



FACT SHEET

Petroleum Remediation Program

Receive Site Fact Sheets by *Email*. See "For More Information" to Learn How.

Site Name: Former Paragon Oil Terminal & Apollo Street Creek Parcels

DEC Site Nos.: S224083 and S224122

Address: 16, 42, and 50 Bridgewater Street and
100 and 120 Apollo Street Brooklyn NY 11222

Have questions?
See
"Who to Contact"
Below

Remedy Proposed for Petroleum Remediation Sites; Public Comment Period and Public Meeting Announced

Public Meeting, Wednesday, 3/12/2014 6:00 – 9:00 PM
Warsaw at the Polish National Home
261 Driggs Avenue (between Eckford St & Leonard St)
Brooklyn, NY 11222
(presentation and Q&A at 7:00pm)

The New York State Department of Environmental Conservation (NYSDEC) invites you to a public meeting to discuss the cleanup (remedy) proposed for the site. You are encouraged to provide comments at the meeting, and during the comment period described in this fact sheet.

A brief presentation and Q&A session will take place at 7:00 pm to describe the proposed cleanup plan for the Former Paragon Oil Company site and the Apollo Street Creek Parcels site. NYSDEC staff will be available both before and after the presentation to answer questions regarding the cleanup proposed for these sites or other Greenpoint Petroleum Remediation Project sites.

The public is invited to comment on a remedy proposed by NYSDEC related to the Former Paragon Oil Company site and Apollo Street Creek Parcels site ("Site") located at 16, 42, and 50 Bridgewater Street and 100 and 120 Apollo Street, Brooklyn, Kings County. Please see the map for the site location. Additional information regarding the Site is included in the following pages.

How to Comment

NYSDEC is accepting written comments about the proposed plan from **February 27, 2014** through **March 30, 2014**. The complete proposed remedy is available for 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.

Proposed Remedy

A summary of the major elements of the remedy (cleanup) proposed for these sites include:

1. Extraction and treatment system of approximately 17 to 20 recovery wells.
2. Periodic indoor and outdoor ambient air monitoring, sub-slab vapor monitoring, and groundwater monitoring.

3. A separate-phase recovery (periodic pumping, bailing, vacuum recovery, or other approved methods) of petroleum from non-extraction wells at the site.
4. Use and maintenance of containment system and capping with existing physical barriers (grout wall, bulkhead improvements, bulkhead seam sealing, barrier membrane, boom system, concrete slabs, and asphalt cover).
5. Monitored Natural Attenuation (MNA) consisting of sampling of physical, chemical, and biological indicators to demonstrate degradation of petroleum material.
6. Multi-phase extraction (MPE) through addition of a vapor-phase recovery (VPR) component at recovery wells to remove petroleum.
7. Establishment of Institutional Controls (ICs) including: (i) restricting the use of the property to industrial or commercial uses; (ii) an agreement with the applicable parties providing for the implementation of the Site Management Plan (SMP); (iii) a restriction on the use of groundwater as a source of potable or process water, (iv) a communication program with the property owners and tenants that will keep them informed of the engineering control activities; and (vi) a periodic certification of institutional and engineering controls.
8. A five-year comprehensive review of the remedy and site management will be conducted until achieving site closure conditions.
9. A Site Management Plan (SMP) is required, which includes: a. An Institution and Engineering Control Plan; b. a Monitoring Plan; and c. an Operation and Maintenance (O&M) Plan

NYSDEC developed the proposed remedy after reviewing the detailed investigation of the site and evaluating the remedial options in the "Alternatives Analysis Report" dated January 6, 2014 submitted under the petroleum remediation program guidance and Site Order on Consent conditions.

Next Steps

NYSDEC will consider public comments as it finalizes the remedy for the site. The selected remedy will be described in a document called a "Record of Decision" that will explain why the remedy was selected and respond to public comments. A detailed design of the selected remedy will then be prepared, and the cleanup will be performed.

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

Background

The Greenpoint section of Brooklyn along Newtown Creek has been an area of heavy industrial and petroleum refinery operations for over 140 years. In the 1830s, whale oil was refined for use as illuminating oil. By the 1860s, petroleum became the primary product refined in Greenpoint. Over 50 petroleum refineries were located along the banks of Newtown Creek by the late 1800s. Greenpoint remained an important hub of petroleum refining and distribution area throughout the twentieth century.

The Former Paragon Terminal site and the Apollo Street Creek Parcels site have been associated with other past petroleum refining and distribution activities in the area as the "Greenpoint Petroleum Remediation Project." While various petroleum storage and terminal facilities remain active in Greenpoint today; the former Paragon facility ceased operations in 1968 when the site was sold to

Peerless Equities, LLC and is currently operated as a liquor distributor. The proposed cleanup (Decision Document) addresses only these Sites while future presentations and decisions are planned to present remedies for the remaining “Greenpoint Petroleum Remediation Projects.”

Former Paragon Oil Terminal (S224083)

Location: This Site occupies the property addressed 16, 42, and 50 Bridgewater Street which are located north of Bridgewater Street and are adjacent to Newtown Creek to the north, Meeker Avenue to the east, and the Apollo Street site to the west.

Site Features: The site operated as a terminal storing fuel oil (numbers 2, 4, and 6), lube oil, gasoline, diesel fuel, and kerosene until sometime before 1969 when Peerless Importers built a warehouse on the property. Various interim remedial measures (IRMs) to address contamination at the site have been implemented since 2004 including a grout wall and other seepage barriers, a recovery and treatment system, and containment booms on Newtown Creek.

Current Zoning and Land Use: The Site is in the M3-1 zoning manufacturing district, zoned for industrial and commercial use. Land use in the vicinity of the subject site is mixed industrial, commercial, and residential. The site is adjacent to the Apollo Street Creek Parcels Site (S224122) now being investigated and remediated under an amended Former Paragon Terminal Order on Consent.

Past Use of the Site: Beginning in 1886, two companies operated on this property; the Locust Hill Refining Company and Greenpoint Oil Refining. Both of these companies ended operation by 1905. From 1905 to 1921, a portion of the property operated as a cement works company. By 1929, a portion of the property was being operated as a petroleum storage terminal by Supreme Oil, which later became known as the Petroleum Terminal Corporation. The other portion of the property was privately owned until 1928 when it became the Brooklyn Ash Removal Company. By 1934, operations throughout the property were generally either run by or affiliated with the Paragon Oil Company, which operated the site as petroleum storage terminal. Paragon Oil was purchased by Texaco Oil, now known as the Chevron/Texaco Corporation, in 1958. The property was sold to Peerless Equities in 1968, and Empire Merchants now operates the property as a liquor distribution warehouse. According to a 2005 consent agreement with the NYSDEC, Texaco is responsible to delineate and remediate the portion of the free product plume underlying the Former Paragon Oil Terminal and control seepage of petroleum into Newtown Creek at this location.

Site Geology and Hydrogeology: Soil borings and monitoring well logs completed during the various investigations for the phase separated hydrocarbon (PSH) plume delineation and subsequent investigations indicate that fill, consisting of sand, silt, gravel, cinders, and wood, generally exists to a depth of 15 to 20 feet bgs. The majority of the material below the fill was documented as sand or silty-clayey sand. Isolated areas of native (non-fill) silt and clay were documented, but the review of the available information suggests these deposits are minimal and are localized.

Groundwater investigations indicate that groundwater in the shallow water-bearing zone, at the Paragon and Apollo Street sites, exists under unconfined conditions. On the north side of the site near Newtown Creek, the water table is in the fill material. Deeper groundwater, found in the regional alluvial sand and gravel, is found under semi-confined conditions beneath the silt. Groundwater at the site is saline and influenced by tidal conditions in Newtown Creek. Depth to groundwater in the shallow water-bearing zone generally ranges from approximately five to twenty-four feet.

From approximately 1900 through 1947, groundwater flow was reverse from the natural flow direction toward the Newtown Creek and flowed south to southeast, away from Newtown Creek and toward the area of industrial pumping. Groundwater flow at the site has since returned to pre-pumping conditions towards the Newtown Creek and the former Paragon property in a north and westward direction.

Apollo Street Creek Parcels (S224122)

Location: This Site comprises the New York City tax parcels located at 100 and 120 Apollo Street and is currently occupied as part of the Empire Merchants liquor warehouse and offices. These properties are located north of Bridgewater Street and are adjacent to Newtown Creek and the BP Terminal (S224082) Petroleum Remediation Project to the west and north, and the Former Paragon Oil Terminal (S224083) to the east and south.

Site Features: The Apollo Street site is approximately 3 acres in size with approximately 2.6 acres covered by warehouse. Other than the end of the Apollo Street, the parcels consist of three connected buildings, small areas of pavement, and a small area of vegetation along Newtown Creek. The Apollo Street site is owned by Apollo Steel, LLC and Peerless Equities, LLC and leased to Empire Merchants for warehouse operations.

Current Zoning and Land Use: The properties are in an M3-1 zoning manufacturing district, zoned for industrial and commercial use. Land use in the vicinity of the subject site is mixed industrial, commercial, and residential. Residential areas are approximately one block to the southwest.

Past Use of the Site: These parcels have been bordered by numerous past petroleum operations including both refining and distribution, but there is no known history or evidence that petroleum refining or distribution operations ever existed on the property. Significant fill was added to the area in the late 1800's to fill tidal wetlands and create land. Brooklyn Ash Disposal likely operated at the site for a significant period in the 1900s. More recent uses of the site include stone cutting and distribution warehouses and operations.

Site Geology and Hydrogeology: The Apollo Street Creek Parcels site and the Former Paragon Oil Terminal sites are adjacent and have similar geology and hydrogeology. See the description above for details.

A site location map and site figure map are attached as Figure 1 and 2.

Remediation Program: New York's Division of Environmental Remediation identifies and characterizes suspected inactive hazardous waste disposal sites, manages the spill response program, Brownfield Cleanup Program, and other programs. Sites that pose a significant threat to public health and/or the environment go through a process of investigation, evaluation, cleanup and monitoring.

NYSDEC attempts to identify parties responsible for site contamination and require cleanup before committing State funds.

For more information about the State's remediation program, visit: <http://www.dec.ny.gov/about/627.html>

ENFORCEMENT STATUS

Texaco, Inc. signed an Order on Consent Case No. D2-1111-01-05 finalized on September 20, 2005 that requires Texaco to investigate and address petroleum seepage at the Former Paragon Oil Terminal. The Order on Consent was revised on May 15, 2009 to include the adjacent Apollo Street Creek Parcels and require a comprehensive remedial plan for both sites.

Additional site details and information on nearby sites, including environmental and health assessment summaries, can be accessed on NYSDEC's website at:

<http://www.dec.ny.gov/cfm/external/derexternal/index.cfm?pageid=3>

These sites are part of the Greenpoint Petroleum Remediation Project with additional details on these sites and other sites in the project available at <http://www.nysdecgreenpoint.org>.

FOR MORE INFORMATION

Where to Find Information

Project documents are also available on the NYSDEC website at:

<http://www.nysdecgreenpoint.org>

Additional documents are available for all Sites in the Greenpoint Petroleum Remediation Project at the following location(s) to help the public stay informed.

Brooklyn Public Library
Grand Army Plaza, Brooklyn
(718) 230-2762

Greenpoint Public Library
107 Norman Avenue, Brooklyn
(718) 349-8504

Newtown Creek Monitoring Committee
329 Greenpoint Avenue, Brooklyn
(718) 349-0150

NYSDEC Central Office
Attn: Mr. Benjamin Rung
625 Broadway, 12th Floor
Albany, NY 12233-7017
Phone: (518) 402-9814

Who to Contact

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

Project Related Questions

Benjamin Rung
Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway, 12th Floor
Albany, NY 12233-7017
888-459-8667
bwrung@gw.dec.state.ny.us

Site-Related Health Questions

Dawn Hettrick
New York State Department of Health
Corning Tower, Room 1787
Albany, NY 12237
(518) 402-7860
BEEI@health.state.ny.us

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 (or counties) you select.

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