanism for achieving this goal is to secure a multi-agency accord. The

multi-agency accord would assign expectations and responsibilities to the agencies and developer to manage or oversee any remediation, what standards will need to be achieved and how they will be reached; who will perform the work; and when that work will be performed.

d) Remediation Options

There are various programs that may be used to manage any unknown contamination encountered:

- Superfund: The regulators can remediate these areas through the federal or state Superfund programs either through emergency contractors or the Superfund Remediation Program
- ERP: The Environmental Remediation Program is a New York State DEC program that provides grants to municipalities for performing the entire investigation and remediation process- Phase I/II and remediation. The City has used this process on Gladsky. The ERP is an investment the DEC makes in a community that would otherwise not be able to afford the cost of the investigation and cleanup.
- BCP: The Brownfield Cleanup Program is a NYSDEC voluntary program into which a site is admitted after the application is approved by the DEC. The developer/volunteer follows a specified procedure to carry out the necessary investigations and analyses to identify the contaminants, remedy, and implement the remedy under the supervision and approval of the DEC. The volunteer receives a liability release and tax credits as incentive to offset the cost of the cleanup and the added risk of developing the brownfield property. The BCP would permit Glen Isle to perform the cleanup according to the procedures in the regulations and offset the additional cost of remediation that has not been completed by the responsible parties.
- Other Programs: Other options for addressing the issues mentioned above will be discussed with the agencies with the objective of using an approach that conforms to the regulations and achieves the goals of the project.

  The methods described above provide a strategy that will ensure existing contamination is removed according to the appropriate regulations, the construction workers, nearby and site residents and visitors to the property will not encounter any contamination, and engineering controls will be maintained and monitored to ensure they are operating according to specifications.

RXR Glen Isle will consider all of the above-mentioned methods along with any other regulatory program opportunities pursuant to the EE, SMP and Agreement that will provide the most effective means to bring the project to fruition in conjunction with optimizing the protection of human health during construction and after construction is finished. RXR-Glen Isle will endeavor to negotiate in good faith with the City IDA/CDA along with all concerned agencies to finalize the strategy

described above to ensure a clear and consistent approach that is attainable and measureable, to meet or exceed standards set forth for protection of human health and the environment.

For most of the project areas, the developers and the IDA are proposing their voluntary participation in the BCP to create and implement a final investigation and remedial program to screen soils and develop consistent final clean soil endpoints. This final surface and subsurface work will enable the public to rest assured that all remaining site conditions have been thoroughly reviewed, any remaining unremediated areas that were inadvertently left by the agencies will be removed as required by the responsible governmental agencies, and a composite site-wide cover system and vapor mitigation will be installed to make all areas of the project site safe for the proposed reuse.