

VOLUNTARY CLEANUP PROGRAM DECISION DOCUMENT

CE-East 115th Street MGP Site New York, New York County Site No. V00540 September 2009

Statement of Purpose and Basis

This Voluntary Cleanup Program (VCP) Decision Document presents the remedy identified by the Department of Environmental Conservation (Department) for the CE-East 115th Street Former Manufactured Gas Plant (MGP) site.

Description of the Site

This 5.5 acre site is located west of the FDR Drive and south of East 116th Street. A manufactured gas plant (MGP) operated on the site between 1895 and 1936. The MGP came under the ownership of Consolidated Edison Company of New York, Inc. (Con Edison), which retains liability for the contamination produced by MGP operations. The site is currently occupied by a school, which was constructed in 1941 and which currently houses the Manhattan Center for Science and Math and the Isaac Newton Junior High School for Science and Math (hereafter referred to as the school). The attached Figures 1 and 2 show the location of the site and current site features, as well as the former MGP structures.

Nature and Extent of Contamination

Soil and groundwater contamination was identified by the Remedial Investigation (RI) at this site. This contamination represents a threat to public health and the environment, requiring a remedial program to address the contamination identified below.

Nature of contamination: The RI identified the presence of coal tar in the subsurface soil. Contaminants of concern in the tar include polycyclic aromatic hydrocarbons (PAHs) and the volatile compounds benzene, toluene, ethylbenzene and xylene (BTEX). These contaminants are found in the tar itself, and in soils and groundwater nearby.

Additional contaminants not associated with coal tar were also identified in the subsurface soil and groundwater. These contaminants, including tetrachlorethene, trichlorethene, acetone and 1,2-dichloroethene, are believed to be derived from a potential off-site source, unrelated to the former MGP.

Extent of contamination: Significant amounts of MGP tar, a non-aqueous phase liquid (NAPL), are present in the foundation of a former MGP structure called a "relief holder". This foundation was left behind when the gas plant was demolished, and is now located under the foundation of the school building. Some tar has migrated from this structure into the surrounding soils. Under the school, the area of contamination is confined to the southern portion of the site, however contamination spreads out in the subsurface as it moves to the east, and is present from 10 to 40 feet below the ground surface. Contamination from the site has moved through the subsurface eastward under the adjacent Harlem River. The contamination under the river is not exposed on the river bottom, and is covered by at least 14 feet of sediment that is not impacted by the MGP site.

Groundwater in the immediate vicinity of MGP tars has been contaminated by MGP related chemicals. However, groundwater contamination does not extend significantly beyond the extent of the tar. The non-MGP related chemicals noted above were found in groundwater in areas to the west and north-west of the school building.

Extensive soil vapor and indoor air monitoring has been conducted in the school building. There is no evidence that subsurface vapors are entering the school. While elevated levels of both MGP related and non-MGP related chemicals were observed in the soil vapor below the concrete floor of the school, soil vapors are not entering the school building under current conditions.

Description of the Selected Remedy

Based on the information provided in the Alternatives Analysis Report, the draft Site Management Plan and the criteria identified for evaluation of alternatives, the Department has selected the remedy for this site. The components of the remedy are as follows:

1. Installation of approximately 500 linear feet of a low permeability subsurface barrier wall along the FDR Drive (see the attached Figure 3). The barrier wall will extend downward into bedrock, to prevent further movement of coal tar from the site. Construction materials and techniques will be established during the remedial design. Tar will be collected and monitored to prevent migration through or around the barrier wall. Groundwater will be monitored and controlled to prevent groundwater mounding behind the wall.
2. Excavation of areas outside the school building where significant contamination has been observed at shallow depths (see the attached Figure 3). The excavation will, at a minimum, remove materials impacted by MGP contamination which are above the water table and which would represent exposure risk or odor nuisance. The excavation will extend below the water table where additional visible contamination can be excavated without dewatering or extensive engineering support. The proposed excavation area will be further defined by test borings and/or test pits as part of the remedial design, and will be extended as dictated by this delineation, as limited by the existing roadway, retaining wall, etc. In addition, any source material encountered during installation of the barrier wall will be excavated and removed. Excavated soil will be transported off-site to an appropriately permitted treatment or disposal facility. A demarcation barrier will be placed at the limit of the excavation to indicate the extent of where clean soil has been backfilled. All excavation will be completed in a manner which will control dust, vapors or nuisance odors.
3. Installation of a sub-slab depressurization system beneath the school foundation slab. The system will provide a negative pressure below the building to prevent soil vapor from entering the building in the future.
4. Imposition of an institutional control, in the form of a deed restriction, which will require: a) compliance with the approved site management plan, including notification of Con Edison and the Department if the building's use as a school is either permanently ended or temporarily suspended (e.g. major renovations); b) restricting the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by NYSDOH; and c) completion of a periodic certification of institutional and engineering controls, submitted to the Department.

5. Development of a site management plan (SMP) which will: a) require that any soil excavated during future activities will be tested and properly handled in a manner acceptable to the Department to protect the health and safety of workers, the school population and the nearby community; b) require monitoring of groundwater and sediment; c) provide for the continued proper operation and maintenance of the components of the remedy including operation of the sub-slab depressurization system, the barrier wall, and the hydraulic control or NAPL collection associated with that barrier wall; and d) completion of a periodic certification of institutional and engineering controls, to be submitted to the Department.

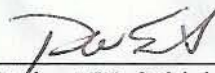
While the property remains active with students attending classes, further remediation of the site using currently available technology has been determined not to be feasible. However, should the building's use as a school either be permanently ended, or temporarily suspended (e.g. major renovations), the SMP for this property will require Con Edison to reevaluate alternatives for the site to determine if the change in the on-site activity would allow additional measures to be taken to decrease the volume, toxicity, or mobility of the remaining MGP source material. The SMP will contain a reopener clause, which preserves Con Edison's obligation to address the remaining source material on the site. In addition, there will be a requirement to assess new remedial technologies every 10 years to determine if a remedial technology has become available that could be effectively implemented.

6. The property owner and/or responsible party will provide a periodic certification of institutional and engineering controls, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department notifies the property owner in writing that this certification is no longer needed. This submission will: a) contain certification that the institutional controls and engineering controls constituting the remedy remain effectively in place and are either unchanged from the previous certification or are compliant with Department-approved modifications; b) allow the Department access to the site; and c) state that nothing has occurred that would impair the ability of the control to protect public health or the environment, or constitute a violation or failure to comply with the site management plan unless otherwise approved by the Department.

Declaration

The selected remedy is protective of human health and the environment for the project identified by the Voluntary Cleanup Agreement for the site. It complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action and will allow for the identified use of the site.

September 2, 2009
Date



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

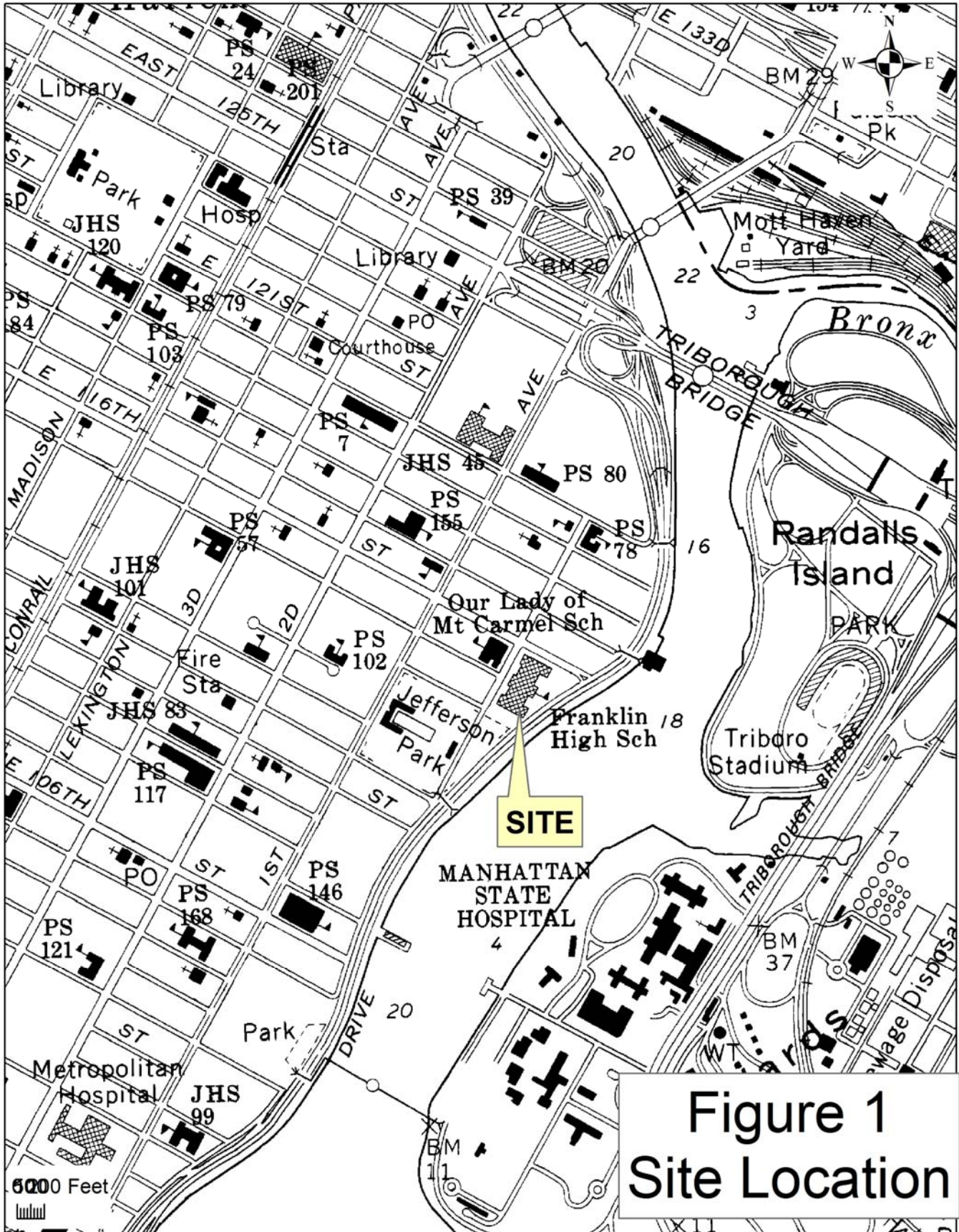
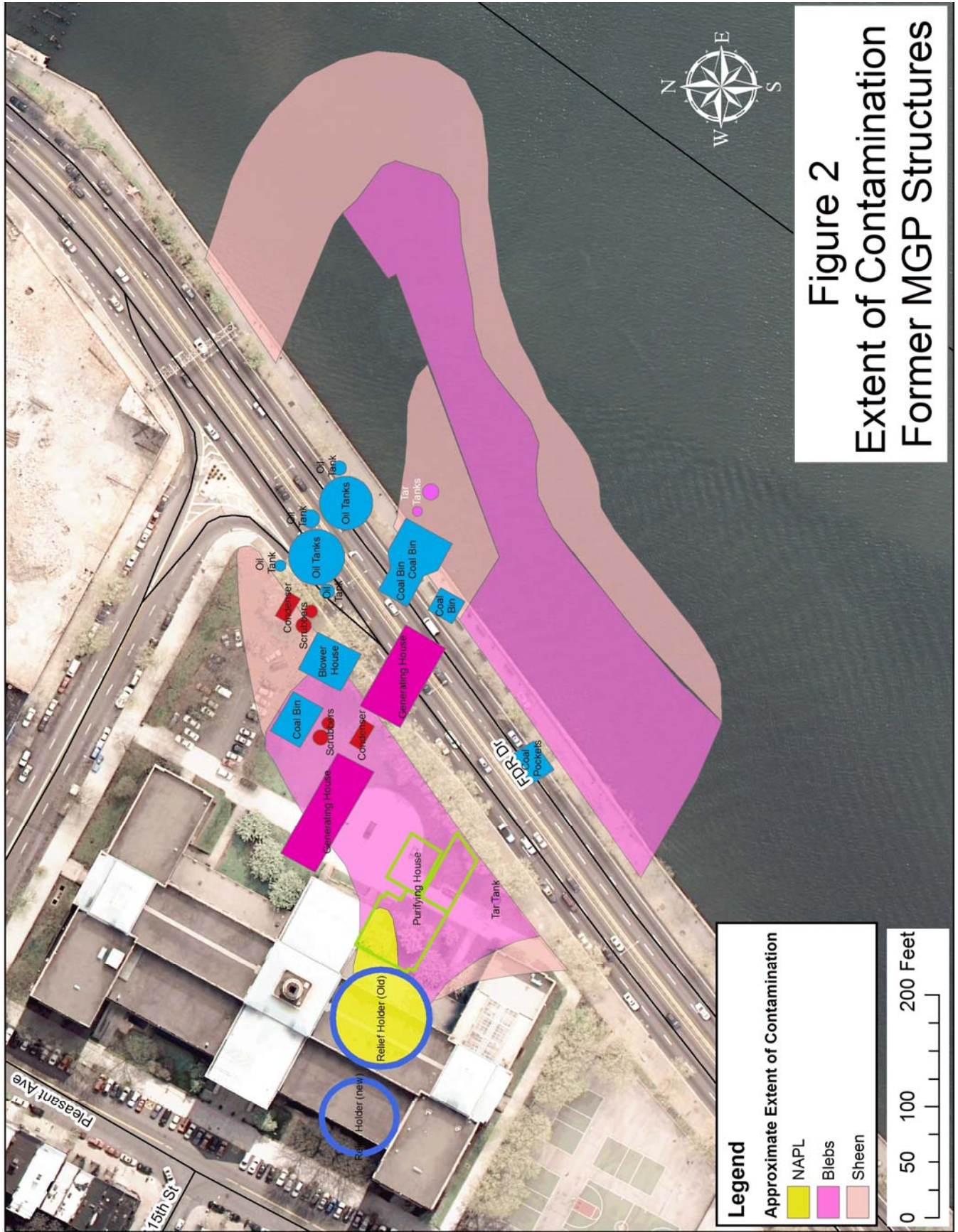


Figure 1
Site Location



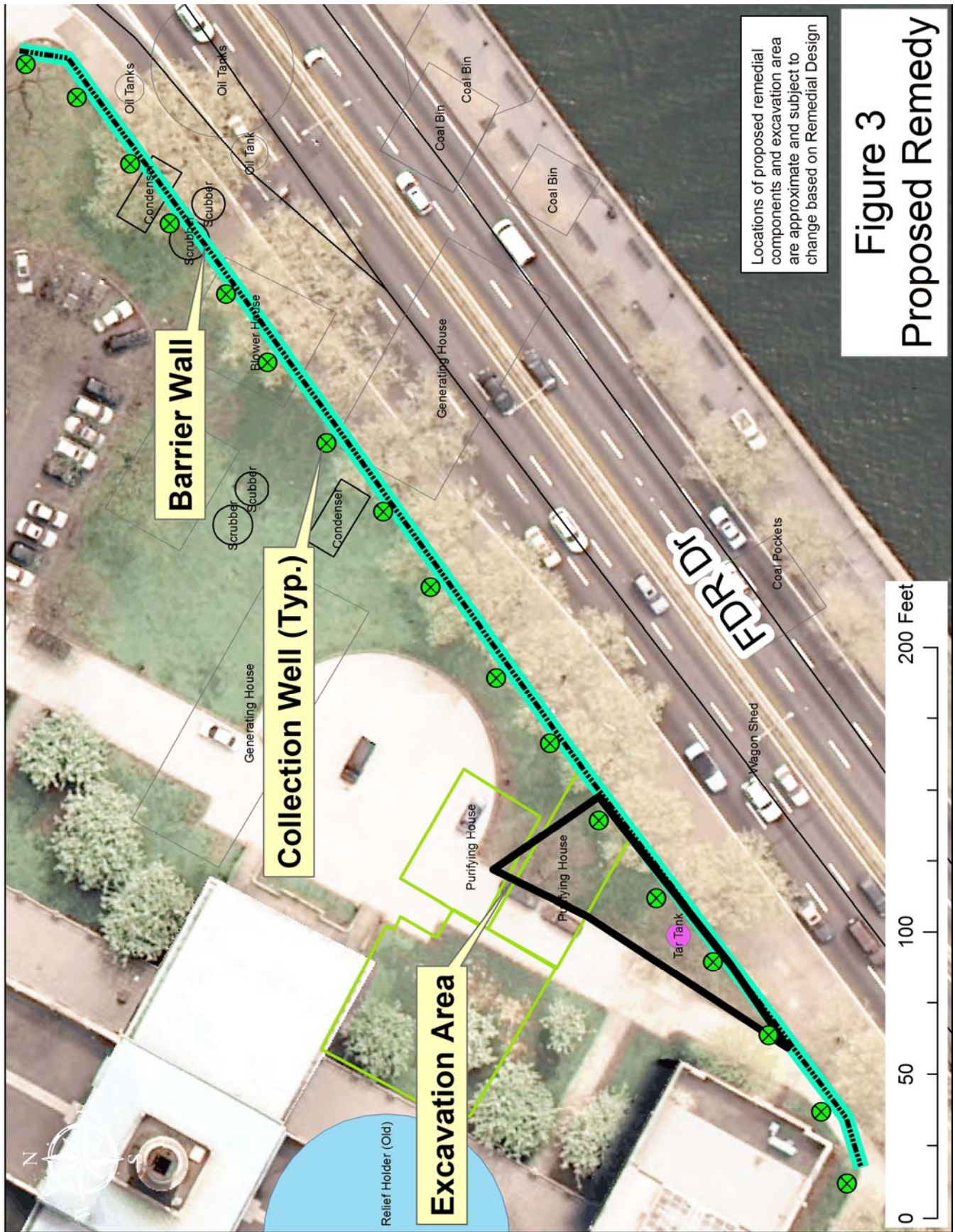


Figure 3
Proposed Remedy