PROPOSED REMEDIAL ACTION PLAN

Captain's Cove Condominiums
Operable Unit Number 03: Ferry Terminal Area
State Superfund Project
Glen Cove, Nassau County
Site No. 130032
March 2016

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

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SECTION 1: SUMMARY AND PURPOSE OF THE PROPOSED PLAN

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), is proposing a remedy for the above referenced site. The disposal of hazardous wastes at the site resulted in threats to public health and the environment that have been addressed by the Li Tungsten Operable Unit 2 (LiT OU2) Remedial Action at the site. The remedy undertaken at this site is discussed in Section 6.2.

Based on the implementation of the original remedy, the findings of the construction completion report indicate that the site no longer poses a threat to human health or the environment. The remedy conducted at the site attained the remediation objectives identified for this site, which are presented in Section 6.5, for the protection of public health and the environment. No Further Action is the remedy proposed by this Proposed Remedial Action Plan (PRAP). A No Further Action remedy may include site management, which will include continued operation of any remedial system installed during the IRM and the implementation of any prescribed institutional controls/engineering controls (ICs/ECs) that have been identified as being part of the proposed remedy for the site. This PRAP discusses the basis for No Further Action.

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

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

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all PRAPs. This is an opportunity for public participation in the remedy selection process. The public is encouraged to review the reports and documents, which are available at the following repository:

A public comment period has been set from:

03/08/20016 to 04/15/2016

A public meeting is scheduled for the following date:

March 23, 2016 7:00PM

Public meeting location:

City Hall Glen Cove

At the meeting, the findings of the construction completion report will be presented along with a summary of the proposed remedy. After the presentation, a question-and-answer period will be held, during which verbal or written comments may be submitted on the PRAP.

Written comments may also be sent through 04/15/2016 to:

Heide-Marie Dudek
NYS Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233
heidi.dudek@dec.ny.gov

The Department may modify the proposed remedy presented in this PRAP based on new information or public comments. Therefore, the public is encouraged to review and comment on the proposed remedy identified herein. Comments will be summarized and addressed in the responsiveness summary section of the Record of Decision (ROD). The ROD is the Department's final selection of the remedy for this site.

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

L Location: The Captain's Cove Condominium site (Site) is located on Garvies Point Road in the City of Glen Cove. A site boundary modification was approved by the Department in March 2016 to incorporate areas of the Li Tungsten USEPA Superfund Site identified as Areas A, A', G and G' into the definition of the Captain's Cove State Superfund (Title 3) Site. The site is located along Glen Cove Creek. Operable Unit 3 (OU3) - Ferry Terminal Area, which is the subject of this document, includes a small portion of the original Title 3 Area and Li Tungsten OU2 Areas G and G'. (see Figure 1 and 2)

Site Features and Current Zoning and Land Use: The site has been cleared of all buildings and foundations and now the City of Glen Cove is currently constructing a Ferry Terminal on the eastern portion of the site which includes the Li Tungsten Areas G and G'. The Ferry Terminal portion of the site is zoned commercial, while the remaining area has been zoned mixed use for restricted residential development.

Past Use of the Site: Historically, the site was used recreationally for boating, fishing, and swimming. Starting in the 1950's a portion of the site turned into a community dump. Municipal wastes, such as garbage, street debris, and yard waste, along with incinerator residues, wastewater treatment plant sludges, construction and demolition (C&D) debris, hazardous wastes including spent solvents, printing wastes, drums, and Li Tungsten mill tailings were dumped on the site. Disposal continued into the early 1980's. From the 1930's through 1965 the redefined site, the exception of the western end, was also used for the disposal of materials dredged from Glen Cove Creek.

Due to interest in the 1980's in redeveloping the Glen Cove Creek area, the site was the focus of several environmental investigations. These investigations identified metals in the soil exceeding background concentrations. On January 7, 1986, the NYSDEC placed the Captain's Cove Site on the New York State Registry of Inactive Hazardous Waste Disposal Sites (Registry) as a Class 2A site. The site classification was subsequently changed to Class 2 indicating substantial threat to human health or the environment.

The City of Glen Cove, the site owner at the time (Village Green Realty) wastes were placed, signed a Consent Order to perform a Title 3 remedial program to address the hazardous waste disposal. Subsequent to signing the Consent Order, Village Green Realty declared bankruptcy. The City of Glen Cove completed the work under the Consent Order. A Remedial Investigation and Feasibility Study were completed in 1999 with the Record of Decision requiring the excavation of waste to industrial/commercial standards signed in March 1999. The City of Glen Cove completed the Remedial Action in 2001.

During the Title 3 Remedial Investigation of the Captains Cove site, the City of Glen Cove identified radiological and metal contamination associated with the Li Tungsten site. The USEPA issued a Record of Decision for the Li Tungsten Operable Unit 2 in 1999 requiring the excavation of the contamination. The USEPA completed the work at Captain's Cove Condominium site in 2006.

In 2009, the City of Glen Cove received Federal Stimulus money to begin the construction of a high speed ferry terminal on the eastern portion of the site. Construction of the new ferry terminal began in 2010 and is scheduled for completion in 2016.

Subsequent to the construction of the Ferry Terminal foundation, a site boundary modification was prepared to better define the overall Captain's Cove Site and to clarify that the Li Tungsten's Areas A, A', G and G' which overlap part of the original Title 3 remediation area are included.

Site Geology and Hydrogeology: The Site is located along the northern shore of Glen Cove Creek. Soils observed at the site are similar to those observed throughout the Garvies Point Road area, the vadose zone consists of silt or silt and fine grained sand, while the saturated zone consists of sand underlain by an extensive and thick peat layer with a clay layer beneath it (observed off-site at 12- to 16-feet below ground surface).

Groundwater, which varies with tidal cycles, was encountered at the site between 7 and 10-feet below ground surface. Regional groundwater flow is in a southerly direction towards Glen Cove Creek.

Operable Units (OU): OU1: is the original NYSDEC Title 3 Area and Li Tungsten OU2 Areas A and A'. OU2 is defined as all areas of the Captain's Cove Site outside of the original Li Tungsten and Captain's Cove remedial areas. OU3 is the Ferry Terminal Area, which includes a small portion of the original Title 3 Area and Li Tungsten OU2 Areas G and G'.

OU3 is the subject of this document.

A Record of Decision was issued previously for OU1. The Department intends to issue a separate Amended Record of Decision for OU1 and a Record of Decision for OU2.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives (or an alternative) that restrict(s) the use of the site to commercial use (which allows for industrial use) as described in Part 375-1.8(g) is/are being evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the investigation to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants was completed as part of the US EPA Remedial Investigation and the 1999 USEPA Record of Decision.

SECTION 5: ENFORCEMENT STATUS

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

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

City of Glen Cove
Village Green Realty at Garvies Point, Inc.
Old Court Savings & Loan (In Receivership)
AGI-VR/Wesson Company;
Adams Carbide Corporation;
Alloy Carbide Company;
Chi Mei Corporation;
Climax Molybdenum Company;
Climax Molybdenum Marketing Corporation;
County Of Nassau, New York;
Cyprus Amax Minerals Company;
General Electric Company;
GTE Corporation;
H.C. Starck, Inc.;
Kennametal Inc.;
Kulite Tungsten Corporation:
M & R Industries, Inc.;

Minmetals Inc. /China National Metals and Minerals Import And Export Corporation;
OSRAM Sylvania Incorporated;
Philips Electronics North America Corporation;
Sandvik AB;
TDY Holdings, LLC;
TDY Industries, Inc.;
United States Department of Defense;
United States Department of the Treasury;
United States General Services Administration

On March 18, 1997, the City of Glen Cove (the site owner at the time wastes were placed), Village Green Realty at Garvies Point, Inc. (the then owner) and Old Court Savings & Loan (In Receivership) signed a Consent Order to perform a Title 3 RI/FS to address the hazardous waste disposal. Subsequent to signing the Consent Order, Village Green Realty at Garvies Point, Inc. declared bankruptcy. The City of Glen Cove completed the work under the Consent Order.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

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

The following general activities are conducted during an RI:

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

The analytical data collected on this site includes data for:

- groundwater
- soil

6.1.1: Standards, Criteria, and Guidance (SCGs)

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

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

6.1.2: RI Results

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

Arsenic, lead, Radium-226 and Thorium-232.

Based on the investigation results, comparison to the SCGs, and the potential public health and environmental exposure routes, certain media and areas of the site required remediation. These media were addressed by the remedial action summarized in Section 6.2. More complete information can be found in the Li Tungsten Remediation Summary Report.

6.2: Interim Remedial Measures

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

The IRM mandated by the USEPA September 1999 Li Tungsten Record of Decision (ROD) for the remediation of mill tailings and associated contamination at Captain's Cove was completed in 2005. The IRM required the excavation of soil contaminated above the cleanup levels as established under the EPA ROD; segregation of radionuclide-contaminated soil and non-radionuclide soil contaminated with arsenic and lead, offsite disposal of all contaminated soil at appropriately licensed or permitted facilities and a site cover of site structures such as buildings, pavement, sidewalks or two-feet of clean fill. Between 2001 and 2003, the USEPA excavated approximately 1.5 acres within Areas G and G' to depths ranging from 3 to 14 feet below grade. Confirmation sampling confirmed the remedial objectives were achieved.

In 2010, as part of the Ferry Terminal Construction, the original bulkhead and associated tie-backs was removed in accordance the approved Site Management Plan and replaced with a new bulkhead to allow the new marina.

6.3: Summary of Environmental Assessment

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

The Fish and Wildlife Resources Impact Analysis (FWRIA) for OU 03, which is included in the 1999 Captain's Cove RI report, presents a detailed discussion of the existing and potential impacts from the site to fish and wildlife receptors.

Soil: Remediation to commercial standards is complete. Prior to remediation, hazardous waste disposal had contaminated the site with metals and radionuclides. Contaminants of concern in the soil included arsenic, lead, radium-226, and thorium-232.

Groundwater: In accordance with the original Captain's Cove and Li Tungsten RODs, groundwater monitoring has continued to evaluate groundwater attenuation for semi volatile organic compounds (SVOCs) and metals. Although, the SVOCs 2-methylnatphalene, acenapthalene, fluorine, naphthalene, and phenanthrene and volatile organic compound (VOC) chlorobenzene continue to be detected above the site SCGs, overall concentrations continue to decrease. The additional VOCs detected are indicative of a petroleum spill located near the north-western section of OU2. Metals however have not shown expected reductions leading to the development of the site-specific excavation criteria.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

People may come into contact with contaminants in soils in OU-1 and OU-2 by walking on the site, digging or otherwise disturbing the soils. Measures are in place to prevent contact with residual soil contamination in OU-3. People are not drinking the contaminated groundwater because the area is served by a public water supply not affected by this site. Volatile organic compounds in the groundwater may move into the soil vapor (air spaces within the soil), which in turn may move into overlying buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Because the site is vacant, the inhalation of site-related contaminants due to soil vapor intrusion does not represent a current concern. The potential exists for people to inhale site contaminants for any future on-site redevelopment or occupancy.

6.5: Summary of the Remediation Objectives

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

Based on the RI and Remedial Construction Summary data the Remedial Action Objectives (RAOs) for the site are:

Groundwater

RAOs for Public Health Protection

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

RAOs for Environmental Protection

- Restore groundwater aquifer to pre-disposal/pre-release conditions, to the extent practicable
- Remove the source of groundwater or surface water contamination

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Soil Vapor

RAOs for Public Health Protection

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

SECTION 7: SUMMARY OF PROPOSED REMEDY

Subsequent to the construction of the Ferry Terminal foundation, a site boundary modification was prepared to better define the overall Captain's Cove Site and clarify that the Li Tungsten's Areas A, A', G and G', which overlap part of the original Title 3 remediation area, are included. With the boundary modification Operable Unit 3 was defined as the Li Tungsten G and G' Area. In 1999, the USEPA issued a Record of Decision for Areas G and G' requiring the remediation of Li Tungsten radiological and metals contaminated waste. The State concurred with the ROD. With the remedial elements completed and based on the soil remediation completed as part of the bulkhead construction the Department is proposing No Further Action as the remedy for the site. This No Further Action remedy includes the implementation of ICs/ECs as the proposed remedy for the site. The Department believes that this remedy is protective of human health and the environment and satisfies the remediation objectives described in Section 6.5.

The proposed remedy consists of the elements of the IRM already completed, as described in section 6.2, and the institutional control listed below:

1. **Institutional Controls:** Imposition of an institutional control in the form of an environmental easement that will require: (a) require the site owner to complete an submit to the Department a periodic certification or institutional and engineering controls in

accordance with Part 375-1.8 (h)(3); (b) allow the use or the use and development of the property to commercial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws; (c) restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by NYSDOH; and (d) compliance with the Department approved Site Management Plan.

2. Site Management: Require a Site Management Plan, which includes the following:
   - an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
     - Institutional Controls: The environmental easement discussed in element 4 above.
     - Engineering Controls: The soil cover listed above in element 3.

   - Any remaining contamination and the depth of contamination that will be managed under the SMP Plan will be delineated on a Site Plan/Survey

   - This plan includes, but may not be limited to:

     1. An excavation plan which details the provisions for management for future excavations of remaining contamination. Details shall include, but are not limited to:
        a. All soil disturbed during redevelopment or site management will need to be handled in accordance to the approved excavation plan.
        b. all soil excavated during development that exceeds the removal criteria defined in element 1 above must be disposed of offsite at an appropriate facility.
        c. All excavated material that will be used onsite must be sampled in accordance with DER 10 for Backfill.

     2. A provision, should redevelopment occur, to ensure no soil exceeding protection of groundwater concentrations as defined in Part 375.6.8 (b) will remain below storm water retention basin or infiltration structures

     3. A provision for evaluation of the potential for soil vapor intrusion in future buildings developed onsite, including provision for implementing actions recommended to address exposures related to soil vapor intrusion.

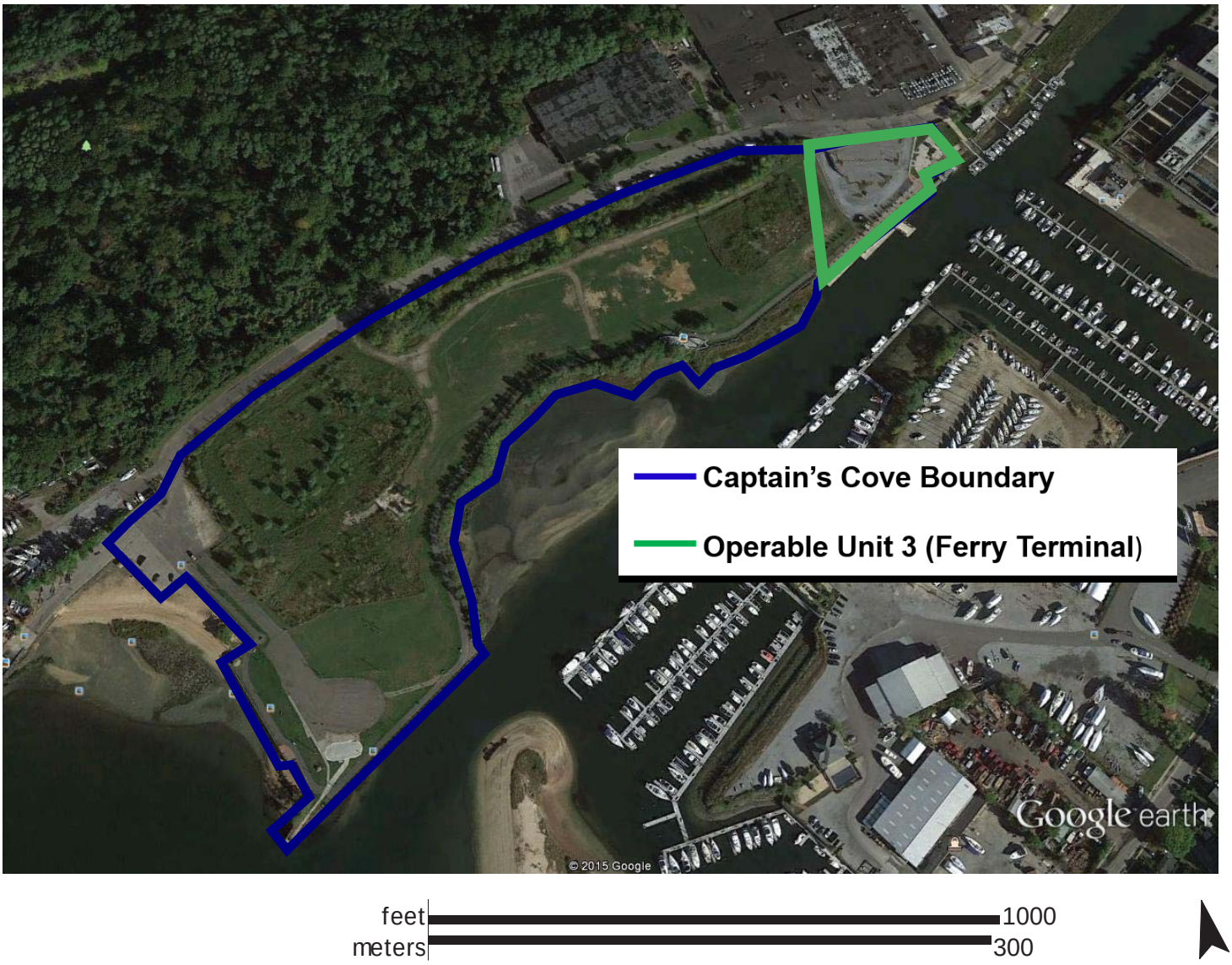
     4. A provision for the management and inspection of the identified engineering controls;

     5. Maintaining site access controls and Department notification;

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

7. Descriptions of the provisions of the environmental easement including any land use and/or groundwater use restrictions.

8. A monitoring Plan to assess the performance and effectives of the remedy. The plan includes, but may not be limited to:
   i. Monitoring of groundwater to assess the performance and effectiveness of the remedy;
   ii. A schedule of monitoring and frequency of submittals to the Department;
   iii. Monitoring for vapor intrusion for any occupied existing or future buildings developed on the site, as may be required by the Institutional and Engineering Control Plan discussed above.



feet 1000
meters 300

FIGURE 1 Site Boundary

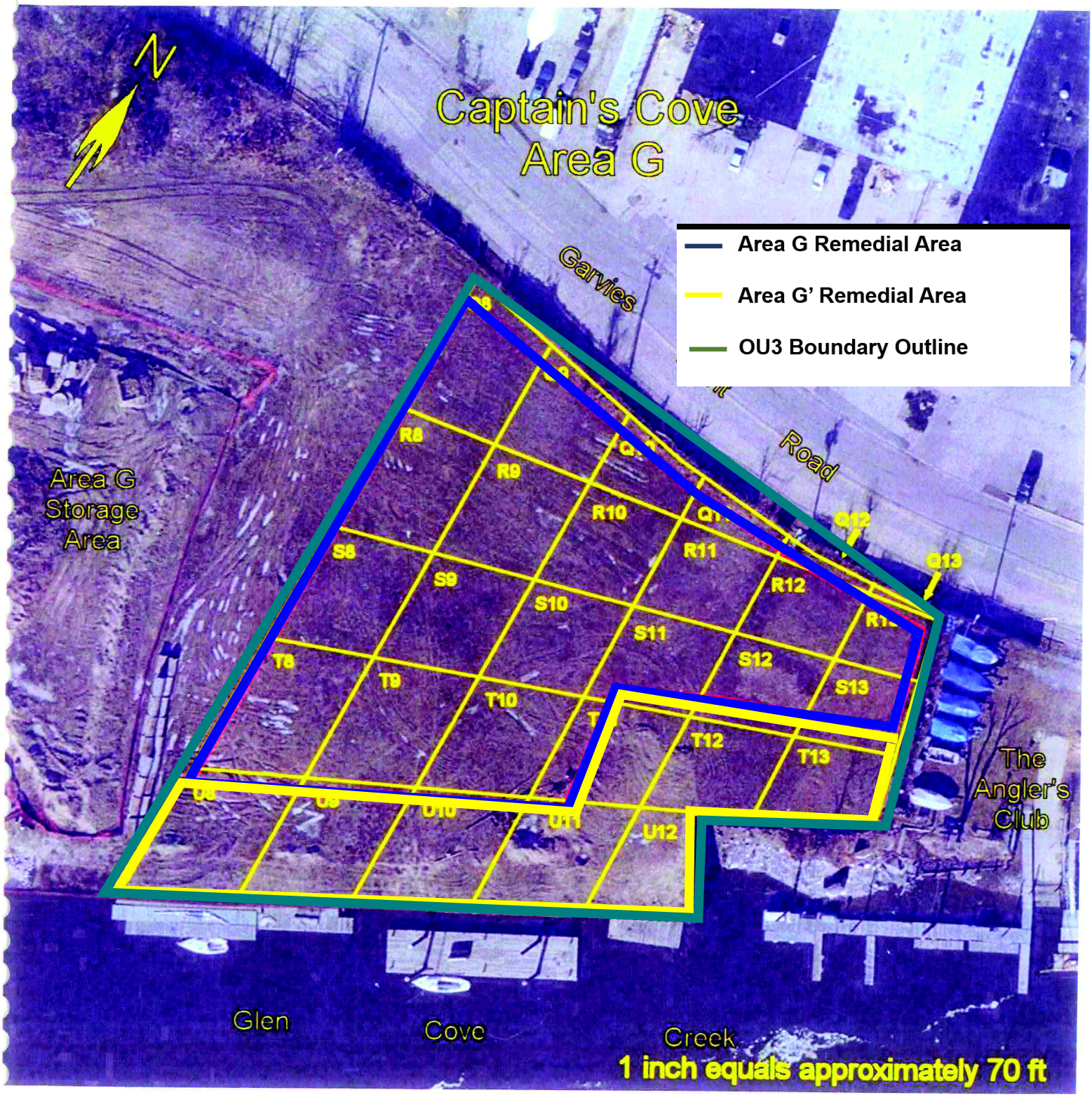


Figure 2: EPA Areas G and G'