EXPLANATION OF SIGNIFICANT DIFFERENCE
FYN PAINT & LACQUER CO., INC.

New York City / Kings County / Site No. C224154 / November 2019

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

1.0 INTRODUCTION

The purpose of this notice is to describe the progress of the cleanup at the Fyn Paint & Lacquer Co., Inc. Brownfield Cleanup Program Site C224154 and to inform you about a change in the site remedy. The site is located at 230 Kent Avenue, Brooklyn, NY. On October 28, 2016, the New York State Department of Environmental Conservation (the Department) issued a Decision Document which selected a remedy to clean up the site. The Decision Document stated that the selected remedy is a Track 1: Unrestricted use remedy. Under the Track 1 remedy described in the approved Remedial Action Work Plan (RAWP) and documented in the October 2016 Decision Document, the selected remedy included excavation and proper disposal of all on-site soil to depths of up to 15 to 17 feet below grade. However, Kent Riverview LLC (the "Volunteer"), recently informed the Department that a Track 1 cleanup would not be achieved. This determination was based on further review of laboratory analytical results obtained from the pre-construction waste characterization soil samples collected from geotechnical and injection well borings completed in July and September 2019, respectively. This communication provided details on proposed changes to the selected remedy and demonstrated that the amended remedy would achieve a Track 4 Restricted use remedy (i.e., a restricted residential cleanup level).

This Explanation of Significant Difference (ESD) will become part of the Administrative Record for this Site. The information here is a summary of what can be found in greater detail in documents that have been placed in the following repositories:

Brooklyn Public Library - Leonard Branch
81 Devoe Street at Leonard St.
Brooklyn, NY 11211
Call for hours: 718-486-6006

Brooklyn Public Library - Greenpoint Branch
107 Norman Avenue at Leonard St.
Brooklyn, NY 11222
Call for hours: 718-349-8504

Brooklyn Community Board No. 1
435 Graham Avenue
Brooklyn, NY 11211
Call for hours: 718-389-0000

NYSDEC Region 2 Office
Bryan Wong, Project Manager
47-40 21st Street

Long Island City, NY 11101
(718) 482-4905
yukyin.wong@dec.ny.gov

Interested persons are invited to contact the Department's Project Manager for this site to obtain more information or have questions answered.

2.0 SITE DESCRIPTION AND ORIGINAL REMEDY

2.1 Site History, Contamination, and Selected Remedy

Site Description:
The Fyn Paint and Lacquer Co., Inc. site is located in an urban area at 230 Kent Avenue in Brooklyn, Kings County. The site is situated on the block bounded by Kent Avenue to the east, Metropolitan Avenue to the north, North First Street to the south and River Street to the west. Alternate addresses for the property are: 230-232 Kent Avenue; 76-80 River Street; and 29-37 North First Street. The site is identified as Block 2362, Lot 1 on the Kings County Tax Map. The site is approximately 0.13 acres (5,472 ft^2 ±) in size. The historical manufacturing building was razed in March 2019 as a component of the site remedy. Past land uses associated with the site include a chemical and coatings company (circa 1949) and paint and lacquer manufacturing company (Fyn Paint - 1959-2011).

Summary of the Investigation: Sampling has identified elevated concentrations of volatile organic compounds (VOCs) in soil, groundwater and soil vapor. The primary contaminants of concern (COCs) identified at this site are solvents which were used as part of the historical paint and lacquer manufacturing activities at the site and include: acetone; ethylbenzene; toluene; xylene (mixed); and, benzene. The COCs are consistent with the previous use of the site, and have been detected in soil, groundwater, and soil vapor.

Elements of the Original Selected Remedy:
The elements of the site remedy are as follows:

1. Remedial Design: 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.

2. Excavation:
    - Installation of a waterproof hydraulic barrier around the perimeter of the site. The waterproof hydraulic barrier will consist of a series of interlocked steel sheets with a sealable cavity within each interlock. After installation, the interlock is flushed and a low permeability grout is injected into the entire length of the interlock. The hydraulic barrier will be installed to a sufficient depth to provide structural support which will facilitate the soil excavation within the property boundaries. Due to these requirements, the sheeting system will be installed to an approximate depth of 25-30 feet below grade;
    - Excavation and off-site disposal of all on-site soil and fill material to a depth of approximately 15 to 17 feet below grade;
    - Collection and analysis of end-point samples to ensure that all contaminant source material has been removed and to evaluate the effectiveness of the remedy with respect to attainment of Soil Cleanup Objectives (SCOs); and,
    - Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to establish the designed grades at the site.;

3. Groundwater Treatment
    - A dual phase extraction system (DPES) was designed and previously installed under the Voluntary Cleanup Program. The extraction system covers the area beneath the footprint of the on-site building and the adjacent parking lot. Prior to installing the hydraulic barrier and implementing the excavation discussed in remedy component 2, above, the on-site components of the DPES will be removed. The DPES components will be relocated offsite to allow for continued operation to address the off-site groundwater contamination; and,
    - Following completion of the excavation, in-situ chemical oxidation (ISCO) will be implemented to achieve a bulk reduction of VOCs in groundwater. A chemical oxidant will be injected into the subsurface via injection wells to destroy the contaminants.

4. Vapor Intrusion Assessment
    - A post-remedial soil vapor intrusion evaluation will be completed prior to occupying any buildings developed on the site. The assessment will include a provision for implementing actions recommended to address exposures related to soil vapor intrusion.

Contingent Remedial Elements:

If a Track 1 cleanup is not achieved, including achievement of the groundwater and soil vapor remedial action objectives, imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required and the site will achieve a Track 2 residential cleanup.

5. Institutional Control
    - If a Track 1 cleanup is not achieved, recording of an Environmental Easement, including institutional controls, will ensure implementation of the SMP and proper use of the site.

6. Site Management Plan
    - If a Track 1 Unrestricted Use cleanup is not achieved, implementation of a Site Management Plan (SMP) would also be required for long term maintenance of the remedial systems. A Site Management Plan will include 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; and,
            - Engineering Controls: the in-situ chemical oxidation.
        - A Monitoring Plan to outline a schedule of monitoring and frequency of submittals to the Department, and to assess the performance and effectiveness of the remedy.

Elements of the June 2019 Department-Approved RAWP Modification:

The June 2019 RAWP addendum only changed one of the originally-approved remedy elements, specifically a change to the depth of the waterproof sheeting design to support deeper excavation and construction dewatering.

- The waterproof hydraulic barrier will consist of a series of standard interlocking steel sheeting with waterproofed seams driven as connected pairs, which will be welded together to ensure they

are water-tight and to increase the structural rigidity;
- The hydraulic barrier will be installed to a depth of 35 feet below grade to facilitate the excavation of contaminated soil. The increased depth of the steel sheeting will allow for the excavation to be advanced to depths greater than 17 feet below grade, if necessary, to remove localized areas of soil exceeding the protection of groundwater SCOs (i.e., source material);
- Construction dewatering, with water treatment prior to discharge to the NYC combined sewer under a NYCDEP-approved sewer discharge permit, to facilitate excavation below the water table.

3.0 CURRENT STATUS

The following components of the site remedy have been completed:

- Department approval of the Remedial Design Report;
- Decommissioning of the DPES remedial system trailer, pending relocation/reconnection on the adjacent Con Edison property and restarting system operation (to be performed under a separate Consent Order);
- Building demolition;
- Installation of the hydraulic barrier;
- Baseline groundwater sampling and ISCO injection activities;
- Department-issued 'Contained-In' Determination Approvals for subsurface soils and for treated groundwater effluent;
- Excavation and off-site disposal of contaminated soil and fill material to a depth of approximately 14 to 15 feet below grade (unsaturated zone);
- Department-approved construction dewatering and Department issuance of Long Island Well Permit Equivalent; and,
- Commencement of operation of the construction dewatering system.

Based on further review of laboratory analytical results obtained from the pre-construction waste characterization soil samples collected from the geotechnical borings and injection well borings completed in July and September 2019, it is unlikely the remedial excavation will be sufficient to achieve Track 1 Unrestricted Use SCOs at the bottom of the excavation. However, following the removal of the majority of source material and installation of the hydraulic barrier, the post-remedial ISCO injection activities are expected to be an effective strategy for remediating the remaining source material left in-place on-site. Therefore, the Volunteer proposes to achieve a Track 4 clean-up in lieu of the Track 1 cleanup established in the October 2016 Decision Document.

4.0 DESCRIPTION OF SIGNIFICANT DIFFERENCE

4.1 New Information

Pre-construction waste characterization soil sampling results indicate that excavation activities will not be able to achieve Unrestricted Use SCOs. The change from Track 1 to Track 4 cleanup will have minimal impact on the scope of the selected remedy. The Track 4 cleanup will minimize the depth to which contaminated soil will be excavated from below the static groundwater table elevation, estimated to be approximately 16-17 feet below grade throughout the site. The excavation will be advanced to greater depths in localized areas of the site (as needed) to remove the bulk of the source material; however, some soil exceeding the protection of groundwater SCOs will be left in-place. This remaining source material will be treated by the ISCO to fully remediate the site under the Site Management Plan.

4.2 Comparison of Changes with Original Remedy

Under the Track 1 remedy described in the October 2016 RAWP and Decision Document, the proposed excavation would have removed all soil exceeding the applicable protection of groundwater and unrestricted use SCOs. The excavation depth was in part driven by the desire to remove all the contaminated soil from beneath the site, allowing for no property use restrictions. The RAWP modification was pursued to increase the likelihood of achieving the applicable protection of groundwater and unrestricted use SCOs, and to allow for the incorporation of two sub-grade levels into potential future redevelopment design plans.

However, to achieve the Track 1 SCOs the excavation would require the removal of a larger volume of soil than was anticipated in the Decision Document.

Therefore, a Track 4 cleanup rather than a Track 1 cleanup will be pursued. The amended remedy for Track 4 is based on achieving a remaining soil contaminant level that meets the Restricted Residential Use SCOs. The following amended remedy for a Track 4 cleanup, includes the following changes to the Track 1 remedy:

- The site-wide excavation will also include deeper excavation, beyond 16-17 feet below grade, in localized areas to maximize the removal of any source material;
- High permeability gravel will be imported to backfill the completed excavation from the bottom up to 2 feet above the static water table elevation. The remainder of the site will be backfilled with Department-approved imported material where some of the material may exceed unrestricted use SCOs but will meet the lower of the Protection of Groundwater or Restricted Residential SCOs;
- Implementation of ISCO to achieve the remedial action objectives for remaining source soil and groundwater. After completion of the remedial excavation, post-remediation groundwater samples will be collected from onsite ISCO performance monitoring wells. The groundwater quality data from the post-remediation samples, in addition to data generated from subsequent groundwater monitoring rounds under the SMP, will be used to monitor effectiveness of the ISCO activities on remediating the site. The scope and frequency of supplemental ISCO injections (if necessary) will be dictated by the effectiveness monitoring data; and
- Because source material will be left in-place, any future post-remedy ground invasive activities will be subject to regulatory compliance requirements as detailed in the SMP.

5.0 SCHEDULE AND MORE INFORMATION

This Explanation of Significant Difference is subject to a thirty (30) day comment period to the public, from **November 27 through December 27, 2019**. If you have questions or need additional information you may contact any of the following:

Project-Related Questions:

Bryan Wong
NYS Department of Environmental Conservation
Division of Environmental Remediation
47-40 21st Street
Long Island City, NY 11101
(718) 482-4905
yukyin.wong@dec.ny.gov

Project-Related Health Questions

Dawn Hettrick
NYS Department of Health
Bureau of Environmental Exposure Investigation

Corning Tower, Room 1787
Albany, NY 12237
(518) 402-7880
beei@health.ny.gov

Site Location Map