

DECISION DOCUMENT

Yaphank (LIRR)
Voluntary Cleanup Program
Yaphank, Suffolk County
Site No. V00384
May 2014



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

DECLARATION STATEMENT - DECISION DOCUMENT

Yaphank (LIRR)
Voluntary Cleanup Program
Yaphank, Suffolk County
Site No. V00384
May 2014

Statement of Purpose and Basis

This document presents the remedy for the Yaphank (LIRR) site, a voluntary cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and applicable guidance.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Yaphank (LIRR) site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the remedy are as follows:

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

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

2. Consolidation/Capping

Soils which exceed residential cleanup objectives will be excavated from an off-site parcel to the

south of the site to meet residential cleanup objectives. Soils will be excavated from the east and west of the site and from properties off-site to the southeast and east to provide space for the cover to be placed over the site related fill (described below in Paragraph 3). The soils excavated from these areas will be consolidated on-site above the water table and capped. The consolidation area will be located in the western portion of the site and an engineered cap system designed, constructed and maintained in conformance with the substantive requirements of 6 NYCRR Part 360 solid waste regulations will be placed over the approximately two acre consolidation area.

Approximately 3,300 cubic yards of soil will be excavated from about a two acre area of the site and about 6,200 cubic yards will be excavated from about a 3.7 acre area adjacent to the site. The excavation will take place at these areas until documentation sampling shows the excavation has removed all soil as defined above requiring consolidation on-site. Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be imported to replace the excavated soil and establish the designed grades at the site.

3. Cover System

An on-site cover of about two acres will be required to cover the site related fill not capped as described above. Additionally, an off-site cover of about 3.5 acres on the commercial (asbestos transfer facility) and industrial (concrete mixing facility) property to the east and southeast of the site will be required to cover the site related fill not consolidated under the cap. The active off-site businesses will be able to continue to operate with the cover overlaying 15-20 feet (depth) of site related fill. The on-site and off-site covers will be maintained and monitored in accordance with the site management plan. The cover will consist either of the structures such as existing buildings, pavement, concrete, aggregate or a soil cover in areas where the surface soil will exceed the applicable soil cleanup objectives (SCOs). Where the soil cover is required it will be a minimum of one foot of soil, meeting the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d) for the appropriate intended use. The soil cover will be placed over a demarcation layer, with the upper six inches of the soil of sufficient quality to maintain a vegetation layer. Any fill material brought to the site will meet the requirements for the identified site use as set forth in 6 NYCRR Part 375-6.7(d).

4. Imposition of an institutional control in the form of a deed restriction for the controlled property that:

- requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8(h)(3);
- allows the use and development of the controlled property for industrial uses as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH; and
- requires compliance with the Department approved Site Management Plan.

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

A. 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 institutional controls will require compliance with the Site Management Plan for the LIRR property, and the off-site properties and will include the controls described in Paragraph 4 above.

Engineering Controls: The engineering controls include the Consolidation/Capping and the Cover System discussed in Paragraphs 2 and 3.

This plan includes, but may not be limited to:

- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
- descriptions of the provisions of the deed restriction including any land use and groundwater use restrictions;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

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

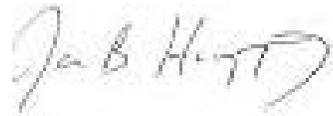
- monitoring of groundwater and the integrity of the cap system and storm water management system to assess the performance and effectiveness of the remedy; and
- a schedule of monitoring and frequency of submittals to the Department.

C. a Maintenance Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any physical components of the remedy. The plan includes, but is not limited to:

- maintenance of the groundwater monitoring wells, the cap system, and the storm water management system as well as providing the data for any necessary permit or permit equivalent reporting;
- maintaining site access controls and Department notification; and
- providing the Department access to the site and O&M records.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.



May 27, 2014

Date

James B. Harrington, PE, Director
Remedial Bureau A

DECISION DOCUMENT

Yaphank (LIRR)
Yaphank, Suffolk County
Site No. V00384
May 2014

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The Voluntary Cleanup Program (VCP) is a voluntary program. The goal of the VCP is to enhance private sector cleanup of brownfields by enabling parties to remediate sites using private rather than public funds and to reduce the development pressures on "greenfields." This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

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

MASTICS-MORICHES-SHIRLEY-COMMUNITY LIBRARY
Attn: Reference Librarian
407 WILLIAM FLOYD PARKWAY
SHIRLEY, NY 11967-3492
Phone: 631-399-1511

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program,

Brownfield Cleanup Program, Voluntary Cleanup Program, and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at <http://www.dec.ny.gov/chemical/61092.html>

SECTION 3: SITE DESCRIPTION AND HISTORY

Location: This site lies along the railroad tracks east of the hamlet of Yaphank, in the Town of Brookhaven. The site is south of the rail road tracks immediately east of River Road.

Site Features and Land Use: The site is about four acres in area. The site has no structures and is fenced off from trespassers. The site is zoned for transportation with adjacent properties zoned for industrial, commercial, and residential uses.

Past Use of the Site: This site was used by the Long Island Railroad from the 1950s until the 1970's as an unauthorized disposal area of contaminated fill and debris. Soil and groundwater samples were collected from the site in the early 1990's. A Preliminary Site Assessment (PSA) was conducted in 1998/99. The results of the PSA indicated that fill disposed of at the site had also extended to off-site areas. The site entered into the Voluntary Cleanup Program in 2002.

Site Geology and Hydrogeology: The fill material disposed of at the site is up to 25 feet thick and overlays the native soils consisting of sands, gravels, and clays to a depth of approximately 1700 feet below grade. The groundwater is about 10 to 30 feet below grade depending on the surface elevation and flows to the south-southwest.

A site location map is attached as Figure 1.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, at a minimum, alternatives (or an alternative) that restrict(s) the use of the site to industrial use as described in DER-10, Technical Guidance for Site Investigation and Remediation were/was evaluated.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

SECTION 5: ENFORCEMENT STATUS

The voluntary cleanup agreement is with a responsible party. The agreement requires the party to address on-site and off-site contamination. Accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

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

LEAD

ARSENIC

COPPER

ZINC

The contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil

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

IRM - soil removal

In the summer of 2007 the volunteer removed about 870 cubic yards of metals contaminated soil from an off-site area southwest of the site. The removal took place from a drainage ditch area of about 17,000 square feet adjacent to River Road. The removal of this soil and restoration of the land surface met residential soil cleanup objectives on this vacant residential property. The IRM also included upgrades to the site fencing and applied a stone/recycled concrete aggregate cover to a portion of the site adjacent to the tracks to mitigate exposures. The construction completion report was approved on June 22, 2009.

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 RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination: Based on the investigations conducted to date the primary contaminants of concern are metals including lead, arsenic, copper, and zinc. The primarily impacted media is soil (contaminated fill disposed onto the site). The contaminants in the fill exceed soil cleanup objectives (SCOs) throughout the majority of the four acre site. Contaminated fill also exceeds the SCOs on the adjacent off-site residential, commercial, and industrial properties to affect an area of about 7.5 acres. The contaminated fill area does not extend west beyond River Road and does not extend east beyond Moriches Middle Island Road. The contaminated fill is not more than 240 feet south of the railroad tracks. The contaminated fill is up to 25 feet thick in some locations but is separated from the groundwater surface by about five to ten feet of native soils. Lead exceeded drinking water standards in one on-site groundwater monitoring well, but did not exceed drinking water standards off-site. More information regarding the site can be found in the documents placed in the Site Document Repository.

Special Resources Impacted/Threatened: The FWRIA, Part 1 Resource Characterization did not identify any threats to fish and wildlife resources. Additionally the site is not within the Carmans River Corridor and is not within a regulated wetland area. Off-site groundwater (including groundwater in the direction of the Carman's River) has not been impacted by site-related contaminants.

6.4: Summary of Human Exposure Pathways

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

The site is completely fenced, which restricts public access. However, persons who enter the site could contact contaminants in the soil by walking on the site, digging or otherwise disturbing the soil. People are not coming into contact with the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination.

6.5: Summary of the Remediation Objectives

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

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.

RAOs for Environmental Protection

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

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.

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation.

The selected remedy is referred to as the Consolidation/Capping and Covering remedy.

The elements of the selected remedy, as shown in Figure 2, are as follows:

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

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requirements of 6 NYCRR Part 375-6.7(d) will be imported to replace the excavated soil and establish the designed grades at the site.

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- requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8(h)(3);
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- requires compliance with the Department approved Site Management Plan.

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- an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
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- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

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

- monitoring of groundwater and the integrity of the cap system and storm water management system to assess the performance and effectiveness of the remedy; and
- a schedule of monitoring and frequency of submittals to the Department.

C. a Maintenance Plan to ensure continued operation, maintenance, optimization, monitoring, inspection, and reporting of any physical components of the remedy. The plan includes, but is not limited to:

- maintenance of the groundwater monitoring wells, the cap system, and the storm water management system as well as providing the data for any necessary permit or permit equivalent reporting;
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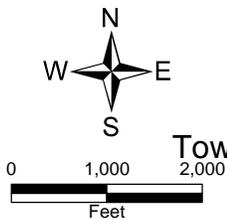
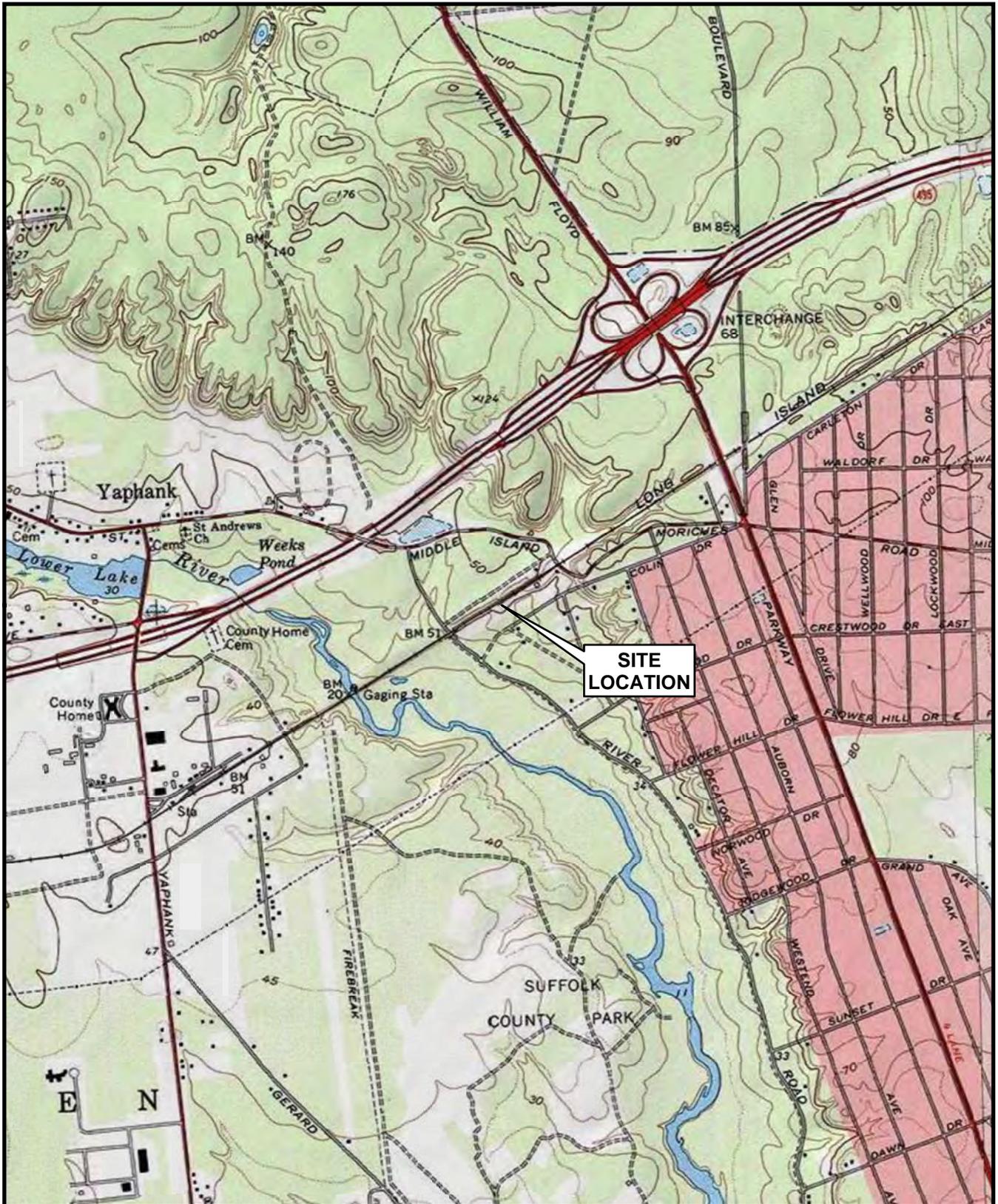


Figure 1
 Site Location Map
 Yaphank (LIRR)
 Town of Brookhaven, Suffolk County
 Site No. V00384



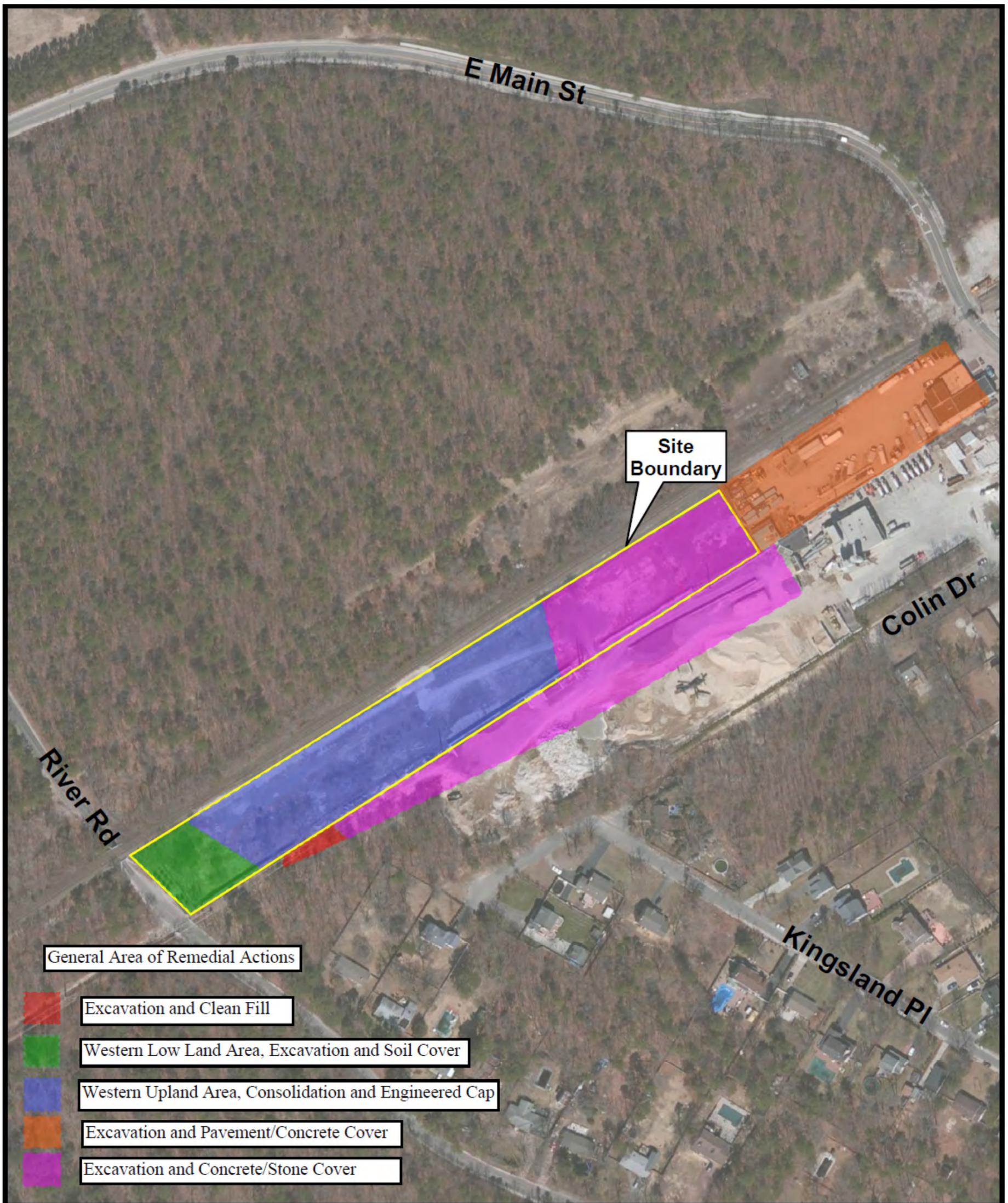


Figure 2

Remedial Action Areas

Yaphank (LIRR)
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