NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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April 20, 2018

Mr. Paul Neureuter (pneureuter@kroggrp.com)
Elk Street Commerce Park, LLC/The Krog Group
4 Centre Drive
Orchard Park, New York 14127

RE: ExxonMobil Former Buffalo Refinery OU-2 West Site
Site ID No. C915201C, City of Buffalo, Erie County
Remedial Alternative Analysis & Decision Document

Dear Mr. Neureuter:

The New York State Department of Environmental Conservation (Department) and the New York State Department of Health (NYSDOH) have reviewed the Remedial Investigation – Alternative Analysis Report (RI-AAR) for the ExxonMobil Former Buffalo Refinery OU-2 West Site dated November 2016. The RI-AAR is hereby approved. Please ensure that a copy of the approved RI-AAR is placed in the document repository.

Enclosed is a copy of the Department's Decision Document for the site. The remedy is to be implemented in accordance with this Decision Document. Please ensure that a copy of the Decision Document is placed in the document repository.

Please contact the Department's Project Manager, Eugene Melnyk, P.E., at 716-851-7220 or eugene.melnyk@dec.ny.gov at your earliest convenience to discuss next steps. Please recall the Department requires seven days' notice prior to the start of field work.

Sincerely,

Michael J. Cruden, P.E.
Director
Remedial Bureau E
Division of Environmental Remediation

Enclosure
ec: M. Ryan - NYSDEC
C. Staniszewski/E. Melnyk/J. Dougherty – Region 9, NYSDEC
K. Anders/C. Bethoney/R. Jones – NYSDOH
E. Zinkewicz – ExxonMobil Environmental; elizabeth.e.zinkevicz@exxonmobil.com
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DECISION DOCUMENT

ExxonMobil Oil Former Buffalo Terminal OU-2 West
Brownfield Cleanup Program
Buffalo, Erie County
Site No. C915201C
April 2018

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

DECLARATION STATEMENT - DECISION DOCUMENT

ExxonMobil Oil Former Buffalo Terminal OU-2 West
Brownfield Cleanup Program
Buffalo, Erie County
Site No. C915201C
April 2018

Statement of Purpose and Basis

This document presents the remedy for the ExxonMobil Oil Former Buffalo Terminal OU-2 West site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the ExxonMobil Oil Former Buffalo Terminal OU-2 West site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the selected remedy are as follows:

1. REMEDIAL DESIGN
A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remediation 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 gas 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. EXCAVATION
Excavation and off-site disposal of contaminant source areas, including:

- grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
- soils that create a nuisance condition, as defined in Commissioner Policy CP-51 Section G.

Excavation and off-site disposal of all on-site soils which exceed commercial SCOs, as defined by 6 NYCRR Part 375-6.8 in the upper 15 feet. If a Track 2 commercial cleanup is achieved, a Cover System will not be a required element of the remedy.

Approximately 360 cubic yards of grossly contaminated soil will be removed for three discrete areas located in the eastern portion of the site. Approximately 1,000 cubic yards of semi volatile contaminated soil exceed commercial SCOs will be excavated from one discrete area on the western portion of the site.

3. BACKFILL
On-site soil which does not exceed the above excavation criteria may be used to backfill the excavation.

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete backfilling of the excavation, as necessary, and establish the designed grades at the site.

4. ENGINEERING AND INSTITUTIONAL CONTROLS
Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve a Track 2 commercial cleanup at a minimum and will include an environmental easement and site management plan as described below.

Institutional Control
Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- 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);
- allow the use and development of the controlled property for commercial and 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. SITE MANAGEMENT PLAN
A Site Management Plan, 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 environmental easement discussed in Paragraph 4 above.

Engineering Controls: No engineering controls are required.

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 environmental easement including any land use and groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any existing and new buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- 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. Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
   - monitoring of groundwater to assess the performance and effectiveness of the remedy;
   - a schedule of monitoring and frequency of submittals to the Department;
   - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional Control Plan discussed above.

Contingent Track 2

The intent of the remedy is to achieve Track 2 commercial use, therefore, no engineering control is needed to achieve the SCOs. In the event that Track 2 commercial use is not achieved, specifically achievement of soil cleanup objectives, the following contingent remedial element will be required and the remedy will achieve a Track 4 commercial cleanup.

6. COVER SYSTEM

A site cover will be required to allow for commercial use of the site in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). The site cover may consist of paved surface parking areas, sidewalks, or a soil cover. Where a soil cover is to be used it will be a minimum of one feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d). In areas where building foundations or building slabs preclude contact with the soil, the requirements for a site cover will be deferred until such time that they are removed.

The following additional SMP items will be required if a cover system is constructed at the site.

The Engineering Control Plan will also identify all engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following engineering control remains in place and effective:

- Engineering Controls: The soil cover discussed above.

This plan will also include, but may not be limited to:

- provisions for the management and inspection of the identified engineering controls; and
- a provision that should an existing or future building or building foundation be demolished in the future, a cover system consistent with that described in Paragraph 6 above will be placed in any areas where the upper one foot of exposed surface soil exceeds the applicable SCOs.

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.

Michael J Cruden

Digitally signed by Michael J Cruden
DN: cn=Michael J Cruden, o=DER, ou=RBE, email=mjcruden@gw.dec.state.ny.us, c=US
Date: 2018.04.19 15:23:43 -04'00'

Date

Michael Cruden, Director
Remedial Bureau E

DECISION DOCUMENT

ExxonMobil Oil Former Buffalo Terminal OU-2 West
Buffalo, Erie County
Site No. C915201C
April 2018

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 New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. 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 repositories:

Valley Community Center
93 Leddy Street
Buffalo, NY 14210
Phone: 716-823-4707

Buffalo and Erie County Public Library
1 Lafayette Square
Buffalo, NY 14203
Phone: 716-858-8900

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:
The site is located in an urban area on Elk Street in the City of Buffalo. The site is bordered by vacant industrial-commercial property to the east, Orlando Street to the west and Prenatt Street (a paper street) running to the south. The site is situated just north of the Buffalo River.

Site Features:
The site is 4.4 acres in size with relatively flat topography. The site consists mainly of open vacant land with a single commercial-industrial building located at the southeastern portion of the site. The eastern area of the site is a paved asphalt road comprised of the former Babcock Street. This site is located within the footprint of a larger former petroleum refining facility. The larger former refinery and storage facility (previously defined as BCP site C915201) was segregated into five smaller individual BCP sites for remediation and redevelopment purposes. The five BCP sites include: OU-1 (BCP Site C915201), OU-2 East (BCP Site C915201B), OU-2 West (BCP Site C915201C), OU-3 (BCP Site C915201D) and OU-4 (BCP Site C915201E). OU-2 West is the subject of this Decision Document.

Current Zoning and Land Use:
The entire site is currently zoned industrial and is generally surrounded by a mixture of industrial and commercial properties. There are a few isolated residential parcels located immediately to the north with several smaller commercial businesses operating on the site.

Past Use of the Site:
Since the 1880s, the site has been used for petroleum refining and storage. Refining operations terminated in the 1980s. Former refinery, lube plant and terminal activities have impacted this site. The site is the western section of the former refinery area.

Site Geology and Hydrogeology:
Three unconsolidated deposits exist throughout the majority of the site including a fill layer (cinders, ash, slag, sand, brick, concrete, etc.), underlain by an alluvial deposit layer consisting of silt, sands, gravel and clay and an alluvial deposit layer consisting of glacio-lacustrine clay which acts as a confining layer. Groundwater is approximately 3 to 20+ feet below ground surface and generally flows southwest toward the Buffalo River.

A site location map is attached as Figure 1 and 2.

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, alternatives that restrict the use of the site to commercial use (which allows for industrial use) as described in Part 375-1.8(g) were/was evaluated in addition to an alternative which would allow for unrestricted use of the site.

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 Applicant under the Brownfield Cleanup Agreement is a Volunteer. The Applicant does not have an obligation to address off-site contamination. However, the Department has determined that this site does not pose a significant threat to public health or the environment; 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

- soil vapor
- sub-slab vapor

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:

petroleum products	dibenz[a,h]anthracene
benzo(a)pyrene	arsenic

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.

There were no IRMs performed at this site during the RI.

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.

The primary sources of contamination in OU-2 West are from the historical petroleum refining, storage and distribution operations that have taken place across the majority of the site since the late 1800s. The site is also located in an area with an industrial history of metal production, chemical manufacturing, paint and varnish manufacturing and waste disposal.

Due to common historic operation and ownership of adjoining areas, OU-2 East (C915201B) and OU-3 (C915201D) sites have similar petroleum contaminants in soil and groundwater, but at greater levels. These areas are being evaluated and remediated under respective brownfield site remediation programs.

SOIL:
Petroleum Impacted Soil: Petroleum impacted soil is limited to two isolated areas in OU-2 West in the zero to four-foot depth interval. The petroleum contaminated soil in these areas meets the definition of grossly contaminated media.

Surface/Near Surface Soil:
The surface (0-2 inches) and near surface (0-2 feet) soil/fill intervals were sampled for metals, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) and polychlorinated biphenyls (PCBs). There were no exceedances of commercial soil cleanup objectives (CSCOs) for VOCs, PCBs and most metals. Arsenic (17.4 ppm/16 ppm CSCO) is the only metal to exceeded its respective CSCO in the shallow soil interval and at one location only. Two immediately adjacent samples did not exceed CSCOs, therefore arsenic is not a contaminant of concern.

The SVOC CSCO exceedance in the shallow soil interval include dibenz[a,h]anthracene up to 0.83 ppm/0.56 ppm CSCO and benzo[a]pyrene up to 4.5 ppm/1.0 ppm CSCO. These contaminants are situated in a localized area of the site.

Subsurface Soil:
Subsurface soil/fill, up to 20 feet below ground surface (fbgs), was sampled for metals, VOCs, SVOCs and PCBs. VOCs, SVOCs, Metals and PCBs did not exceed CSCOs.

Off-site impacts to soil from contaminants that have migrated from this site is not likely given the limited areas of on-site soil contamination exceeding CSCOs.

GROUNDWATER:
Groundwater across OU-2 West was sampled for VOCs, SVOCs and metals.

Separate phase petroleum product was not observed in monitoring wells and test pit trenches across OU-2 West. There were no exceedances for NYSDEC Ambient Water Quality Standards and Guidance Values (AWQSGV) for Class GA groundwater quality for VOC and SVOC parameters.

Metals: The AWQSGV were exceeded in at least one of two monitoring wells for the following metals including antimony up to 0.107 micrograms per liter (ug/l or ppb) (0.003 ppb), arsenic up to 0.0645 ppb (0.025 ppb), cadmium up to 0.0063 ppb (0.005 ppb), lead up to 0.561 ppb (0.025

ppb) and selenium up to 0.0218 ppb (0.01 ppm). Filtered samples revealed a relatively consistent pattern of reduced concentrations for antimony, cadmium, lead and selenium to levels below respective water quality standards.

No significant off-site impacts to groundwater from contaminants that have migrated from this site are expected due to generally low on-site contaminant concentrations in groundwater. Additional, the site is located in a municipality that prohibits the use of groundwater.

SOIL VAPOR, SUB-SLAB VAPOR
Soil vapor and sub-slab vapor sampling was conducted during two sampling events in 2008 and 2009 in existing Building 140, the only building situated in OU-2 West. Sub-slab vapor samples revealed methylene chloride at 8.3 microgram/cubic meter (ug/m^3).

Petroleum related compounds were also detected in sub-slab vapor and soil vapor in the vicinity of the occupied on-site building. Benzene was detected in soil vapor and sub-slab vapor up to 12 ug/m^3. Ethylbenzene was detected in soil vapor and sub-slab vapor up to 7.4 ug/m^3. Toluene was detected in soil vapor and sub-slab vapor up to 53 ug/m^3. Total xylene was detected in soil vapor and sub-slab vapor up to 34.6 ug/m^3. 2,2,4-trimethylpentane was detected in sub-slab vapor at 17,750 ug/m^3 in 2008, but had dropped to 560 ug/m^3 in 2009. The sub-slab soil vapor sample below building 140 also detected methane at 130,200 parts per million per volume (ppmv) in 2008 but had decreased to 7,007 ppmv in 2009. 12,500 ppmv is the lower explosive level for methane.

Additional soil vapor intrusion sampling will be conducted to confirm previous findings.

Off-site impacts to soil vapor from contaminants that have migrated from this site were not identified based on perimeter soil vapor sample results.

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*.

Contaminated groundwater at the site is not used for drinking or other purposes and the site is served by a public water supply that obtains its water from a source not affected by site contamination. Persons who enter the site can contact contaminants in the soil or groundwater by walking on the site, digging below the surface, or otherwise disturbing the soil. Volatile organic compounds in soil vapor (air spaces within the soil), may move into buildings and affect the indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Sampling identified the potential for impacts to indoor air quality in the existing on-site building and additional evaluation of the indoor air quality is needed.

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:

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent migration of contaminants that would result in groundwater or surface water contamination.

Groundwater

RAOs for Public Health Protection

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

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

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 and 6 NYCRR Part 375.

The selected remedy is a Track 2 commercial use cleanup remedy.

The elements of the selected remedy, as shown in Figure 3, are as follows:

1. REMEDIAL DESIGN

A remedial design program will be implemented to provide the details necessary for the construction, operation, maintenance, and monitoring of the remediation 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 gas 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. EXCAVATION

Excavation and off-site disposal of contaminant source areas, including:

- grossly contaminated soil, as defined in 6 NYCRR Part 375-1.2(u);
- soils that create a nuisance condition, as defined in Commissioner Policy CP-51 Section G.

Excavation and off-site disposal of all on-site soils which exceed commercial SCOs, as defined by 6 NYCRR Part 375-6.8 in the upper 15 feet. If a Track 2 commercial cleanup is achieved, a Cover System will not be a required element of the remedy.

Approximately 360 cubic yards of grossly contaminated soil will be removed for three discrete areas located in the eastern portion of the site. Approximately 1000 cubic yards of semi volatile contaminated soil exceed commercial SCOs will be excavated from one discrete area on the western portion of the site.

3. BACKFILL

On-site soil which does not exceed the above excavation criteria may be used to backfill the excavation.

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to complete backfilling of the excavation, as necessary, and establish the designed grades at the site.

4. ENGINEERING AND INSTITUTIONAL CONTROLS

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve a Track 2 commercial cleanup at a minimum and will include an environmental easement and site management plan as described below.

Institutional Control

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- 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);
- allow the use and development of the controlled property for commercial and 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. SITE MANAGEMENT PLAN

A Site Management Plan, 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 environmental easement discussed in Paragraph 4 above.

   Engineering Controls: No engineering controls are required.

   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 environmental easement including any land use and groundwater use restrictions;
   - a provision for evaluation of the potential for soil vapor intrusion for any existing and new buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
   - 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. Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
   - monitoring of groundwater to assess the performance and effectiveness of the remedy;
   - a schedule of monitoring and frequency of submittals to the Department;
   - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional Control Plan discussed above.

Contingent Track 2

The intent of the remedy is to achieve Track 2 commercial use, therefore, no engineering control is needed to achieve the SCOs. In the event that Track 2 commercial use is not achieved, specifically achievement of soil cleanup objectives, the following contingent remedial element will be required and the remedy will achieve a Track 4 commercial cleanup.

6. COVER SYSTEM

A site cover will be required to allow for commercial use of the site in areas where the upper one foot of exposed surface soil will exceed the applicable soil cleanup objectives (SCOs). The site cover may consist of paved surface parking areas, sidewalks, or a soil cover. Where a soil cover

is to be used it will be a minimum of one feet of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material as set forth in 6 NYCRR Part 375-6.7(d). In areas where building foundations or building slabs preclude contact with the soil, the requirements for a site cover will be deferred until such time that they are removed.

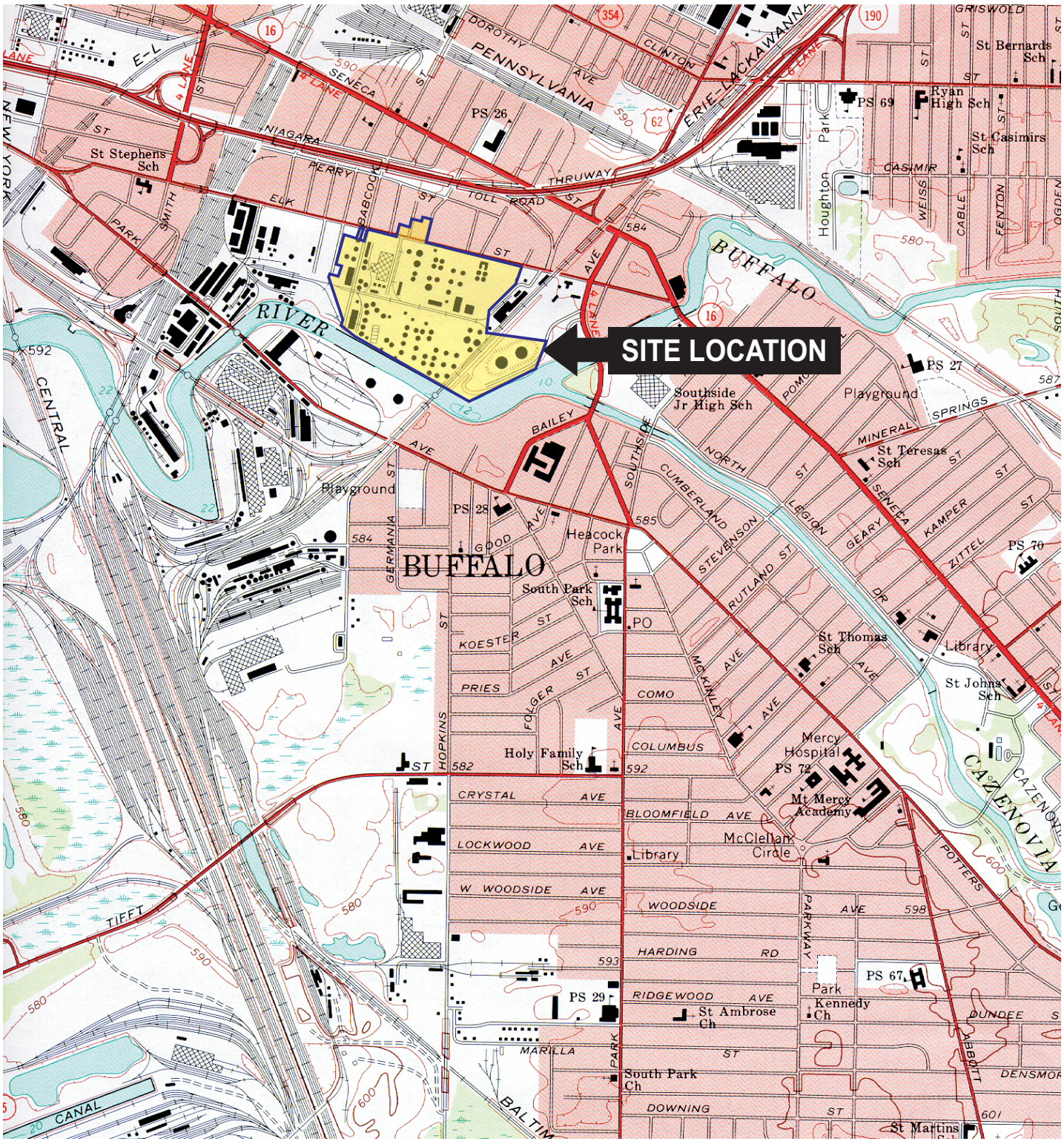
The following additional SMP items will be required if a cover system is constructed at the site.

The Engineering Control Plan will also identify all engineering controls for the site and detail the steps and media-specific requirements necessary to ensure the following engineering control remains in place and effective:

– Engineering Controls: The soil cover discussed above.

This plan will also include, but may not be limited to:

- provisions for the management and inspection of the identified engineering controls; and
- a provision that should an existing or future building or building foundation be demolished in the future, a cover system consistent with that described in Paragraph 6 above will be placed in any areas where the upper one foot of exposed surface soil exceeds the applicable SCOs.



QUADRANGLE LOCATION

SOURCE:
USGS; 1965, Buffalo SE, New York
7.5 Minute Topographic Quadrangle

N

0 2000'

Title:

SITE LOCATION MAP

EXXONMOBIL FORMER BUFFALO TERMINAL, BUFFALO, NEW YORK

Prepared for:

EXXONMOBIL OIL CORPORATION

ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: W.K.	Date: 29AUG12	FIGURE
Prepared by: J.A.D.	Scale: AS SHOWN	1
Project Mgr.: N.C.	Project No.: 0172.0052Y015	
File No.: 0172.0052Y441.02.CDR		

V:\CAD\PROJECTS\0172\Y0052Y441\0172.0052Y441.02.CDR

Existing
OU-1 Site
C915201

0.3 ac.

OU-2 West
Site
C915201 C

OU-2 East Site
C915201B

22.7 ac.

4.1 ac.

6.7 ac.

OU-3 Site
C915201D

6.8 ac.

16.7 ac.

OU-4 Site
C915201E

17.0 ac.

Exhibit C:
Current Proposed BCA Divisions
as of Feb. 20, 2017

- Original Exxon-Mobil BCA (OU-1)
- New ESCP BCA Application (OU-2, partial)
- New ESCP BCA Application (OU-2, partial)
- New ESCP BCA Application (OU-3)
- New Exxon-Mobil BCA Application (OU-4)

Elk Street
Commerce Park, LLC

Figure 2

2/20/17

LEGEND

STABILIZE SOILS TO CLAY ELEVATION

STABILIZE SOILS TO 5 FOOT DEPTH BELOW EXISTING GRADE

(10) SOIL DEPTH TO CLAY CONTOUR (FROM EXISTING GRADE)

OU2 WEST IMPACTED SOIL EXCAVATION LIMITS

EXCAVATION CELL LIMTS

EXCAVATION FLOOR SAMPLE ONE PER 900 SF

EXCAVATION WALL SAMPLE ONE PER 30 LF

OU2 WEST

N=1044295.4316
E=1080386.3567

N=1044245.8833
E=1080372.5090

N=1044224.2897
E=1080366.5910

N=1044241.4944
E=1080099.9796

N=1044232.0157
E=1080138.8403

EXCAVATE TO A DEPTH OF 1 FT BELOW EXISTING GRADE

N=1044137.2566
E=1080266.5141

N=1044129.5659
E=1080292.8624

N=1044144.4714
E=1080117.4870

N=1044130.1941
E=1080176.0209

N=1044042.8652
E=1080154.7201

N=1044066.6212
E=1080057.3255

ORLANDO AVENUE

FORMERLY BABCOCK AVENUE

FORMERLY PRENATT STREET

OU2

OU-2 East

MW-47

0 25 50 100
SCALE IN FEET

OU-3

Prepared/Date: WJW 3/09/18
Checked/Date: RSE 3/09/18

ELK STREET PROPERTY BUFFALO, NY	amec foster wheeler	OU2 WEST Proposed Excavation Project 3617-16-7397 Figure 3