



FACT SHEET Voluntary Cleanup Program

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Site Name: Port Ivory Site (Former P & G) Site 3
DEC Site #: V00675
Address: 40 Western Avenue
Staten Island, NY 10303

Have questions? See "Who to Contact" Below

Remedy Proposed for Voluntary Cleanup Site Contamination; Public Comment Period Announced

The New York State Department of Environmental Conservation (NYSDEC) has released a proposed cleanup plan for the Port Ivory Site 3 (Former P & G) Site 3 ("site") located at 40 Western Avenue, Staten Island (Richmond County) NY. Please see the map for the site location. Documents related to the cleanup of this site can be found at the location(s) identified below under "Where to Find Information."

How to Comment

NYSDEC is accepting written comments about the proposed plan for 30 days, from February 1, 2016 through March 1, 2016. The proposed plan is available for public review at the location(s) identified below under "Where to Find Information." Please submit comments to the NYSDEC project manager listed under Project-Related Questions in the "Who to Contact" area below.

Draft Remedial Action Work Plan

The cleanup plan is described in the Remedial Action Work Plan". The proposed remedy consists of:

- A site cover at Areas 3A and 3B that will consist of impervious surfaces (existing buildings, asphalt or concrete) or at least one foot of gravel or clean fill with vegetative cover.
8-foot high fencing at the inactive construction and demolition (C&D) landfill that is not being proposed for redevelopment.
In addition to wells where Light Non-Aqueous Phase Liquid (LNAPL) has been recovered during Interim Remedial Measures (IRM), new wells at Area 3A and 3B, to monitor and recover any light non-aqueous phase liquid (LNAPL) that reappears will also be installed.
A Deed Restriction to limit site use to commercial, restrict use of site groundwater as source of potable water, submission of periodic reports and to ensure compliance with the site management plan.
A Site Management Plan.

Interim Remedial Measures Completed

- The 2006 IRM consisted of excavating LNAPL impacted soil and vector truck pumping of LNAPL. An IRM is an action that is conducted at a site relatively quickly to reduce the risk to human health and the environment from defined hazardous substances. This was done at targeted areas at the site. The IRM resulted in the removal of about 1,600 cubic yards of LNAPL-impacted soil and about 22,000 gallons of LNAPL/water from eight areas/trenches. However, LNAPL remained in some areas.

- The 2013 IRM addressed three areas (Area F, AOC-TT-4 and AOC-EM-7A) where LNAPL impacted soil and mobile LNAPL were removed and disposed off-site. 26,224 gallons of LNAPL/groundwater were removed from the excavated areas via a vacuum truck. About 171 tons of soil were excavated and disposed off-site.

*Additional Details*

Three pipelines and easements traverse the site.

- An inactive pipeline, previously owned by Tidewater Pipeline Co Ltd, extends in a north-south direction through the center of Area 3A. The pipeline continues in a northerly direction across Richmond Terrace and through the southeast corner of Area 3B.
- A second pipeline, maintained by Exxon-Mobil, runs in an east-west direction at the southern edge of Area 3B along Richmond Terrace.
- The third pipeline, owned by Spectra Pipeline, was recently installed in 2013. It runs along the western edge of Area 3A in a north-south direction.

*Summary of the Investigation*

Investigations at the site were conducted from 1992 to 2007, with the following findings.

- Soil at the site was primarily impacted by metals (arsenic, barium, copper, nickel and lead) and volatile organic compounds (benzene, 2-butanone, pentachlorophenol) and semi-volatile compounds (polycyclic aromatic hydrocarbons), as a result of historic fill materials.
- LNAPL was encountered in at least six Areas of Concern (AOCs). The LNAPL is attributed to inactive underground pipelines not owned by the Port. These pipelines were accessed by hot tapping in June 2004. It was confirmed that the pipelines are inactive and that residual LNAPL, solids and water exist to a limited degree within pipelines.
- Groundwater was impacted by volatile organic compounds (benzene, ethylbenzene, xylene and 2-butanone); semi-volatile organic compounds (polycyclic aromatic hydrocarbons, naphthalene, phenanthrene, pyrene), and metals (cyanide, arsenic, chromium, copper and lead), at concentrations above the New York Ambient Water Quality Standards and Guidance Values (AWQSGVs).
- Surface water impacts in the Arthur Kill do not appear to be attributable to groundwater from Site 3, based on groundwater results from the site.
- A vapor intrusion investigation was completed at buildings 74/75, and further evaluation was not warranted based on the use of the building and the infrequency that it is occupied by people.

Of the 24 Areas of Concern (AOCs) identified at Site 3, only five (AOC-Central Area, AOC-Northern Area, AOC-MW-13N4, AOC-EM-7A, and AGC-D-46/MW-26) were determined to warrant remedial actions.

**Next Steps**

NYSDEC will consider public comments, revise the RAWP as necessary, and issue a final Decision Document. New York State Department of Health (NYSDOH) must concur with the proposed remedy. The volunteer(s) may then design and perform the cleanup action to address the site contamination, with oversight by NYSDEC and NYSDOH.

NYSDEC will keep the public informed throughout the investigation and cleanup of the site.

**Background**

Location:

The Howland Hook Marine Terminal - Port Ivory Facility (HHMT) is located at 40 Western Avenue in Staten Island, Richmond County, New York, in an industrial/commercial area. The HMTT Facility consists of Area 3A (41.3 acres) and area 3B (38.9 acres). Areas 3A and 3B are non-contiguous areas of land transected by Richmond Terrace. Area 3A is bordered by Richmond Terrace to the north undeveloped wooded land to the east, Site 2 (Area 2B) to the south, and Western Avenue to the west. Area 3B is bordered by the Arthur Kill to the north, northeast and northwest; marsh areas and vacant land to the east; Richmond Terrace and an extension of Richmond Terrace to the south; and marsh areas at the confluence of Bridge Creek and the Arthur Kill to the west. No residential properties are located within 2,000 feet of the site.

#### Site Features:

At Area 3A, building 74/75, Buildings No. 60, Building Nos. 64 through 68, Building No. 79 and Building No. 80 are the only remaining structures. Building Nos. 74/75 is located on the southern portion of Area 3A and is currently leased by the New York Container Terminal. The 60 series buildings (No. 60 and Nos. 64-68), Building No. 79, and Building No. 80, are located on the northern portion of Area 3A and currently vacant. It is anticipated that all buildings, except for Building Nos. 74/75 will be demolished for redevelopment.

Asphalt-paved access roads, associated parking lots and railroad spurs surround the buildings. Area 3A generally consists of gravel, paved, or vegetated land. Area 3B is currently improved only with piers and barge slips, a gravel parking area and a small guard shack. The northwestern portion consists of a closed construction and demolition (C&D) landfill and the southern portion is currently vacant. Area 3B is relatively flat and slopes downwards to the north, east, and west from the topographic high points near the central and southern portions of the site. Area 3B is adjacent to bodies of water (Bridge Creek to the east and Arthur Kill to the north). Wetlands are located along the eastern and western property lines of Area 3B.

The site is traversed by two abandoned pipelines and easements that formerly carried fuel oil and petroleum products; they are owned by Tidewater and Exxon-Mobil. The Tidewater pipeline runs in a north/south direction, underneath buildings 74/75, 60 and 80 at Area 3A. This pipeline has been out of service for at least 10 years. The Exxon-Mobil pipeline is located east of the Tidewater pipeline, and runs along the southern boundary of Area 3B. Recently, Spectra installed a pipeline (and easement) that runs along the entire western boundary of Area 3A. This pipeline is currently operating.

#### Current Zoning/Uses(s):

The site is currently zoned industrial. The surrounding land uses are primarily industrial, light industrial, undeveloped land, and wetlands. At Area 3A, only building 74/75 is currently used by New York Container Terminal for storage; the other buildings are vacant. The Port Authority plans to redevelop Area 3A for commercial use (an intermodal facility). Area 3B consists mainly of the C&D landfill and no redevelopment is currently planned.

#### Historical Uses(s):

Proctor & Gamble operated the site from 1906 to 1991. The Port Authority purchased the site in 2000 for the purpose of redevelopment. During Proctor & Gamble's ownership, the site was used for manufacturing consumer products such as soap, detergent, edible oils and foods. At Area 3A, operations consisted of manufacturing and processing soap, orange juice, cake mix and edible oils. These activities occurred at buildings 70 to 75, 50-series, 60-series and 80. Above ground Storage Tanks (ASTs), situated on concrete pads, were located south and east of Building 56. The following materials were stored in the ASTs: caustics, vegetable and fish oils, fuel oil, waste oil, soap, spent acids, and vegetable grease. Underground Storage Tanks (USTs) were also used at Area 3A and potentially stored petroleum oil. A truck depot and internal railroad system was used for loading and unloading hydrogen products (oils).

Area 3B currently consists of a closed C&D landfill that Proctor & Gamble operated from 1958 to 1989. The landfill was closed in the mid 1990's in accordance with applicable NYSDEC solid waste regulations. The landfill does not have a liner or leachate collection system, and wastes disposed included scrap metal, tires, telephone poles, railroad ties, vegetative debris and sharps. Post-closure groundwater monitoring and maintenance under the oversight of the NYSDEC has been performed from 2001 to present. Prior to the C&D landfill, Area 3B included two 420,000 gallon fuel oil ASTs, concrete secondary containment, two pump houses, fly ash storage and several railroad spurs. Activities included loading and unloading of barges at the piers; storage and transport of fuel oils in the ASTs; and storage of soap ash in two silos previously located near the piers. In 1986 and 1989 two spills were reported and they were cleaned up to the satisfaction of DEC and subsequently closed.

The primary contamination that remained at Areas 3A and 3B is from the petroleum related pipelines that traverse the site and that are not owned by the Port Authority.

### Operable Units (OU):

The site was divided into two operable units. An operable unit represents a portion of a remedial program for a site that for technical or administrative reasons can be addressed separately to investigate, eliminate or mitigate a release, threat of release or exposure pathway resulting from the site contamination. OU1 addresses Area 3A and Area 3B. OU1A addresses the on-site LNAPL source at specific locations within Areas 3A and 3B.

### Site Geology and Hydrogeology:

The overburden materials at the site consist of the following strata.

- Fill material placed on tidal marsh or sand deposits consisting of sand, silt, clay, and loose gravel mixed with carbonaceous material and/or vegetative, wood, brick, concrete, and glass debris, with a maximum thickness of about 19.5 feet;
- Organic clays and peat consisting of soft and compressible tidal marsh deposits, to a maximum thickness of approximately 27 feet;
- Sand deposits consisting of loose to medium dense sand from marine or glacio-fluvial deposits, ranging in thickness from 5 to 16 feet;
- Glacial clay and silt deposits with lenses of sand and gravel, ranging in thickness from less than 10 to approximately 60 feet; and
- Weathered shale.

Depth to groundwater in the overburden aquifer is about 3 to 11 feet below ground surface (bgs). In the southern and central portions of Area 3A, the hydraulic gradient is to the south, southwest, or west (i.e., towards Bridge Creek or its tributary). In the northern portion of Area 3A and at Area 3B, the hydraulic gradient is predominantly to the west, northwest, or north (i.e., towards Bridge Creek, the confluence of Bridge Creek and the Arthur Kill). In the extreme northeastern portion of Area 3A and in the eastern portion of Area 3B, the hydraulic gradient is east towards a marsh that is hydraulically connected to the Arthur Kill. The vertical hydraulic gradient is downward and appears to be greater in magnitude farther away from Bridge Creek and the Arthur Kill. Tidal fluctuations were not observed in the shallow aquifer. However, marsh areas adjacent to Area 3B are tidally influenced by the Arthur Kill. The marsh areas are inundated twice daily based on tidal fluctuations.

Groundwater is not currently used for public water supply on Staten Island. Due to saline intrusion of aquifers in the area caused by former groundwater use, future development of aquifers for potable purposes in the general area is unlikely.

Additional site details, including environmental and health assessment summaries, are available on NYSDEC's website at:

<http://www.dec.ny.gov/cfmx/extapps/derexternal/haz/details.cfm?pageid=3&progno=V00675>

**Voluntary Cleanup Program:** New York's Voluntary Cleanup Program (VCP) was developed to encourage private sector volunteers to investigate and clean up contaminated properties and return these sites to productive use. Once cleaned up, the properties may be redeveloped for commercial, industrial, residential or public use.

For more information about the VCP, visit: <http://www.dec.ny.gov/chemical/8442.html>

## FOR MORE INFORMATION

### Where to Find Information

Project documents are available at the following location(s) to help the public stay informed.

**Mariners Harbor Library**

206 South Avenue  
Staten Island, NY 10303  
Phone: (212) 621-0690  
Hours: Mon: 12 PM to 8 PM  
Tue to Th: 10 AM to 7 PM  
Fri and Sat: 10 AM to 5 PM.  
Closed Sunday  
(Call for Appointment)

**Office of Community Board 1 Staten Island**

1 Edgewater Plaza, Suite 217  
Staten Island, New York 10305  
Hours: M – F; 9:00 AM – 4:00 PM  
Phone: (718) 981-6900  
(Call for Appointment)

**Who to Contact**

Comments and questions are always welcome and should be directed as follows:

Project Related Questions

Alicia Barraza  
NYS Department of Environmental Conservation  
Division of Environmental Remediation  
625 Broadway  
Albany, NY 12233-7016  
Tel: 518-402-9690  
Email: alicia.barraza@dec.ny.gov

Site-Related Health Questions

Stephanie Selmer  
New York State Department of Health  
Bureau of Environmental Exposure Investigation  
Empire State Plaza, Tower Room 178  
Albany, NY 12237  
Tel: 518-402-7860  
Email: BEEI@health.ny.gov

**We encourage you to share this fact sheet with neighbors and tenants, and/or post this fact sheet in a prominent area of your building for others to see.**

**Receive Site Fact Sheets by Email**

Have site information such as this fact sheet sent right to your email inbox. NYSDEC invites you to sign up with one or more contaminated sites county email listservs available at the following web page: <http://www.dec.ny.gov/chemical/61092.html>. It's quick, it's free, and it will help keep you *better informed*.

As a listserv member, you will periodically receive site-related information/announcements for all contaminated sites in the county(ies) you select.

Note: Please disregard if you already have signed up and received this fact sheet electronically.



FIGURE 1 - SITE LOCATION - PORT IVORY

