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submitted via electronic mail

November 21, 2025

Ms. Megan Kuczka
New York State Department of
Environmental Conservation – Region 9
700 Delaware Avenue
Buffalo, New York 14209

RE: Excavation Work Plan – Revision 1
Operable Unit 3 (OU-3)
Buckeye Terminals, LLC
Buffalo Terminal, 625 Elk Street
Buffalo, New York 14210
NYSDEC Site Number C915201D

Dear Ms. Kuczka:

The enclosed OU-3 *Excavation Work Plan – Revision 1* (the revised OU-3 EWP) has been prepared to address your comments outlined in electronic mail correspondence received on November 13, 2025. The revised OU-3 EWP describes the procedures to be implemented during the planned ground-intrusive activities that will occur within OU-3 for the installation of new fire suppression distribution piping and associated pipe rack support system at the Buckeye Buffalo Terminal.

It should be noted that following receipt of your comments on November 13, 2025, Buckeye's installation contractor has made modifications to their installation plans for the pipe rack supports needed for the existing above-grade pipe rack system located along the west side of the facility (i.e., the defined exclusion zone inside OU-3 for the existing pipe-rack system). The previous plan to install four (4) new helical piers within the OU-3 exclusion zone will no longer occur in this area. Instead, Buckeye's installation contractor will be fabricating additional pipe supports to the existing above-grade, pipe-rack infrastructure and no ground-intrusive work will need to be completed within the OU-3 exclusion zone. As indicated in the revised OU-3 EWP, the proposed ground-intrusive and cover system disturbance locations positioned on the east side of the facility have been confirmed to be located within the OU-3 boundary and will be completed in accordance with the revised OU-3 EWP.

In November 2025, Buckeye's installation contractor completed the removal of ten (10) inactive, above-grade fire hydrants/values from the existing, inactive fire suppression infrastructure located in OU-3. At each location, the contractor severed the hydrant/valve at grade, filled the pipe opening with stone to the meet the existing grade, and the ground surface will be restored with

an asphalt patch during the OU-3 restoration work. There was no asphalt pavement or subsurface soil disturbed during the removal of the inactive hydrants/valves. There is no other existing fire suppression piping planned for removal or capping on OU-3.

Should you have any questions or comments regarding the updated information provided herein, please contact Robert N. Sickler at (800) 220-3069, extension 4052, or Genevieve F. Bock, at extension 4302.

Respectfully Submitted,
Groundwater & Environmental Services, Inc.

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Enclosure

cc: Andrea Caprio, NYSDEC
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Buckeye Terminals, LLC

Excavation Work Plan – Revision 1

Buffalo Terminal – Operable Unit 3
625 Elk Street
Buffalo, New York 14210
NYSDEC Site Number C915201D

November 21, 2025

Excavation Work Plan – Revision 1

Buffalo Terminal – Operable Unit 3
625 Elk Street
Buffalo, New York 14210
NYSDEC Site Number C915201D

Prepared for:
Buckeye Terminals, LLC
The Buckeye Building
6161 Hamilton Boulevard
Allentown, Pennsylvania 18106

Prepared by:
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GES Project:
0925012

Date:
November 21, 2025

for

Rebecca L. Keating
Staff Geologist

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Principal Engineering Manager

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Senior Project Manager

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Acronyms

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Acronyms

6NYCRR	Title 6 of the New York Codes, Rules, and Regulations
AST	Above-Ground Storage Tank
BCA	Brownfield Cleanup Agreement
BCP	Brownfield Cleanup Program
bgs	below ground surface
Buckeye	Buckeye Terminals, LLC
CAMP	Community Air Monitoring Program
CFR	Code of Federal Regulations
DER	Division of Environmental Remediation
EC	Engineering Control
ESCP	Elk Street Commerce Park, LLC
EWP	Excavation Work Plan
HASP	Health and Safety Plan
GES	Groundwater & Environmental Services, Inc.
g/m^3	grams per cubic meter
LaBella	LaBella Associates
MOSF	Major Oil Storage Facility
$\mu g/m^3$	micrograms per cubic meter
NYS	New York State
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
OU-2E	Operable Unit 2 East
OU-3	Operable Unit 3 (BCP Site No. C915201D)
OU-4	Operable Unit 4
OU-5	Operable Unit 5 (Buffalo River)
PID	photoionization detector
PE	Professional Engineer
PM-10	particulate matter less than 10 micrometers in size
ppm	parts per million
QEP	Qualified Environmental Professional
SMP	Site Management Plan
STEL	Short-Term Exposure Limit
SVOC	semi-volatile organic compound
VOC	volatile organic compound
WM	Waste Management of New York, LLC

1 Introduction

The former ExxonMobil Buffalo Terminal Operable Unit 3 (OU-3) located collectively on the properties identified at 503 and 625 Elk Street and 1 Babcock Street in Buffalo, New York, is regulated under the New York State (NYS) Brownfield Cleanup Program (BCP Site Number C915201D) by the New York State Department of Environmental Conservation (NYSDEC). A portion of OU-3 is owned and operated by Buckeye Terminals, LLC (Buckeye) as an active petroleum major oil storage facility (MOSF) that is located at 625 Elk Street in Erie County, Buffalo, New York (hereinafter referred to as the "Site"). A Site Location Map is provided as **Figure 1**.

Groundwater & Environmental Services, Inc. (GES), on behalf of Buckeye, has prepared the *Excavation Work Plan* for OU-3 (the OU-3 EWP) to summarize the proposed construction plans for the installation of new fire suppression distribution piping and the associated pipe rack support system on portions of the Site and define actions that are required for compliance with the OU-3 February 2023 draft revised (Revision 001) *Site Management Plan* (the draft OU-3 SMP). Specifically, the OU-3 EWP addresses the requirements related to Excavation Controls as outlined in the draft OU-3 SMP.

1.1 Site Information

According to information provided in the draft OU-3 SMP, which was prepared by LaBella Associates (LaBella) of Buffalo, New York, for Elk Street Commerce Park, LLC (ESCP), as a volunteer to remediate OU-3, the Site entered into a Brownfield Cleanup Agreement (BCA Number C915201D-08-17) with the NYSDEC on October 2, 2017.

The active Buckeye Buffalo Terminal portion of OU-3 is approximately 15.68 acres and contains multiple above-grade petroleum storage tanks (ASTs), a truck loading rack and associated above-grade petroleum distribution piping, and a storm-water retention basin. The Site is bounded to the north by a portion of operable unit 2 East (OU-2E); to the south by operable unit 5 (OU-5, Buffalo River); to the east by operable unit 4 (OU-4); and, to the west by the remaining portions of OU-3 (parcels identified as 503 Elk Street and 1 Babcock Street). A Site Map showing the subject property and surrounding properties is provided as **Figure 2**.

1.2 Regulatory Notification

In accordance with the draft OU-3 SMP requirements, the OU-3 EWP describes the procedures to be implemented during the proposed OU-3 ground-intrusive activities at the Site. On November 7, 2025, GES, on behalf of Buckeye, provided the required 15-day notification of ground intrusive activity pursuant to the OU-3 SMP to the NYSDEC.

The 15-day advance notification was made to:

1. Megan Kuczka, NYSDEC DER Project Manager, megan.kuczka@dec.ny.gov
2. Andrea Caprio, NYSDEC DER Project Manager's Supervisor, andrea.caprio@dec.ny.gov
3. Kelly A. Lewandowski, NYSDEC Site Control, kelly.lewandowski@dec.ny.gov

New York State Department of Environmental Conservation
Division of Environmental Remediation, Region 9
270 Michigan Avenue
Buffalo, New York 14203-2915
Phone: 716-851-7220

This EWP notification included:

- A detailed description of the proposed work to be performed by Buckeye's installation contractor, including the location and aerial extent of the proposed ground disturbance areas related to the installations of the helical piers for the supporting the above-grade fire suppression piping and a section of the subgrade fire suppression piping planned installation in an excavated trench, estimated volumes of soil to be excavated, and the site restoration plans;

- A summary of the environmental conditions anticipated to be encountered in the work areas, including the nature and concentration levels of contaminants of concern, potential presence of grossly contaminated media, and plans for any pre-construction sampling;

- A schedule for the work detailing the start and estimated completion dates of all proposed OU-3 ground-intrusive work;

- A summary of the applicable components of the OU-3 EWP;

- A statement that the work will be performed in compliance with the OU-3 EWP and 29 Code of Federal Regulations (CFR) 1910.120;

- A copy of the contractor's health and safety plan (HASP);

- Identification of the disposal facilities for potential waste streams; and,

- Identification of sources of any anticipated backfill, along with all required chemical testing results.

2 Description of Proposed Work

A new fire suppression system is planned for installation at the Buckeye Buffalo Terminal to provide fire-fighting protection for the active MOSF infrastructure located on portions of OU-3 and OU-4 [Note: An EWP for the proposed construction work on OU-4 will be provided separately to the NYSDEC.]. The proposed construction work for the OU-3 fire suppression system will primarily involve the installation of new, above-grade steel piping that will be secured to a network of existing pipe racks currently located at the Site and below-grade steel piping to cross the primary driving area between OU-3 and OU-4. **Figure 3** shows the proposed layout of the new fire suppression piping planned for both OU-3 (highlighted on figure) and OU-4.

There are two (2) proposed areas in OU-3 that will involve ground-intrusive activities and one (1) proposed area that will disturb only the OU-3 cover system (i.e., asphalt pavement) as part of the fire suppression system construction project. A qualified environmental professional (QEP), as defined in Title 6 of the New York Codes, Rules, and Regulations (6 NYCRR) Part 375, who is a professional engineer (PE) licensed and registered in NYS has been involved in the preparation of this EWP and will be reviewing progress of the work at the Site. A designee who reports to the NYS PE will be physically present at the Site during all OU-3 ground-intrusive/cover system intrusive work activities completed by Buckeye and its contractors. The OU-3 ground-intrusive disturbance activities include, but are not limited to, the removal of asphalt pavement, drilling for the installation of the helical piers, soil excavation/trenching for the installation of subgrade fire suppression piping, and handling, staging, and load-out of the excavated OU-3 soil.

2.1 Helical Piers Installation

There is one (1) proposed location within OU-3 that will require the installation of new pipe rack supports (i.e., helical piers) to support a section of new above-grade fire suppression piping. **Figure 4** shows the location where the helical piers that will be installed within OU-3 (near the OU-3/OU-4 boundary along the concrete retaining wall on the east side of the Site). There are four (4) new helical piers planned for installation along the concrete retaining wall near the OU-3/OU-4 boundary that will support a new above-grade section of the fire suppression piping equipped with a fire hose connection point and valve. The proposed location for the four (4) new helical piers within OU-3 are in an area with existing asphalt pavement at the surface and no reported subsurface liner. **Figure 5** specifies the locations of the intrusive activities on a map that more specifically shows the OU-3 cover systems at the Site.

At each helical pier location, a maximum opening of 3-feet-wide by 3-feet-wide will be sawcut in the existing asphalt pavement and removed prior to installing the helical pier. The helical piers are constructed with a dedicated section of solid-stem augers positioned at the tip of the pier shaft that will be directly drilled into the subsurface to approximately ten (10) feet below ground surface (bgs). **Figure 6** provides a schematic with the specifications of the helical piers.

A rotary drilling tool equipped with a torque monitoring device will be attached to a skid steer to install the helical piers to the required completion depth. It is likely that little-to-no soil cuttings will be generated during the installation of each helical pier.

It is possible that soil beneath the asphalt pavement in the helical pier installation locations within OU-3 may be impacted by volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and/or metals from historic remaining contamination associated with the petroleum refining, storage, and distribution operations that have taken place at the Site. If any soil cuttings are generated during the helical pier installation activities, those cuttings and all asphalt debris removed will be managed in accordance with the soil staging methods and soil excavation and load-out plans provided below in **Section 2.4** and **Section 2.5**. The disturbed area around each newly installed helical pier will be resurfaced with either asphalt pavement or concrete to match the surrounding grade level.

2.2 At-Grade Fire Suppression Piping and Cross-Over Ramp Installation

There is one (1) proposed OU-3 cover system disturbance area located between Tank 90 and Tank 97 on the eastern side of OU-3. **Figure 4** and **Figure 5** show the proposed location where the OU-3 cover system will be disturbed for the installation of the grade-level fire suppression piping. In this area, a section of the existing asphalt pavement approximately 25-feet-wide by 25-feet-wide will be sawcut and removed from the OU-3 driveway. There are no plans to disturb, excavate, or remove the stone/soil material beneath the existing asphalt pavement. The asphalt debris will be managed in accordance with the soil staging methods and soil excavation and load-out plans provided below in **Section 2.4** and **Section 2.5**. Imported fill will be utilized as bedding material following the removal of the asphalt pavement for the section of grade-level fire suppression piping installed across the OU-3 driveway. Additional details about the planned imported fill materials are included in **Section 2.8**.

The grade-level fire suppression piping will be inserted through a larger diameter steel, pipe sleeve for protecting the fire suppression piping. Additional imported fill will be placed atop the grade-level fire suppression piping and pipe sleeve and built up and tapered to the north and south of the pipe cross-over to create a cross-over ramp for continued vehicular access in OU-3. The new cross-over ramp will be capped with replacement asphalt pavement to restore the OU-3 cover system, and the asphalt seams at the north and south ends of the ramp will be sealed with a hot asphalt sealant.

The grade-level fire suppression piping exiting the east side of the new cross-over ramp will continue east and transition back onto the existing above-grade pipe rack system located along the south side of Tank 90. Before the OU-3/OU-4 boundary, the above-grade fire suppression piping will reach a pipe junction on OU-3 where the new fire suppression piping will split in two (2) directions. An extension of new fire suppression piping will continue to the east as above-grade piping onto OU-4 [Note: Refer to the OU-4 EWP for the pipe installation details on OU-4.] and a second extension will turn to the south at the pipe junction and transition to subgrade

piping on OU-3. Refer to **Section 2.1** and **Section 2.3** for details concerning the installation of this pipe extension to the south on OU-3.

2.3 Subgrade Fire Suppression Piping Installation

There is one (1) proposed ground-intrusive disturbance area located near the OU-3/OU-4 boundary on the eastern side of OU-3 where the new fire suppression piping will transition from the above-grade pipe rack system to a below grade piping run to traverse beneath the OU-3 driveway. **Figure 4** shows the location where the proposed trenching will be completed on OU-3 for the installation of the subgrade fire suppression pipe section. The subgrade fire suppression piping will transition back to above-grade piping on the opposite side of the OU-3 driveway along the concrete retaining wall to complete the installation of a pipe junction (for the installation of a pipe extension to the east onto OU-4) and the above-grade fire suppression piping with hose connection discussed in **Section 2.1**. The proposed location for the installation of the subgrade fire suppression piping on OU-3 contains asphalt pavement at the surface and no reported underlying liner.

The proposed trenching will be marked out on the asphalt surface and then sawcut approximately two (2) feet wide to remove the section of asphalt pavement for the OU-3 ground-intrusive activities. Approximately 50 linear feet of proposed trench in the work area will be excavated to a depth of approximately five (5) feet bgs to complete the installation of the subgrade fire suppression piping. It is anticipated that soil beneath the asphalt pavement in the proposed trenched area may be impacted by VOCs, SVOCs, and/or metals from historic remaining contamination associated with the petroleum refining, storage, and distribution operations that have taken place at the Site. A total volume of ten (10) tons of soil is estimated to be excavated from the OU-3 pipe trenches. All excavated soil and asphalt debris will be managed in accordance with the soil staging methods and soil excavation and load-out plans provided below in **Section 2.4** and **Section 2.5**.

Imported fill will be utilized as bedding and backfill material for the new subgrade piping in addition to imported fill utilized for the subbase level for the replacement asphalt paving. Additional details about the planned imported fill materials are included in **Section 2.8**. Replacement asphalt pavement will be restored in the trench scars to meet the existing grade surface, and the asphalt seams will be sealed with a hot asphalt sealant. The disturbed areas where the fire suppression piping transitions from either above grade to subgrade or subgrade to above grade will be resurfaced with either asphalt pavement or concrete.

2.4 Soil Staging Methods

Excavated soil and asphalt debris generated from OU-3 will be managed within the planned disturbance areas and then either loaded into lined roll-off containers, and/or temporarily staged on an impervious surface (i.e., asphalt pavement) in OU-3 prior to placement into a roll-off container or dump truck. If necessary, soil stockpiles will be placed on plastic sheeting, covered, and secured daily with plastic sheeting until the soil is transported off site for disposal. Hay bales or other sediment control devices may be used if a soil stockpile is located near a catch basin or other discharge point. Soil stockpiles will be routinely inspected and damaged sheeting will be replaced. Soil stockpiles will be inspected by the QEP's designee a minimum of once per week and after every significant storm event. The weekly inspections will be documented in a logbook and maintained at the Site.

2.5 Soil Excavation and Load-Out

A QEP's designee will oversee all ground-intrusive work and the excavation and load-out of all excavated soil and asphalt debris from OU-3. Buckeye and its contractor(s) are responsible for safe execution of all ground-intrusive and other work performed under the OU-3 EWP. Buckeye's installation contractor will submit a UDig NY notification for a public utility mark out to be completed at the Site prior to the start of the OU-3 ground-intrusive activities. The QEP or their designee will evaluate all available information for the presence of subsurface utilities at the Site prior to the start of the ground-intrusive work.

The roll-off containers will be appropriately lined, tarped, manifested, and placarded in accordance with the appropriate federal, state, local, and New York State Department of Transportation (NYSDOT) requirements (and all other applicable transportation requirements). The off-site transport of materials will be performed by a licensed waste hauler in accordance with the appropriate local, state, and federal regulations, including 6 NYCRR Part 364.

A truck wash area will not be set up or operated at the Site as the roll-off containers will be staged on asphalt pavement and the transport trucks will utilize the asphalt-paved access roads while entering and exiting the Site to pick up the roll-off containers. However, the QEP's designee will be responsible for the inspection of the filled roll-off containers to ensure that the exterior and top rim of each roll-off container is free of soil before leaving the Site.

2.6 Soil Characterization and Off-Site Disposal

Characterization soil sampling and laboratory testing will be required to obtain an approved waste profile for off-site transport and disposal of the OU-3 excavated soil. The characterization soil sampling will be completed by the QEP's designee during the start of the OU-3 ground-intrusive work completed by Buckeye's installation contractor. One (1) composite soil sample will be collected at the discretion of the chosen waste disposal facility from the spoils generated during the excavation of the trench for the installation of the subgrade fire suppression piping. The proposed trenches are anticipated to be excavated to a maximum depth of approximately five (5) feet bgs for the installation of the subgrade fire suppression piping.

The soil excavated and asphalt debris removed from OU-3 will be disposed of offsite pending laboratory results of the characterization sampling data and receipt of an approved waste profile. The intended waste disposal facility to be used for the OU-3 soil disposal will be the non-hazardous waste Chaffee Landfill Management Facility (NYSDEC Permit Number 9-1462-00001/00006) located at 10860 Olean Road, in Chaffee, New York. This landfill is owned and operated by Waste Management of New York, LLC (WM). Soil transported offsite will be handled, at a minimum, as a Municipal Solid Waste per 6 NYCRR Part 360-1.2.

2.7 On-Site Soil Reuse

Buckeye and its installation contractor are not planning to reuse any materials excavated during the OU-3 ground-intrusive work. All soil excavated from OU-3 is planned to be temporarily staged at the Site until the characterization sampling and testing have been completed to obtain approval from the waste facility to transport the soil off-site for disposal.

2.8 Backfill from Off-Site Sources

Incoming backfill material will be obtained by Buckeye's installation contractor and come from a NYS-certified clean quarry, Amrize Aggregates and Asphalt's Lockport Quarry (NYSDOT Sources #5-5R and #2985). The NYSDEC *Request to Import/Reuse Fill or Soil* forms for the planned imported fill types are provided in **Appendix A** and include the aggregate grading specifications and the NYSDOT source letters for both fill types. Any off-site sources of backfill that have not been identified at this time in the OU-3 EWP will be provided to the NYSDEC under a separate cover. All imported fill will meet the backfill and cover soil quality standards established in 6NYCRR Part 375-6.7(d). Trucks entering the Site with the imported backfill will be securely covered with tarps and utilize the asphalt-paved access roads for deliveries to the Site. Imported backfill will be stockpiled separately from the excavated materials.

2.9 OU-3 Cover System Restoration

The existing OU-3 cover system in the locations of the OU-3 planned ground-intrusive work for the installation of the helical piers and the subgrade fire suppression piping is comprised of asphalt pavement and no reported subsurface liner. After completion of the installation activities, the OU-3 cover system will be restored in a manner that complies with the draft OU-3 SMP. Imported fill will be used to backfill the excavated trenches and provide subbase material for the installation of replacement asphalt pavement to restore the surface areas to meet the existing grade levels in each work area. The disturbed areas around the base of the new helical piers and the fire suppression piping transitions to/from above or below grade will be resurfaced with either asphalt pavement or concrete.

2.10 Fluids Management

Groundwater is not expected to be encountered during the completion of the ground-intrusive work in OU-3. However, in the event of storm-water run-off accumulating in an open trench, excavation dewatering may be necessary for Buckeye's installation contractor to complete the installation of the subgrade fire suppression piping. Liquids extracted from any OU-3 excavation dewatering event will be temporarily staged on site in an appropriate containment device and then will be handled, transported, and disposed in accordance with applicable local, State, and Federal regulations. Dewatering will not be recharged back to the land surface or subsurface at the Site, and will be managed offsite, unless prior approval is obtained from the NYSDEC.

3 Environmental Compliance Monitoring Activities

Pursuant to the draft OU-3 SMP Section 1.3 Notifications, GES, on behalf of Buckeye and its contractors, is notifying the NYSDEC of the proposed OU-3 ground-intrusive activities at the Site. All work will be performed in compliance with the OU-3 EWP, which is part of the draft OU-3 SMP for the Site, and Title 29 Code of Federal Regulations (CFR) Part 1910.120.

3.1 Soil Screening Methods

Soil screening activities will be performed during the ground-intrusive work completed in OU-3 by the QEP's designee using a field-calibrated photoionization detector (PID). The soil screening data will be documented in a logbook and maintained at the Site. All soil excavated in OU-3 is planned to be temporarily staged at the Site and then transported off-site for disposal. Further discussion of the off-site soil disposal is provided above in **Section 2.6**.

3.2 Community Air Monitoring Plan

During the ground-intrusive work activities to complete the installation of the OU-3 helical piers and the subgrade fire suppression piping, the following Community Air Monitoring Plan (CAMP) will be implemented in accordance with the draft OU-3 SMP. Real-time, continuous air monitoring for total VOCs and respirable dust (particulate matter) will be performed daily during the OU-3 ground-intrusive work activities. The OU-3 ground-intrusive disturbance activities include but are not limited to the removal of the asphalt pavement, drilling for the installation of the helical piers, soil excavation and trenching for the installation of the subgrade fire suppression piping, and handling, staging, and load-out of the excavated OU-3 soil.

Three (3) portable air monitoring stations will be set up and deployed by the QEP's designee at the start of each work day before any ground-intrusive activities are initiated. In general, one (1) upwind monitoring location and two (2) downwind air monitoring locations will be selected at the perimeter of the work area based on the predominant wind direction. Security, accessibility, and the proximity of the work area to potential receptors will also be considered in selecting monitoring locations each day. Each air monitoring station will include a data-logging PID for measuring the airborne concentration of total VOCs and a data-logging aerosol photometer for measuring the airborne particulate matter. The air monitoring equipment will be housed in portable, weather-tight enclosures, which will be mounted on surveying tripods at a height of approximately 4.5 to 5.5 feet above grade (breathing zone height).

3.2.1 Total VOC Monitoring, Response Levels, and Actions

Total VOCs must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The air monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or

for an appropriate surrogate. The air monitoring equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the action levels specified in accordance with the New York State Department of Health (NYSDOH) *Generic Community Air Monitoring Plan* (Appendix 1A) found in the Division of Environmental Remediation 10 (DER-10), Technical Guidance for Site Investigation and Remediation (NYSDEC, May 2010):

- If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds five (5) parts per million (ppm) above background for the 15-minute average, the ground-intrusive work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, the ground-intrusive work activities can resume with continued monitoring.
- If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of five (5) parts per million (ppm) over background but less than 25 ppm, the ground-intrusive work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/ commercial structure, whichever is less but in no case less than 20 feet, is below five (5) ppm over background for the 15-minute average.
- If the organic vapor level is above 25 ppm at the perimeter of the work area, the ground-intrusive work activities must be shutdown.
- All 15-minute readings must be recorded and be available for NYSDEC and NYSDOH personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

3.2.2 Fugitive Dust and Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone during the ground-intrusive work activities. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) with the following minimum performance standards:

- Objects to be measured: Dust, mists, or aerosols.
- Measurement ranges: 1 to 400,000 micrograms per cubic meter (µg/m^3).
- Precision (2-sigma) at constant temperature: +/- 10 grams per cubic meter (g/m^3) for one (1) second averaging and +/- 1.5 g/m^3 for sixty second averaging.
- Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd = 2 to 3 :m, g= 2.5, as aerosolized).
- Resolution: 0.1% of reading or 1 g/m^3, whichever is larger.
- Particle size range of maximum response: 0.1-10.
- Total Number of Data Points in Memory: 10,000.
- Logged data: Each data point with average concentration, time/date, and data point number.

- Run summary: Overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), short-term exposure limit (STEL) concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number.
- Alarm averaging time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required.
- Operating time: 48 hours (fully charged nickel-cadmium battery); continuously with charger.
- Operating temperature: -10 to 50 degrees Celsius (14 to 122 degrees Fahrenheit).
- Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes. In addition, fugitive dust migration will be visually assessed during the ground-intrusive work activities.

Particulate monitoring response and action levels include:

- If the downwind PM-10 particulate level is 100 µg/m^3 greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 µg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 µg/m^3 above the upwind level, the ground-intrusive work must be stopped and a reevaluation of activities initiated. Work can resume provided that the dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 µg/m^3 of the upwind level and in preventing visible dust migration.

The locations of the air monitoring stations in the OU-3 work area will be adjusted on a daily or more frequent basis by the QEP's designee as necessary based on actual wind directions to provide an upwind and downwind monitoring stations. If the action levels are exceeded, the ground-intrusive work activities shall be stopped until particulate monitoring indicates particulates are within operating ranges. The use of additional engineering controls (i.e., wetting soils, etc.) may be required to continue the ground-intrusive activities while maintaining particulate emissions within the operable range.

Community air monitoring results will be submitted electronically to the NYSDEC and the NYSDOH Project Managers on a daily basis during the OU-3 ground-intrusive work. Exceedances of the action levels identified in this CAMP and any corrective measures taken will be reported to the NYSDEC and NYSDOH Project Managers within 24 hours of an occurrence.

3.3 Additional Control Plans

3.3.1 Odor Control Plan

This odor control plan is capable of controlling emissions of nuisance odors off-site. Specific odor control methods to be used on a routine basis, if necessary, will include spraying down the trenches with water to prevent nuisance odors. If nuisance odors are identified at the Site boundary, or if an odor complaint is received, work will be halted, and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. The NYSDEC and the NYSDOH will be notified of all odor events and of any other complaints about the project. Implementation of any odor control measures will be the responsibility of Buckeye's installation contractor under the direction of the QEP or their designee.

All necessary means will be employed to prevent on- and off-site nuisances. At a minimum, these measures will include limiting the area of open excavations and size of soil stockpiles and/or shrouding the roll-off containers, soil stockpiles, and open excavations with tarps and other covers (if necessary) to cover exposed odorous soils. If odors develop and cannot be otherwise controlled, additional means to eliminate odor nuisances may include the use of chemical odorants in spray or misting systems, if necessary.

3.3.2 Dust Control Plan

Dust suppression will be achieved by wetting the soil in the open trenches during the ground-intrusive disturbance activities with water to reduce air-borne dust and shrouding the roll-off containers and soil stockpiles with tarps and other covers, as necessary.

4 Health and Safety Plan

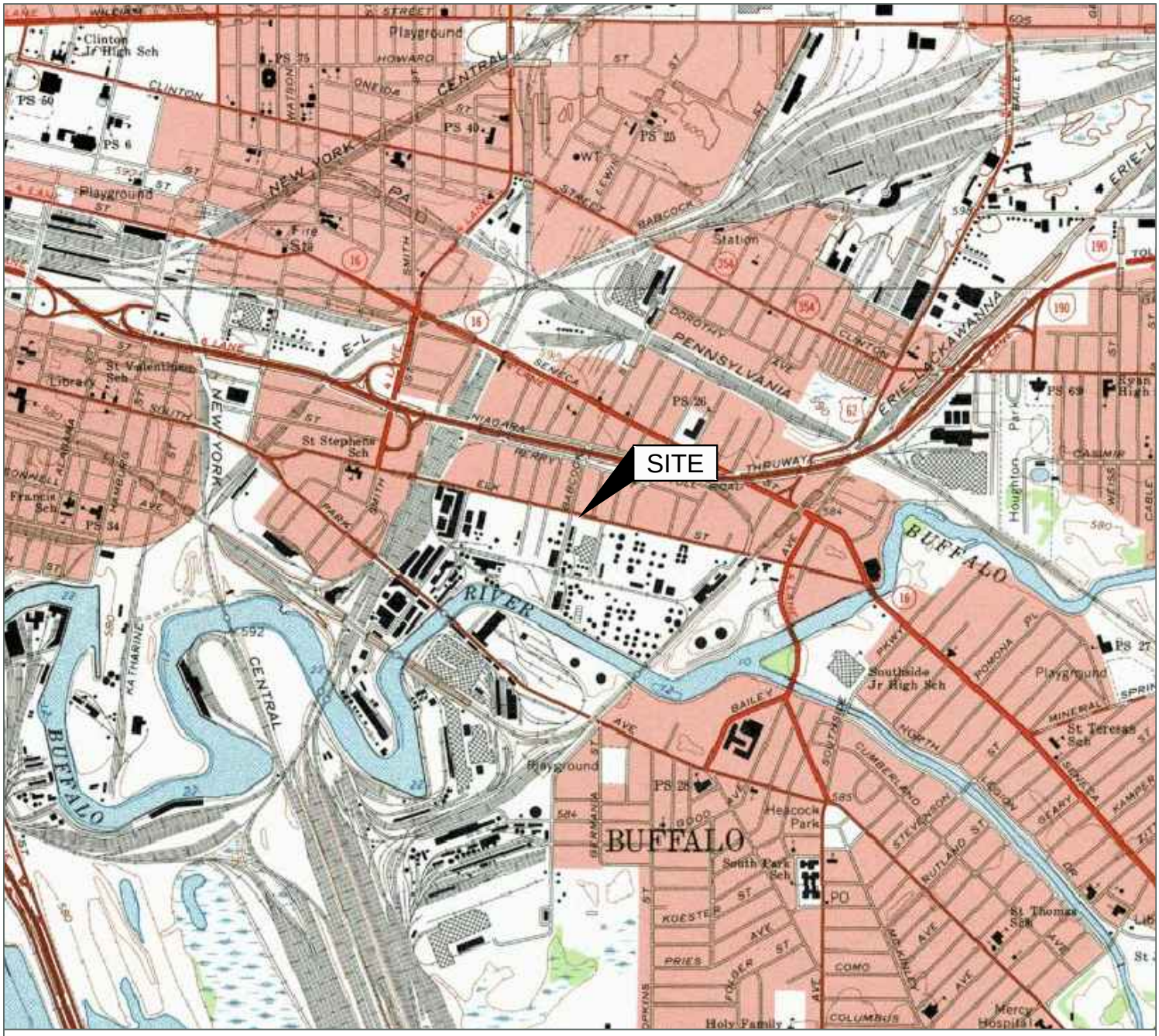
The OU-3 HASP from the draft OU-3 SMP has been updated with the GES contacts and field tasks that are expected during the OU-3 ground-intrusive activities and is provided in **Appendix B**.

5 Regulatory Reporting and Schedule

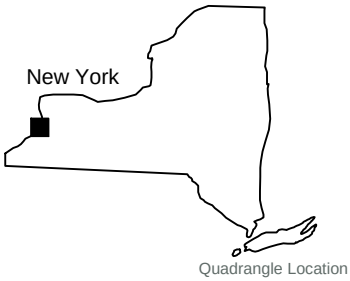
In addition to the submission of the daily air monitoring reports to the NYSDEC and NYSDOH during the OU-3 ground-intrusive activities, GES will prepare a final post-construction summary report that will summarize the environmental field activities, cover system and site restoration work, and soil disposal management activities following the completion of the OU-3 construction and site restoration work completed by Buckeye's installation contractor. The OU-3 post-construction summary report will be provided to the NYSDEC and NYSDOH and will include a certification from a NYS PE.

The proposed OU-3 ground-intrusive work for the fire suppression system construction work within OU-3 is anticipated to be initiated in December 2025. The time of completion of the proposed OU-3 ground-intrusive work is estimated to be completed by the end of the 2025 calendar year but will be weather dependent. The NYSDEC will be notified of any changes or updates to the OU-3 ground-intrusive schedule.

Figures



Source:
USGS 7.5 Minute Series
Topographic Quadrangle, 1965
Buffalo SE, New York
Contour Interval = 10'



Quadrangle Location

Site Location Map

Buckeye Buffalo Terminal
625 Elk Street
Buffalo, New York

Drawn
W.G.S.
Designed

Approved

Date
5/22/18
Figure
1

N

Scale In Feet
0 2000

GES
Groundwater & Environmental Services, Inc.

ELK STREET

ELK STREET

635 ELK STREET
PARCEL 3

OU2 EAST

PARCEL 1
503 ELK STREET
BCP SITE C915201B

OU2 WEST
45 ORLANDO STREET
BCP SITE C915201C

623 ELK STREET
PARCEL 2A

677 ELK STREET

PARCEL 2

PARCEL 3A

BUCKEYE TERMINAL
625 ELK STREET

ORLANDO STREET

FORMERLY BABCOCK STREET

SLURRY WALL

FORMERLY PRENATT STREET

FORMERLY PRENATT STREET

1 BABCOCK STREET

EXISTING WATER TREATMENT FACILITY

ISS AREA

625 ELK STREET
BCP SITE C915201D

OU3
503 ELK STREET

ESCP-PZ4

ESCP-PZ5

SLURRY WALL

ESCP-PZ1

ESCP-PZ2

ESCP-MW1

ESCP-MW2

ESCP-MW3

BULKHEAD WALL

BUFFALO River

ESCP-MW4

ESCP-MW5

ESCP-MW6

OU4

SLURRY WALL

AREA EXCLUDED FROM BCP SITE

LEGEND

INSTITUTIONAL CONTROLS BOUNDARY

OPERABLE UNIT

PARCEL BOUNDARY

TAX PARCEL IDENTIFICATION

1 BABCOCK STREET	ESCP 123.13-1-21
503 ELK STREET	ESCP 123.13-1-2.111
625 ELK STREET	BUCKEYE TERMINALS LLC 123.13-1-2.112
635 ELK STREET	ESCP 123.13-1-2.113

0 50 100 200
SCALE IN FEET

Site Map

OU3
FORMER BUFFALO TERMINAL
BUFFALO, NEW YORK

SITE FEATURES

Project 3617-16-7397
SMP-Figure 1.2

amec

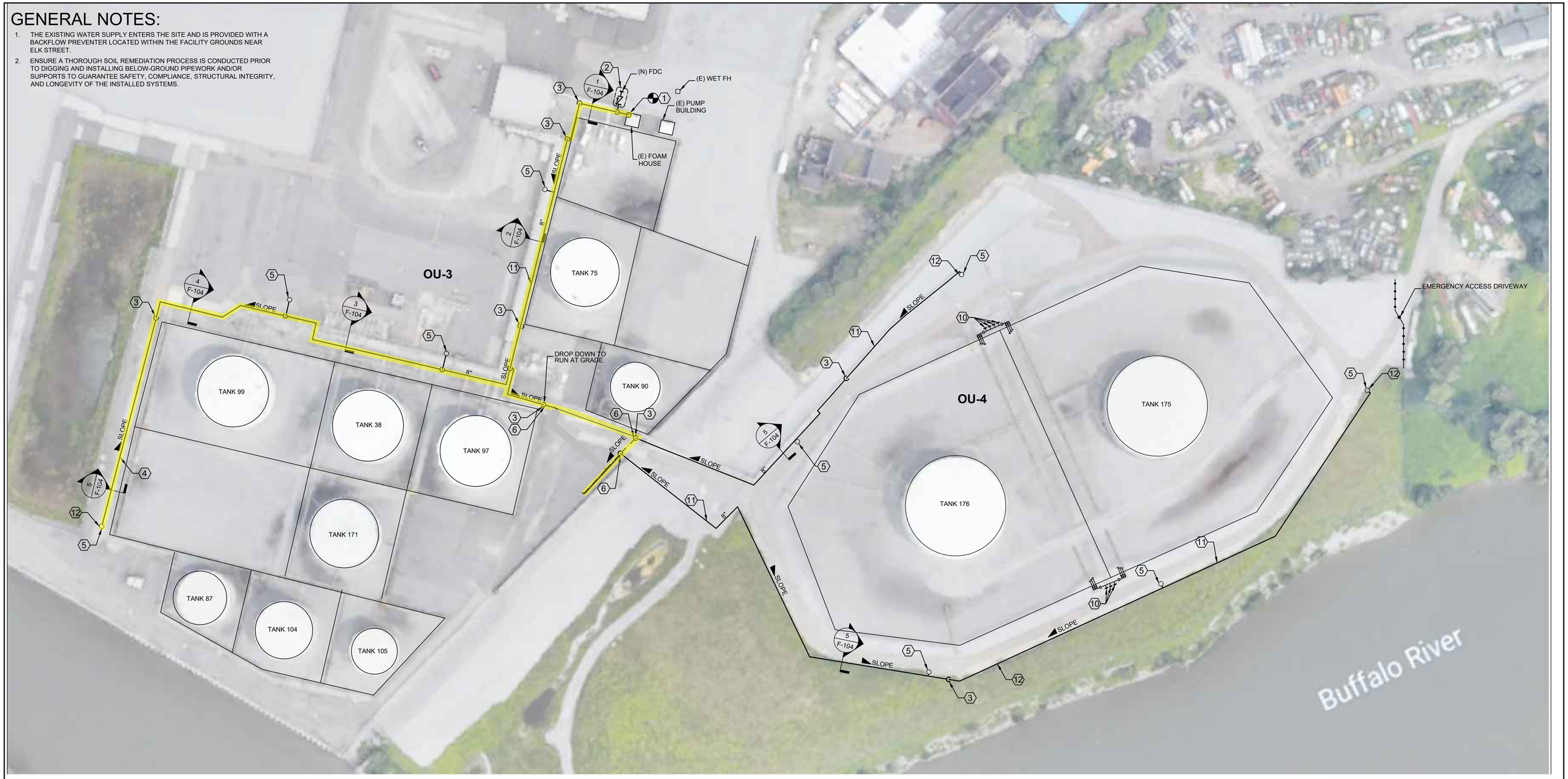
Prepared/Date: WJW 12/19/19
Checked/Date: RSE 12/19/19

Figure 2

Z:\Projects\ExxonMobil-nk90C-Elk Street\OU3 Design\Figures\SMP-Fig-1-2 Site Features.dwg Thu, 19 Dec 2019 - 10:42am william.whitten

GENERAL NOTES:

1. THE EXISTING WATER SUPPLY ENTERS THE SITE AND IS PROVIDED WITH A BACKFLOW PREVENTER LOCATED WITHIN THE FACILITY GROUNDS NEAR ELK STREET.
2. ENSURE A THOROUGH SOIL REMEDIATION PROCESS IS CONDUCTED PRIOR TO DIGGING AND INSTALLING BELOW-GROUND PIPEWORK AND/OR SUPPORTS TO GUARANTEE SAFETY, COMPLIANCE, STRUCTURAL INTEGRITY, AND LONGEVITY OF THE INSTALLED SYSTEMS.



Proposed OU-3 and OU-4 Fire Suppression Piping Layout

Buckeye Buffalo Terminal - Operable Unit 3
625 Elk Street
Buffalo, New York

Figure **3**

0 32' 64' 128'
1/64"=1'-0"

Legend:

Proposed modified OU-3 Fire Suppression Piping Layout

KEYED NOTES

1. CONNECT THE ABOVE GRADE FIRE HYDRANT PIPEWORK TO THE FIRE PUMP MANIFOLD IN THE FOAM HOUSE.
2. REFER TO THE 3D PERSPECTIVE VIEW OF THE FOAM HOUSE ALTERATIONS.
3. PROVIDE LOW POINT DRAIN AT THE LOWEST POINT OF DIFFERENT PIPE SEGMENTS, AS INDICATED.
4. PROVIDE GROOVED 8-INCH PIPEWORK, ROUTED AS INDICATED ON SECTIONS VIEWS IN LAYOUT F-103, INSTALLED WITH SLOPE OF $\frac{1}{4}$" PER 10 FT, SUPPLEMENTAL STEEL SHALL BE ADDED AS REQUIRED FOR RACKING.
5. PROVIDE 5" STORZ CONNECTION 3'-0" ABOVE GRADE, WITH MINIMUM 3 IN. CLEARANCE BETWEEN THE HANDLE OF THE ISOLATION VALVE AND ANY ADJACENT EQUIPMENT, REFER TO DETAILS 1 TO 3 IN DRAWING F-105.
   PROVIDE PROTECTIVE BOLLARDS PROTECTION TO PROTECT THE STORZ CONNECTION FROM DAMAGE FROM VEHICLES.
6. PROVIDE AND INSTALL AN 8-INCH RESILIENT WEDGE GATE VALVE TO ISOLATE THE BELOW-GROUND SEGMENT OF THE PIPE FOR DRAINING PURPOSES. THE VALVE SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION AND SHALL BE RATED FOR BURIED SERVICE. THE ISOLATION IS INTENDED TO FACILITATE THE PURGING OF TRAPPED WATER FROM THE BELOW-GROUND PIPING USING COMPRESSED NITROGEN GAS.
7. PROVIDE A NEW 8-INCH HIGH DENSITY POLYETHYLENE (HDPE) BELOW THE GROUND WITHIN 36" SLEEVE, INSTALLED WITH SLOPE OF $\frac{1}{4}$" PER 10 FT.
8. REMOVE THE EXISTING OS&Y CONTROL VALVE AND REPLACE IT WITH A WALL POST INDICATING VALVE.
9. INSTALL A NEW CHECK VALVE AND 5" STORZ CONNECTION.
   MOUNT FIRE DEPARTMENT CONNECTION 3'-0" ABOVE GRADE, AND PROVIDE SIGNAGE INDICATING PUMP AT 1450 GPM AT 70 PSI. EXISTING FIRE DEPARTMENT CONNECTION, CONNECTED TO THE EXISTING SEMI-FIXED FOAM SYSTEM TO BE RETAINED.
10. INSTALL GROOVED 8-INCH PIPEWORK, INSTALLED WITH SLOPE OF $\frac{1}{4}$" PER 10 FT. REFER TO STRUCTURAL SET FOR SUPPORTS' ALTERATIONS.
11. THE SOUTHERN GROOVED PIPEWORK ABOVE GRADE TO RUN ON NEW SUPPORTS, REFER TO STRUCTURAL SET FOR DETAILS.
12. PROVIDE AN AUTOMATIC AIR VENT AT THE HIGH POINT OF THE PIPEWORK TO ALLOW FOR THE RELEASE OF TRAPPED AIR.
13. PROVIDE AND INSTALL A DRY-BARREL FIRE HYDRANT SUITABLE FOR FREEZE CONDITIONS, IN ACCORDANCE WITH NFPA 24 AND LOCAL AUTHORITIES' REQUIREMENTS. ENSURE ALL VALVES AND HYDRANT ARE INSTALLED IN ACCESSIBLE LOCATIONS AND RATED FOR BURIED SERVICE. PROVIDE PROTECTIVE BOLLARDS PROTECTION TO PROTECT THE DRY-BARREL HYDRANT FROM DAMAGE FROM VEHICLES.

ISO PAGE

PAGE 04

OLD DWG NO:_____

STATE OF NEW YORK · JAMES PERISE · LICENSED PROFESSIONAL ENGINEER · 089294

NO	LOC	DESCRIPTION OF REVISION	BY DATE	APPR DATE
10	J	ISSUED FOR PERMIT	MM 06/20/25	JP 06/20/25
9	I	ISSUED FOR PERMIT	MM 06/19/25	JP 06/19/25
8	H	REVISED PRE-FINAL ISSUE	MM 05/30/25	JP 05/30/25
7	G	REVISED PRE-FINAL ISSUE	MM 05/16/25	JP 05/16/25
6	F	REVISED PRE-FINAL ISSUE	MM 12/06/24	EJ 12/04/24

WORK ORDER NO. PROJECT NUMBER

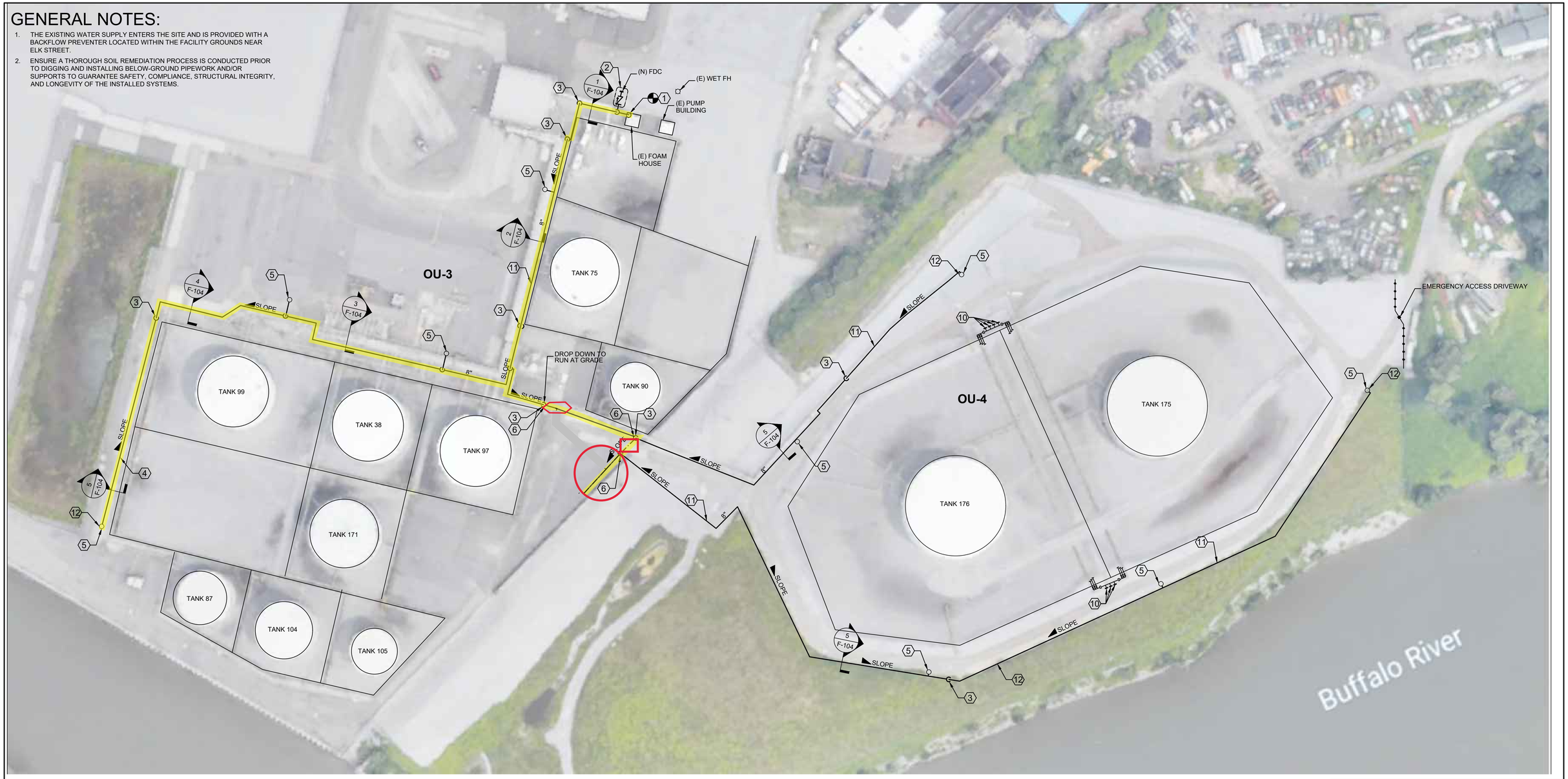
BUCKEYE PARTNERS, LP

FIRE PROTECTION
NEW WORK PLAN
BUCKEYE TERMINALS
625 ELK STREET, BUFFALO, NEW YORK

DRAWN: AL | SCALE: 1/64" | DATE: 06/20/25
APPROVED: JP | CHECKED: JP | F-103 DRAWING NUMBER | REV J

GENERAL NOTES:

1. THE EXISTING WATER SUPPLY ENTERS THE SITE AND IS PROVIDED WITH A BACKFLOW PREVENTER LOCATED WITHIN THE FACILITY GROUNDS NEAR ELK STREET.
2. ENSURE A THOROUGH SOIL REMEDIATION PROCESS IS CONDUCTED PRIOR TO DIGGING AND INSTALLING BELOW-GROUND PIPEWORK AND/OR SUPPORTS TO GUARANTEE SAFETY, COMPLIANCE, STRUCTURAL INTEGRITY, AND LONGEVITY OF THE INSTALLED SYSTEMS.



Legend:

- Proposed modified OU-3 fire suppression piping layout
- Proposed excavation/trenched area (approx.) for installation of new sub-grade fire suppression piping in OU-3.
- Proposed installation area (approx.) for new helical piers to be installed to support the new section of above-grade fire suppression piping in OU-3.
- Proposed disturbed area (approx.) to OU-3 cover system for the installation of grade-level fire supression piping and constructed cross-over ramp in OU-3.

KEYED NOTES

1. CONNECT THE ABOVE GRADE FIRE HYDRANT PIPEWORK TO THE FIRE PUMP MANIFOLD IN THE FOAM HOUSE.
2. REFER TO THE 3D PERSPECTIVE VIEW OF THE FOAM HOUSE ALTERATIONS.
3. PROVIDE LOW POINT DRAIN AT THE LOWEST POINT OF DIFFERENT PIPE SEGMENTS, AS INDICATED.
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Proposed OU-3 Ground-Intrusive Locations

Buckeye Buffalo Terminal - Operable Unit 3
625 Elk Street
Buffalo, New York

Figure **4**

0 32' 64' 128'
1/64"=1'-0"

OLD DWG NO:_____

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PAGE 04

STATE OF NEW YORK · JAMES PERISE · LICENSED PROFESSIONAL ENGINEER · 089294

NO	LOC	DESCRIPTION OF REVISION	BY DATE	APPR DATE
10	J	ISSUED FOR PERMIT	MM 06/20/25	JP 06/20/25
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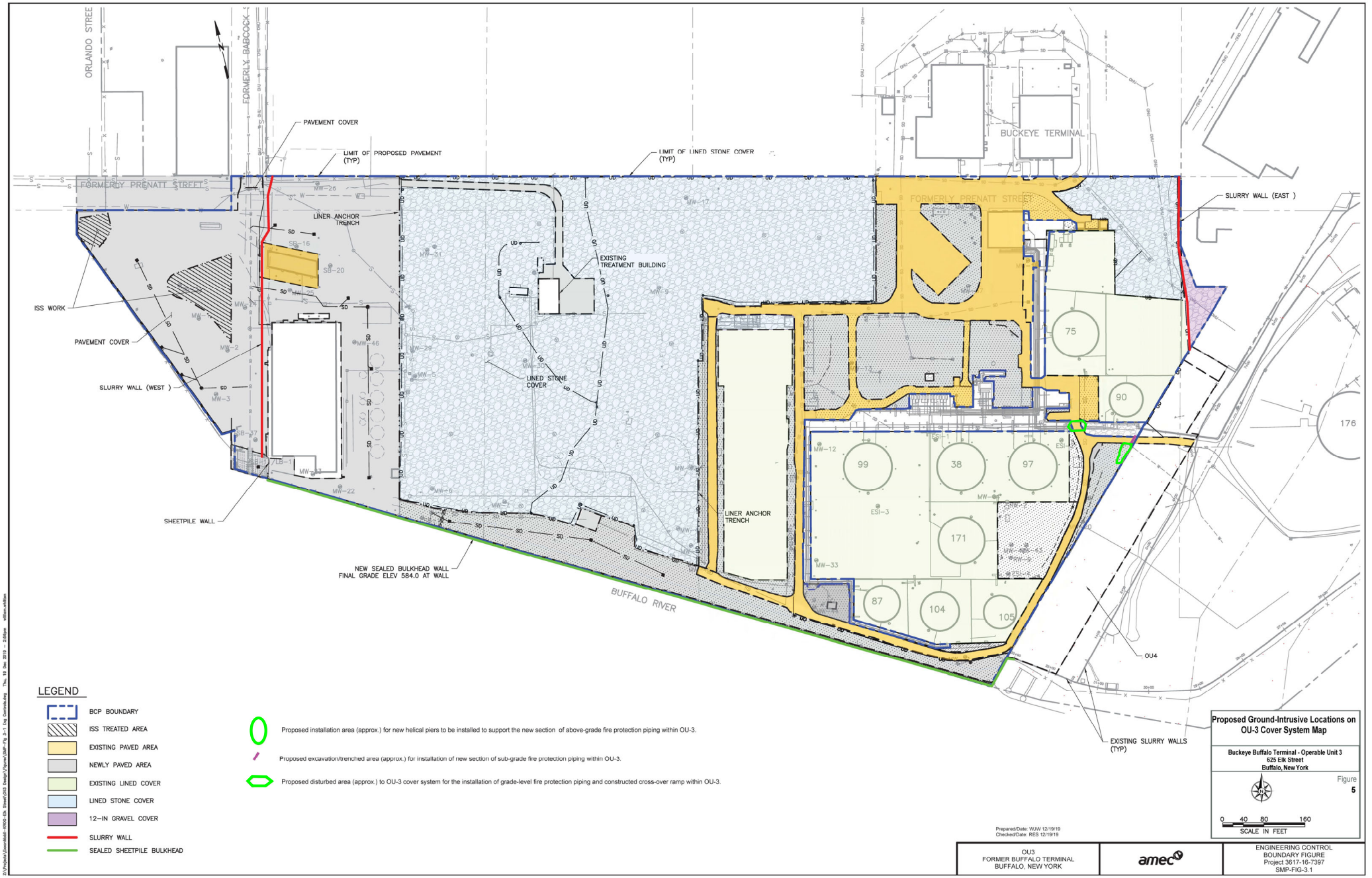
6	F	REVISED PRE-FINAL ISSUE	MM 12/06/24	EJ 12/04/24

WORK ORDER NO. PROJECT NUMBER

BUCKEYE PARTNERS, LP

FIRE PROTECTION
NEW WORK PLAN
BUCKEYE TERMINALS
625 ELK STREET, BUFFALO, NEW YORK

DRAWN: AL | SCALE: 1/64" | DATE: 06/20/25
APPROVED: JP | CHECKED: JP | F-103 DRAWING NUMBER | REV J



LEGEND

- BCP BOUNDARY
- ISS TREATED AREA
- EXISTING PAVED AREA
- NEWLY PAVED AREA
- EXISTING LINED COVER
- LINED STONE COVER
- 12–IN GRAVEL COVER
- SLURRY WALL
- SEALED SHEETPILE BULKHEAD

Proposed installation area (approx.) for new helical piers to be installed to support the new section of above-grade fire protection piping within OU-3.

Proposed excavation/trenched area (approx.) for installation of new section of sub-grade fire protection piping within OU-3.

Proposed disturbed area (approx.) to OU-3 cover system for the installation of grade-level fire protection piping and constructed cross-over ramp within OU-3.

Proposed Ground-Intrusive Locations on OU-3 Cover System Map

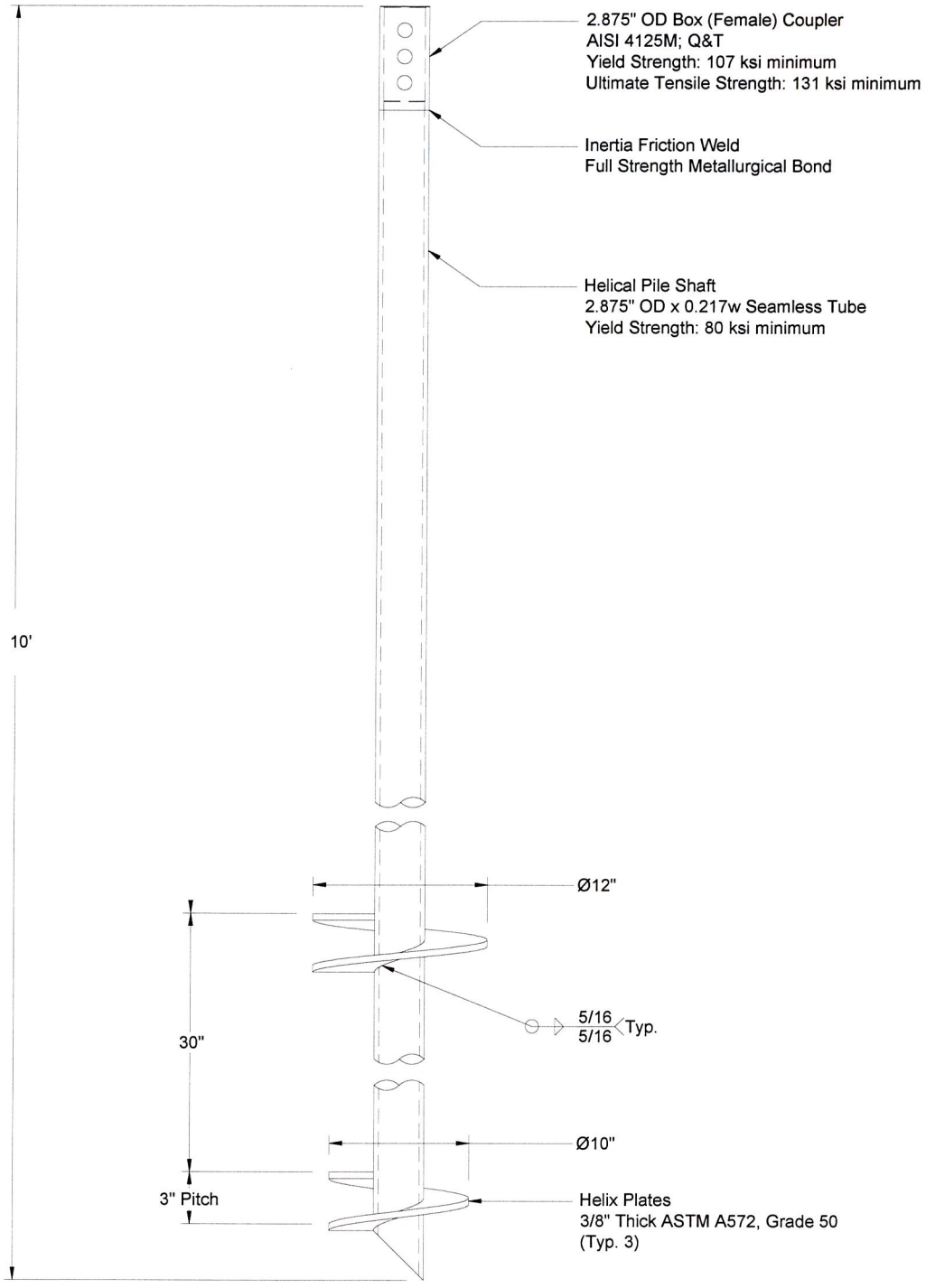
Buckeye Buffalo Terminal - Operable Unit 3
625 Elk Street
Buffalo, New York

Figure **5**

0 40 80 160
SCALE IN FEET

Prepared/Date: WJW 12/19/19
Checked/Date: RES 12/19/19

OU3 FORMER BUFFALO TERMINAL BUFFALO, NEW YORK	amec	ENGINEERING CONTROL BOUNDARY FIGURE Project 3617-16-7397 SMP-FIG-3.1



NOTES:

1. Ultimate Torque Rating: 13,000 ft-lbs
2. Ultimate Capacity Based on Torque: 117 kips
3. Installation Torque Factor (K_t): 8.0 - 9.0
4. Coupling Bolts: Ø3/4" dia. heavy hex bolt per ASTM A325 (Typ. 3 per Connection)
5. All material to be hot dip galvanized per ASTM A123

Helical Pier Schematic and Specifications

Buckeye Buffalo Terminal - Operable Unit 3
625 Elk Street
Buffalo, New York

Figure 6

VIKING HELICAL ANCHORS
7615 Smetana Lane, Suite 140
Eden Prairie, MN 55344
Office: (800) 733-3801
Fax: (952) 941-4633
www.vikinghelicalanchors.com

CLIENT	PROJECT/DRAWING TITLE
N/A	2.875" OD x 0.217w Helical Pile Lead Section Standard Specifications

PRELIMINARY DESIGN: THIS DRAWING IS MEANT TO SERVE AS AN EXAMPLE ONLY. NOT ISSUED FOR CONSTRUCTION.

SCALE	DRAWING NUMBER	REV.	AUTHOR	DATE
NTS	VHA-101820161	1.0	TJH	10/18/2016

Appendix A – NYSDEC Request to Import/Reuse Fill or Soil Forms

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Request to Import/Reuse Fill or Soil

This form is based on the information required by DER-10, Section 5.4(e) and 6NYCRR Part 360.13. Use of this form is not a substitute for reading the applicable regulations and Technical Guidance document.

SECTION 1 – SITE BACKGROUND

Site Name: Buckeye Buffalo Terminal, 625 Elk Street, Buffalo, NY - Operable Unit OU-3

Site Number: C915201D

The allowable site use is: Commercial or Industrial Use

Have Ecological Resources been identified? yes

Is this soil originating from the site? no

How many cubic yards of soil will be imported/reused? 0-50

If greater than 1000 cubic yards will be imported, enter volume to be imported: NA

SECTION 2 – MATERIAL OTHER THAN SOIL

Is the material to be imported gravel, rock or stone? yes

Does it contain less than 10%, by weight, material that passes a size 100 sieve? yes

Is this virgin material from a permitted mine or quarry? yes

Is this material recycled concrete or brick from a DEC registered processing facility? no

SECTION 3 - SAMPLING

Provide a brief description of the number and type of samples collected in the space below:

No sampling required. Requesting exclusion per DER-10 regulations below:

"The following material may be imported, without chemical testing, to be used as backfill beneath pavement, buildings or as part of the final site cover, provided that it contains less than 10% by weight material which would pass through a size 80 sieve and consists of: gravel, rock or stone, consisting of virgin material from a permitted mine or quarry."

Example Text: 5 discrete samples were collected and analyzed for VOCs. 2 composite samples were collected and analyzed for SVOCs, Inorganics & PCBs/Pesticides.

If the material meets requirements of DER-10 section 5.4(e)5 (other material), no chemical testing needed.

SECTION 3 CONT'D - SAMPLING

Provide a brief written summary of the sampling results or attach evaluation tables (compare to DER-10, Appendix 5):

NA

Example Text: Arsenic was detected up to 17 ppm in 1 (of 5) samples; the allowable level is 16 ppm.

If Ecological Resources have been identified use the "If Ecological Resources are Present" column in Appendix 5.

SECTION 4 – SOURCE OF FILL

Name of person providing fill and relationship to the source:

Roy Stasiak - Amrize Quality Control Technician

Name and address of fill source:

NYSDOT #1A's from Amrize Aggregates and Asphalt - 400 Hinman Rd., Lockport, NY 14094

Location where fill was obtained:

Amrize Aggregates and Asphalt, Lockport Quarry (NYSDOT Source #5-5R)

Identification of any state or local approvals as a fill source:

NYSDEC Permit No. 9-2999-0002/00015

If no approvals are available, provide a brief history of the use of the property that is the fill source:

NA

Provide a list of supporting documentation included with this request:

Please find attached the following supporting documents:
1. Aggregate Gradation Specifications
2. NYSDOT Source Number

The information provided on this form is accurate and complete.

Rebecca L. Keating

Signature

10/31/2025

Date

Rebecca Keating (GES)

Print Name

Groundwater & Environmental Services, Inc. (GES)

Firm

AMRIZE

400 Hinman Rd.
Lockport, NY 14094

10/22/25

Att:
Re:
Email:

To whom it may concern:

This is to certify that the material being supplied to the above project conforms to the outlined NYSDOT requirements for Section 703-02 Coarse Aggregate. Below is a gradation for NYSDOT 1A's.

Location: Lockport
Material Type: NYSDOT #1A
Source No. 5-5R
Test no: 23AR097

Sieve Size	Weight	% Retained	% Passing	Spec
1 1/2"	0.0	0.0	100.0	
1"	0.0	0.0	100.0	
3/4"	0.0	0.0	100.0	
1/2"	0.0	0.0	100.0	100
3/8"	0.0	0.0	100.0	
1/4	418.6	9.8	90.2	90-100
#4	1944.4	45.8	44.4	
1/8	1440.8	33.9	10.5	0-15
#8	255.0	6.0	4.5	
#16	76.5	1.8	2.7	
pan	114.8	2.7		
Total	4250			

Sincerely,

Roy Stasiak
Quality Control
Amrize

AMRIZE

10/28/2025

Roy Stasiak
400 Hinman Rd.
Lockport, NY 14094
(716) 263-0878 (cell)

RE: NYSDOT 1As

To Whom It May Concern:

This letter is to confirm that the NYSDOT 1As from our Lockport NY quarry to the above stated project/customer is virgin material and is from an approved DEC source. Our DEC permit number is 9-2999-00002/00015. Our quarry is comprised of dolomitic limestone, and contains no hazardous or deleterious materials. It is free from any known contaminates or additives.

Please feel free to contact me at the number above with any questions and I would be happy to assist in any way possible. Thank you.

Regards,

Roy Stasiak
Quality Control Technician
Amrize Aggregates and Asphalt

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Request to Import/Reuse Fill or Soil

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How many cubic yards of soil will be imported/reused? 0-50

If greater than 1000 cubic yards will be imported, enter volume to be imported: NA

SECTION 2 – MATERIAL OTHER THAN SOIL

Is the material to be imported gravel, rock or stone? yes

Does it contain less than 10%, by weight, material that passes a size 100 sieve? yes

Is this virgin material from a permitted mine or quarry? yes

Is this material recycled concrete or brick from a DEC registered processing facility? no

SECTION 3 - SAMPLING

Provide a brief description of the number and type of samples collected in the space below:

No sampling required. Requesting exclusion per DER-10 regulations below:

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Example Text: 5 discrete samples were collected and analyzed for VOCs. 2 composite samples were collected and analyzed for SVOCs, Inorganics & PCBs/Pesticides.

If the material meets requirements of DER-10 section 5.4(e)5 (other material), no chemical testing needed.

SECTION 3 CONT'D - SAMPLING

Provide a brief written summary of the sampling results or attach evaluation tables (compare to DER-10, Appendix 5):

NA

Example Text: Arsenic was detected up to 17 ppm in 1 (of 5) samples; the allowable level is 16 ppm.

If Ecological Resources have been identified use the "If Ecological Resources are Present" column in Appendix 5.

SECTION 4 – SOURCE OF FILL

Name of person providing fill and relationship to the source:

Roy Stasiak - Amrize Quality Control Technician

Name and address of fill source:

2" Crusher Run from Amrize Aggregates and Asphalt - 400 Hinman Rd., Lockport, NY 14094

Location where fill was obtained:

Amrize Aggregates and Asphalt, Lockport Quarry (NYSDOT Source #2985)

Identification of any state or local approvals as a fill source:

NYSDEC Permit No. 9-2999-0002/00015

If no approvals are available, provide a brief history of the use of the property that is the fill source:

NA

Provide a list of supporting documentation included with this request:

Please find attached the following supporting documents:
1. Aggregate Gradation Specifications
2. NYSDOT Source Number

The information provided on this form is accurate and complete.

Rebecca L. Keating

Signature

10/31/2025

Date

Rebecca Keating (GES)

Print Name

Groundwater & Environmental Services, Inc. (GES)

Firm

AMRIZE

400 Hinman Rd.
Lockport, NY 14094

10/27/25

Att:
Re:
Email:

To whom it may concern:

This is to certify that the material being supplied to the above project conforms to the outlined NYSDOT requirements for Section 703-02 Coarse Aggregate. Below is a gradation for 2" ROC, NYSDOT Subase Type 2, 304.12.

Location: Lockport
Material Type: 2" ROC
Source No 2985
Test No. 23AR097

Sieve Size	Weight	% Ret	% Pass	Spec
2"	0.0	0.0	100.0	100
1 1/2"	404.3	3.5	96.5	
1"	1651.7	14.3	82.2	
3/4"	1143.5	9.9	72.3	
1/2"	1640.1	14.2	58.1	
1/4"	1928.9	16.7	41.4	25-60
1/8"	1813.4	15.7	25.7	
#20	1143.5	9.9	15.8	
#40	381.2	3.3	12.5	5-40
#80	346.5	3.0	9.5	
#200	80.8	0.7	8.8	0-10
pan	1016.4	8.8		
Total	11550.0			

Sincerely,

Roy Stasiak
Quality Control
Amrize

AMRIZE

09/03/2025

Roy Stasiak
400 Hinman Rd.
Lockport, NY 14094
(716) 263-0878 (cell)

RE: 2" Crusher Run

To Whom It May Concern:

This letter is to confirm that the 2" Crusher Run from our Lockport NY quarry to the above stated project/customer is virgin material and is from an approved DEC source. Our DEC permit number is 9-2999-00002/00015. Our quarry is comprised of dolomitic limestone, and contains no hazardous or deleterious materials. It is free from any known contaminates or additives.

Please feel free to contact me at the number above with any questions and I would be happy to assist in any way possible. Thank you.

Regards,

Roy Stasiak
Quality Control Technician
Amrize Aggregates and Asphalt

Appendix B – OU-3 Health and Safety Plan

ELK STREET COMMERCE PARK
SITE-SPECIFIC HEALTH AND SAFETY PLAN
Former Buffalo Terminal
503 Elk Street
Buffalo, New York

EMERGENCY PHONE NUMBERS

Local Police:	911	Buffalo Police Department: (716) 851-4444
Local Fire:	911	Buffalo Fire Department: (716) 851-5510
Local Rescue:	911	
Local Hospital:	Mercy Hospital	
	565 Abbott Road	
	Buffalo, New York	
	(716) 826-7000	

Directions to Hospital are located on ATTACHED MAP.

National Response Center (NRC): 1-800-424-8802
The NRC should be contacted in the event of a significant chemical release. Once notified, the NRC will activate a federal response to the spill. *Please confirm with the client and project manager to determine if the spill should be reported.*

U.S. Coast Guard: 1-800-424-8802 / (716) 843-9500 Office / (716) 843-9527 ER

NYSDEC Spills Hotline: 1-800-457-7362 (Oil & HAZMAT Spills)
NYSDEC should be contacted in the event of a significant chemical release. Once notified, NYSDEC will activate a state response to the spill. *Please confirm with the client and project manager to determine if the spill should be reported.*

Poison Control Center: 1-800-222-1222
The Poison Control Center should be contacted in the event of accidental poisoning. They will provide information on immediate treatment for the poisoning.

Accidental Release or Discharge: (716) 851-4664 x. 5256
The Buffalo Sewer Authority (BSA) should be notified in the event of an accidental discharge or exceedance of the site discharge permit.

Robert N. Sickler, P.G. (GES) Senior Project Manager	Office: Cell Phone:	(800) 220-3069 x4052 (315) 374-2795
Genevieve Bock, P.E. (GES) Qualified Environmental Professional	Cell Phone:	(856) 906-5642
Megan Kuczka *State Agency Representative*	Office:	(716) 851-7220
Jim Geary *Buckeye Terminal Superintendent*	Office: Cell Phone:	(716) 822-3982 (716) 846-5279

DO NOT TRANSPORT THE SERIOUSLY INJURED
CALL LOCAL RESCUE SERVICES

HOSPITAL ROUTE MAP

Directions to Mercy Hospital (565 Abbott Rd. Buffalo, New York):

1. Exit the site and turn right on Elk Street
2. Turn **right** on Bailey Avenue
3. At the fork in the road turn **left** on McKinley Parkway
4. Turn **left** on Abbott Road
5. **Mercy Hospital** is on **right** hand side of Abbott Road

TABLE OF CONTENTS

1.0 PLAN PREPARATION, REVIEW, AND APPROVAL

Prepared By: Andrew Janik
(Project Manager)

Signature: _____ Date: _____

Reviewed By: Robert N. Sickler, P.G. (GES)
Senior Project Manager

Signature: _____ Date: _____

2.0 SITE DESCRIPTION

Project Name: Elk Street Commerce Park (ESCP)

Site Address: 503 Elk Street, Buffalo, New York 14210

Erie County, New York

Nearest Intersection: Bailey Ave. and Elk Street

Township/Municipality: City of Buffalo

County: Erie County

Type of Facility: Former Refinery/Bulk Storage Terminal

Parcel Size: 77 acres

Surrounding Land Uses: Industrial

Area/Media Affected: Soil, groundwater, and surface water

Additional Information: During an emergency or an inclement weather condition, report to the Groundwater Treatment Facility office and evacuate to the gate. **Workers need to obtain a work permit from Buckeye personnel for all work on Buckeye property prior to initiation of work.**

Historically, the major Site refinery and terminal operations occurred south of Elk Street in an area of approximately 89 acres. The petroleum refining operations at the Site began during 1880. The majority of the Site was purchased by Standard Oil Company of New York (SOCONY), ExxonMobil's predecessor, in 1892. In May 1981, the Site terminated all refinery operations. The Site continued as an ExxonMobil distribution terminal, receiving product via a pipeline and barge until May 2005. The active petroleum products storage and distribution terminal portion of the Site was sold on May 4, 2005 and is now owned and operated by Buckeye. The area of Buckeye's active terminal is approximately 35.8 acres. Throughout the Site's history, the aerial extent of property owned by ExxonMobil changed as portions of property were acquired or sold for various reasons. The area within the current ESCP property boundary is approximately 43.6 acres. On January 1, 2020 Elk Street Commerce Park acquired properties formerly owned by ExxonMobil.

In order to address the environmental conditions, ExxonMobil entered into a Brownfield Site Cleanup Agreement with the New York State Department of Environmental Conservation (NYSDEC) on April 3, 2006. Under this agreement, the Site entered into New York State's Brownfield Cleanup Program (BCP). The "Site" is defined, for the purposes of the BCP, as the area within the limits of five Operable Units (OU) as shown in **Figure 1**. The contents of this Health and Safety Plan cover Operable Units 1 (#C915201), 2 East (#C915201B), 2 West (#C915201C), and 3 (#C915201D).

FIRE EXTINGUISHERS are posted throughout the site, in the GWTF, and are located in site vehicles.

FIRST AID KITS AND EYE WASH are in the GWTF and in site vehicles.

2.1 Key Project Personnel

Responsibility	Name	Task Description
Project Manager	Robert N. Sickler (GES)	Oversee and coordinate all budget and technical aspects for the project.
Site Safety Officer	Owen Ogiony (GES)	Coordinates and completes the community air monitoring and soil screening during the completion of the OU-3 ground-intrusive work.
Field Team Leader	Owen Ogiony (GES)	Coordinates and oversees the environmental field activities during the completion of the OU-3 ground-intrusive work.

2.2 Description of Tasks to Be Performed

GES Field Tasks:
1. Daily set up and operation of the community air monitoring program (CAMP) equipment during the OU-3 ground-intrusive activities.
2. Daily construction worker air monitoring with 5-gas meter in and near open excavated areas.
3. Soil condition observations and soil screening with PID meter during the OU-3 ground-intrusive activities.
4. Soil sampling for waste characterization testing.
5. Oversight and documentation of the OU-3 ground-intrusive activities.
6. Oversight, inspections, and documentation during the handling, staging, and load-out of the excavated OU-3 soil.
7. Oversight and documentation of the OU-3 site restoration activities.

3.0 EMPLOYEE TRAINING REQUIREMENTS

All personnel performing activities covered by this plan must be trained in accordance with the requirements of 29 CFR 1910.120(e). The Project Manager will verify and document that all personnel meet the applicable training requirements prior to the start of site work, including:

- OSHA 1910.120 initial 40-hour training.
- OSHA annual eight-hour refresher training within the last year.
- OSHA eight-hour supervisory training for on-site managers and supervisors.
- Trained and understands client specific requirements. This will include knowledge of exclusion zone required work practices.

Subcontractors chosen to perform well drilling, excavation, materials disposal, utility installation in trenches, and any other site activities where the potential exists for contact with contaminants must provide written documentation of HAZWOPER training, for each employee who will be involved in activities at this site, before the start of work.

3.1 Medical Monitoring

All personnel performing activities requiring the use of an air-purifying respirator covered by this plan must be active participants in an ongoing medical monitoring program in accordance with the requirements of 29 CFR 1910.120(f). Subcontractors chosen to perform selected site activities must provide written documentation of such, for each employee who will be involved in activities at this site, before the start of work.

3.2 Accident/Incident Medical Surveillance

As a follow-up to a work-related injury, all employees are entitled and encouraged to seek medical attention. All accidents and potential exposures must be reported **immediately** to the Project Manager, who will coordinate with Corporate H&S to arrange for appropriate medical attention. Depending on the type of incident, it may be critical to perform tests within 24 to 48 hours. *Failure to report an injury or incident immediately will result in disciplinary action*.

3.3 First Aid Training

At least one member of the staff assigned to the project will have American Red Cross (or equivalent) First Aid and cardiopulmonary resuscitation (CPR) training. At least one trained individual will be present on-site at all times.

4.0 GENERAL SITE CONTROL MEASURES

A controlled work area should be established in the immediate vicinity of the site activities covered by this plan. Only those persons who can comply with the requirements of this plan should be allowed into this area during any work activities, which may result in exposure to the hazards associated with the specific task being performed. The work site should be marked off with at least the following items: traffic cones, caution tape, work area signs or barricades at the site entrances, and a flashing amber light/hazard lights on vehicles.

When activities involve invasive activities on site, a three-zone system will be used to control the potential spread of contamination. These zones are characterized by the presence or absence of chemical and biological hazards and the activities contained within them.

Zone boundaries should be clearly marked at all times and the flow of personnel among the zones must controlled. The site should be monitored for changing conditions that may warrant adjustment of zone boundaries. Zone boundaries are adjusted as necessary to protect personnel and clean areas. Whenever boundaries are adjusted, zone markings must also be changed and workers immediately notified of the change.

For the purpose of this plan, the following definition of terms is provided:

Exclusion Zone - The immediate area of the work activity to be performed or an area fully enclosing the hazards present. Personnel and equipment will enter and exit the Exclusion Zone from designated access points in the Contamination Reduction Zone (CRZ).

Contamination Reduction Zone - The transition area between the contaminated and uncontaminated area. Based on monitoring results, the CRZ boundaries may be adjusted to ensure that the Support Zone remains uncontaminated. Workers and equipment exit the Exclusion Zone through the designated access point(s) into the CRZ. Workers and equipment are then decontaminated in the CRZ, according to the procedures specified in the Decontamination section of this HASP. Workers and equipment then exit the CRZ into the Support Zone through the designated access points.

If necessary, emergency decontamination procedures are implemented.

Support Zone - The Support Zone is the clean area of the site, beyond the outer boundary of the CRZ. There should be no contamination in this zone.

5.0 DECONTAMINATION PROCEDURES

The procedures outlined below shall be followed for decontamination of site workers, equipment, disposal of personal protective equipment (PPE), and decon liquids. A decon station will be set up so that:

- Site workers and equipment can be decontaminated during egress from the exclusion zone.
- Contaminated clothing and decon liquids can be collected for disposal.

All waste generated during the completion of site activities shall be disposed of offsite in accordance with state and federal regulations.

5.1 Personnel Decontamination

At a minimum, site workers shall complete the following decontamination steps:

- Remove gross contamination from tools, respirator, monitoring equipment, boots, etc., prior to leaving the "exclusion zone", using paper towels, handi-wipes, etc.
- Remove personal protective equipment in the following order: outer gloves, rubber boots, Tyvek® suit, and inner gloves last.
- Dispose of contaminated gloves, Tyvek suits, used cartridges, paper towels, etc., by placing in a plastic bag and discarding in accordance with applicable standards.
- Wash hands and face thoroughly with soap and water or handi-wipes before lunch or coffee breaks, and after finishing work for the day.
- Particular care should be taken to protect any skin injuries. If open wounds exist on hands or forearms, handling chemicals should be restricted or eliminated.
- Shower as soon as possible.

5.2 Equipment Decontamination

Completely decontaminate soiled equipment in the Contamination Reduction Zone using detergent and water and dispose of all cleaning materials as follows.

- Remove gross contamination from heavy machinery using had tools. Remove gross contamination from hand tools.
- Clean tools, equipment, and machinery with pressurized, hot water or steam.

5.3 Waste Disposal

The following procedures shall be followed for the management of the waste stream generated by site activities:

- Protective sheeting, rags, absorbent materials, disposable PPE, and decontamination fluids should be carefully screened with a photoionization detector (PID) prior to placement in the appropriate receptacle. Lightly contaminated materials will be segregated from those materials containing free phase product.
- All solid waste will be placed into labeled, United Nation (UN) approved, 55-gallon drums.

- All decontamination fluids will be treated via the site treatment system prior to discharge. If the site treatment system is not operational, decon liquids will be containerized in labeled, UN approved, 55-gallon drums.

Note: All Federal, State, County, and/or City requirements regarding disposal must be complied with.

6.0 EMERGENCY PROCEDURES

If any injury, condition, or event occurs that may affect the safety and health of site workers or the adjacent community during the completion of the tasks presented in Subsection 2.2 of this document, the Field Team Leader shall contact the Project Manager. It will be the responsibility of the Project Manager to notify the appropriate personnel, including: ESCP Project Manager, and Regional Operations Manager.

6.1 Personal Injury Within the Exclusion Zone

Site operations shall be halted, and all site personnel shall assemble in the Contamination Reduction Zone if there is an injury within the Exclusion Zone. The Field Team Leader shall evaluate the nature of the injury and, if indicated by the hazards present on site, the injured person shall be decontaminated to the extent possible prior to movement to the Support Zone.

Contact shall be made for an ambulance and with the designated medical facility (if required). An individual certified in Standard First Aid and Adult CPR may choose to initiate the appropriate first aid. No persons shall re-enter the Exclusion Zone until the cause of the injury or symptoms are determined and appropriate revisions are made to this plan.

6.2 Personal Injury Within the Decontamination Zone

The Site Safety Officer shall evaluate the nature of the injury and, if indicated by the hazards present on site, the injured person shall be decontaminated to the extent possible prior to movement to the Support Zone.

Contact shall be made for an ambulance and with the designated medical facility (if required). An individual certified in Standard First Aid and Adult CPR may choose to initiate the appropriate first aid.

If the injury increases risk to other site workers, all site personnel shall move to the Contamination Reduction Zone and site activities will stop until the risks can be assessed and either removed or minimized.

6.3 Personal Injury Within the Support Zone

The Site Safety Officer will assess the nature of the injury and determine if the cause of injury or loss of the injured person will affect continuation of site operations. If the injury will not affect the safety or performance of other site workers, operations may continue, with the person certified in first aid initiating the appropriate first aid and necessary follow up as stated above.

If the injury increases risk to other site workers, all site personnel shall move to the Contamination Reduction Zone and site activities will stop until the risks can be assessed and either removed or minimized.

6.4 Fire/Explosion

Upon notification of a fire/explosion or other emergency on site, personnel will notify field crews as to the extent of the emergency and provide instructions for evacuation. This will be communicated by cellular communications or meeting the crew at their work area. The fire department shall be alerted, and all personnel moved to a safe distance from the involved area. Refer to the Evacuation Plan in Figure 2 of this document for the Site evacuation routes.

If a fire is observed in the incipient phase (i.e., when it begins) and if the site personnel witnessing the fire feel secure in attempting to control the fire, the individual can attempt to extinguish the fire by using the onsite fire extinguisher. The fire extinguisher should be a 10- or 20-pound (lb.) dry chemical, Class A, B, and C extinguisher and is adequate for paper and wood-based products (A), flammable and combustible liquids (B), and electrical (C) type fires.

6.5 Personal Protective Equipment Failure

If any site worker experiences a failure or alteration of personal protective equipment that affects the protection factor, that person and their buddy, if applicable, shall immediately leave the Exclusion Zone. Re-entry shall not be permitted until the equipment has been repaired or replaced.

6.6 Equipment Failure

If any other equipment on site fails to operate properly, the Project Manager shall be notified and then determine the effect of this failure on continuing operations. If the failure will affect the safety of personnel, all personnel shall leave the Exclusion Zone until the situation is evaluated and appropriate actions are taken.

In all situations, when an on-site emergency results in evacuation of the Exclusion Zone, personnel shall not re-enter until:

- The conditions resulting in the emergency have been corrected;
- The hazards have been reassessed;
- The Site Safety Plan has been reviewed; and
- Site personnel have been briefed on any changes in the Site Safety Plan.

6.7 Discharge Permit Exceedance

In the event of a discharge permit exceedance, personnel will notify ESCP, the BSA, and begin the shut-down of process equipment that is causing the exceedance. The condition will be evaluated with the BSA prior to start-up of process equipment.

7.0 GENERAL SITE OPERATING PROCEDURES

The following are the required general site operation procedures:

- Work conducted at the Site will require permission of owner/operator and Buckeye, if applicable.
- A Pre-entry meeting reviewing the Site Specific Health and Safety Plan for all proposed work location personnel shall be held and documented in this HASP and in the site log. This meeting shall be prior to the commencement of any on-site work activities.
- The subcontractor's training documentation will be reviewed, and a pre-entry briefing will be held to review the site's health and safety plan concerns and emergency procedures. Attendance will be documented.
- All personnel shall be deemed "Fit for Duty" by staff, and disclosure of pre-existing health conditions shall be made.
- One site worker will be assigned to keep the Daily Log for all health and safety-specific site activities, unless otherwise specified.
- All personnel will wear ASTM F 2413 footwear at all times. Ice cleats to be worn during winter conditions.
- High visibility clothing shall be worn at all times.
- Hard hats will be worn at all times.
- Gloves will be worn at all times.
- ANSI Z87 eye protection will be worn at all times while on site.
- Possession of alcohol or illegal substances on the job site or consumption of the same during work is strictly prohibited.
- Food and/or beverages are not permitted in the site's Exclusion or Contamination Reduction Zones. Food and/or beverages will be permitted in the Support Zone if proper decontamination procedures are followed.
- Smoking is not permitted in the site's Exclusion or Contamination Reduction Zones or on Buckeye property.
- A change in level of protection, discussed in detail in Section 9.0, will be based on air monitoring readings taken in the breathing zone. Site-specific action levels are presented in Section 10.0.
- Field personnel will use air monitoring equipment and not their nose to determine site contamination (i.e., sniffing sampled soils or water in jars, confined spaces, open bore holes or trenches, etc.). Odors detected during the course of standard operating procedures, however, should be noted in the Daily Log.
- Field personnel should not stand with their head directly over a well when it is being opened or gauged.
- Events surrounding accidents/injuries will be recorded in the Daily Log.
- First aid kit(s), eye wash station(s), and a fire extinguisher(s) will be available in all company vehicles and/or within 50 feet of the working area.

- Chemical protective clothing and other splash protection shall be worn whenever the potential for exposure by physical contact with hazardous materials in solid, liquid, or gaseous forms has been identified.
- Keys to emergency exits will be distributed to crew members working in remote areas of the Site. These keys are to be kept on the person and separate from operations keys. The assigned keys will be returned when the crew completes the job task.
- Upon notification of a fire/explosion or other emergency on site, personnel will notify field crews as to the extent of the emergency and provide instructions for evacuation. This will be communicated by cellular communications or meeting the crew at their work area.
- If there is a Sole Worker onsite, communications must be made with them at the beginning of the work shift, during, and at the end of the shift.
- During a severe weather event (thunderstorm, tornado watch or warning conditions, blizzard), employees are to gather at the GWTF. A headcount will be performed, and weather conditions discerned.
- Prior to a LOTO task, the Project Manager will be notified.
- For working within 10' of the sheet piling dock wall, the buddy system must be used, and personal flotation devices worn.
- Fire resistant outer clothing to be worn on Buckeye property.

8.0 GENERAL HAZARD EVALUATION

8.1 Chemical Materials of Concern

Substance	Primary Hazards
Gasoline	• Irritant to skin • If ingested, induces nausea and vomiting • Possible Carcinogen • Combustible
Reformulated Gasoline	• Same as above
Leaded Gasoline	• Same as above
Benzene	• Same as above
Tetraethyl Lead	• Same as above
Hydrogen Peroxide	• Irritant to skin • Known oxidizer • Combustion enhancer
Ozone	• Irritant to eyes • Known oxidizer • Combustion enhancer
Heating Oil No. 2	• Irritant to skin • If ingested, induces nausea and vomiting • Carcinogen • Combustible
Diesel Fuel No.2	• Same as above
Kerosene Fuel	• Same as above
Used Oils	• Irritant to skin • Possible carcinogen if heavy metals are present
Toluene	• Irritant to skin • If ingested, induces nausea and vomiting • Combustible
Ethyl Benzene	• Irritant to skin • If ingested, induces nausea and vomiting • Carcinogen • Combustible
Xylenes	• Irritant to skin • If ingested, induces nausea and vomiting • Combustible
Methyl Tert Butyl Ether	• Same as above

8.2 Operational Hazards

- A general work permit will be completed prior to the start of the work on Buckeye property. Fire resistant clothing to be worn on Buckeye property.
- The Site Supervisor will conduct a safety briefing on general work rules and procedures.
- The Site Supervisor will conduct a safety briefing on subsurface work rules and procedures, and all subsurface work participants will sign the permit.

8.2.1 Petroleum Hydrocarbons (liquid and vapors)

- Eye protection is to be worn at all times.
- Respirators may be necessary, in accordance with action levels.
- Nitrile sampling gloves or nitrile coated gloves are to be worn when handling any environmental media.
- Note which wells are historically product-bearing.
- Be aware of potential vapors at recovery wells and storage tanks.
- Wear nitrile/rubber gloves when changing filters and dispose of both properly.

8.2.2 Biological Hazards (insects, snakes, poisonous plants, and animals)

- Do not touch or contact poisonous plants, such as poison ivy/poison oak.
- If available, apply an over-the-counter barrier cream, such as Ivy Block® to prevent contact with plant oils.
- Wash hands and arms immediately with soap and water if skin contacts the plants.
- Wear long pants with socks pulled over legs to prevent skin contact with plants and insects.
- Inspect yourself carefully for insects or ticks after being outdoors.
- Spray any wasp/hornet nests with an insect repellant from a safe distance recommended by the product's manufacturer.

8.2.3 Slip/Trip/Fall/Cuts

- Be aware of open manholes and the potential for slip and trip hazards.
- Take caution when removing manhole covers - potential for crushed fingers.
- Use caution tape or barricade fencing where warranted.
- Replace manhole covers securely to prevent tripping and vehicle accidents.
- Use caution when cutting materials - potential to cut fingers.
- Don ice cleats during winter conditions.
- Watch for piping and water on the floor of buildings.
- Be cautious of pressure released while working on equipment.

8.2.4 Excessive Noise

- Noise will be controlled when sound pressure levels (SPL) exceed 85 decibels, or whenever a person must raise their voice above normal conversational speech because of a loud noise source.
- Control measures will include: TIME, limit exposure to loud noise sources; DISTANCE by doubling the distance from a loud noise source, the SPL will be reduced by five to six decibels; SHIELDING, the use of engineering controls such as enclosures, insulation and hearing protection devices (plugs, muffs or both).
- Hearing protection measures and devices should be capable of attenuating worker exposure to an 8-hour time weighted average (TWA) of 85 dBA or below.
- Hearing protection devices will be used during loud mechanical operations such as drilling, jackhammer, cut/concrete saw, or other loud mechanical equipment.
- Use hearing protection inside a remedial shed when equipment is operating loudly or in other high decibel situations.

8.2.5 Airborne Particulate (ears, eyes, nose, mouth, inhalation)

- Eye protection is to be worn **AT ALL TIMES**.
- Respiratory protection is to be worn when site activities cause excessive particulates, and when performing diffuser change outs.

8.2.6 On-site Traffic

- Safety vest or high visibility clothing shall be worn, and safety cones placed around the work site.
- Utilize hazard lights/flashers when working in or near active roadways.

8.2.7 Ladder Safety

- Ladders must be inspected prior to use. Any damaged ladder will be discarded immediately.
- Painted ladders are forbidden.
- Never stand on the top step of the ladder.
- Extension ladders must extend 36" beyond work area.
- Pitch ladders at a 4:1 ratio.
- Extension and straight ladders must be tied off.
- Fall protection must be worn when working at heights six feet or more above ground.

8.2.8 Air Compressor

- Eye protection will be worn at all times.
- Use proper pressure relief valves before performing O&M on an air compressor.

8.2.9 Power Tools

- Equipment will be inspected for defects prior to use.
- A GFCI will be used with all power tool operations.

- Loose or frayed clothing, dangling jewelry, or loose long hair will not be worn when working with power tools.
- Shielding or guarding will be in effect if applicable.

8.2.10 Electrical

- Inspect all electrical equipment and extension cords prior to use. Any extension cord or equipment power cord that is cut or frayed shall be removed from service and replaced.
- Equipment producing sparks is not to be used in operating remedial system buildings.
- Lockout/Tagout procedures will be in effect if equipment is to be repaired.
- Use three-pronged plugs and extension cords.
- Ground-fault circuit interrupters are required when using any electrical, non-rechargeable electric tool.

8.2.11 Static Electricity

- Do not create static discharge in flammable atmospheres.
- Electrically bond and ground pumps, transfer vessels, tanks, drums, bailer and probes when moving liquids.
- Electrically bond and ground vacuum trucks and tanks during operation.
- Do not splash-fill containers with flammable liquids.

8.2.12 Back Strain

- Utilize proper lifting procedures when loading and unloading heavy equipment.
- Do not lift items more than 45 pounds, get assistance when lifting heavy or awkward burdens.
- Bend down at the knees rather than bending at the waist.
- Use a mechanical lifting device or a lifting aid where appropriate.

8.2.13 Pedestrian Traffic

- Be aware of curious and naive bystanders who may interfere with the task at hand.
- Do not permit **anyone** who is not properly trained and outfitted with the appropriate PPE to enter the Exclusion or Contamination Reduction Zones.

8.2.14 Heat Stress

- Know and recognize the signs and symptoms of heat-related illnesses.
- Adjust work schedules to provide time intervals for intake of juices, juice products, and water in an area free from contamination.

8.2.15 Cold Stress

- Know and recognize the signs and symptoms of cold-related illnesses.
- Have appropriate clothing available to protect against cold weather.

- Adjust work schedules to provide sufficient rest periods in a heated area for warming up.

8.2.16 Confined Space Entry (CSE)

- A CSE permit will be completed prior to the start of the work.
- The Site Supervisor will conduct a safety briefing on confined space rules and procedures, and all confined space work participants will sign the permit.

8.2.17 Fall Hazards

- The Site Supervisor will conduct a safety briefing on working at heights rules and procedures, and all working at heights participants will sign the permit.
- OSHA-approved man-lifts and ladders will be used for access to elevated locations.
- Employees must wear a safety harness with a lanyard attached to the boom or basket when working from a man-lift.

8.2.18 Hot Work

- A hot work permit will be completed prior to the start of the work.
- The Site Supervisor will conduct a safety briefing on hot work rules and procedures, and all hot work participants will sign the permit.
- Hot work will not be performed if there is a possibility of an explosive atmosphere or an oxygen-enriched atmosphere.
- The Site Supervisor will designate a person for fire watch duty, who will have access to a properly rated fire extinguisher and will remain on-duty for one-half hour after the hot work is complete.
- All hot work equipment will be inspected daily, prior to use. If the equipment is found to be defective, it will be removed from the site, or tagged with a "Do Not Use" sign until it is repaired.
- All welding and cutting personnel will be trained in the safe operation of their equipment.

9.0 GENERAL PERSONAL PROTECTION REQUIREMENTS AND ACTION LEVELS

9.1 Engineering Controls

It shall be the policy of the company to utilize appropriate engineering controls whenever available to reduce the potential for exposure to hazards present in the workplace which would require the use of PPE. PPE shall be used in addition to, or in place of, such engineering controls whenever reduction of hazards to safe levels cannot be accomplished.

9.2 Respiratory Protection and Protection Levels

Monitoring of the work zone using a PID calibrated for benzene (utilizing isobutylene as the span gas) and a Lower Explosive Level (LEL)/Oxygen (O_2) meter will be performed during field activities. During activities that produce visible dust, particulate monitoring will be performed using an aerosol particulate monitor. The Site Safety Officer will be responsible for ensuring the proper use, maintenance, and calibration of monitoring equipment as well as monitoring frequency.

The levels of protection that will be employed on site include:

- **LEVEL D:** No respiratory protection is necessary during on-site activities.
- **MODIFIED LEVEL D:** The protection level will be upgraded for those tasks where site workers may come in physical contact with free phase product.
- **LEVEL C:** If warranted by air monitoring, use of a half-face or full-face, negative pressure, air purifying respirator equipped with GMC-H combination cartridges. All site personnel must be fit tested prior to performing site work.

If site conditions reach a level that is immediately dangerous to life and health (IDLH) the work area will be evacuated and the Project Manager will be contacted prior to upgrading the level of protection and work zone reentry.

Separate Health and Safety Plans will be developed for Level A/Level B activities and for Emergency Responses, which may involve the use of Level A and/or Level B health and safety measures.

9.3 PPE Requirements for Each Level of Protection

9.3.1 PPE for Level D Protection

- Hardhat conforming to American National Science Institute (ANSI) Z89.I 1986 Class B;
- Chemical resistant gloves manufactured from Nitrile;
- Steel-toe boots manufactured from leather, conforming to ANSI Z41.1 9 (ice cleats as needed);
- Safety glasses conforming to ANSI Z87.1;
- Hearing protection;
- Work gloves;
- Personal flotation device;

- Ear plugs and/or muffs;
- Fire resistant clothing to be worn on Buckeye property; and
- Face shield (optional).

9.3.2 PPE for Modified Level D Protection

PPE for work in Modified Level D shall include all of the items listed above plus the following:

- Tyvek coveralls (coated and uncoated);
- Natural rubber over-boots and/or latex disposable boot covers; and
- Nitrile over gloves and nitrile inner gloves.

9.3.3 PPE for Level C Protection

PPE for work in Level C shall include all of items listed above plus the following:

- NIOSH approved half-face or full-face, negative pressure, air purifying respirator equipped with GMC-H combination cartridges.

10.0 AIR MONITORING PROGRAM

According to 29 CFR 1910.120, air monitoring shall be used to identify and quantify airborne levels of hazardous substances and health hazards for the protection of site workers, protection of the community, identify conditions that require the implementation of control measures and control measures.

OSHA has not established permissible exposure limits (PEL) for gasoline. The OSHA recommended 8-hour time-weighted average (TWA) and 15-minute short-term exposure limits (STEL) are 300 and 500 parts per million (ppm), respectively.

10.1 Air Monitoring Requirements

The following subsections present the monitoring activities that will be implemented during the completion of each task.

10.1.1 Task 1 - Weekly GWTF Site Inspections, River Inspections, and Monitoring Well Gauging

- No air monitoring equipment

10.1.2 Task 2 - Weekly and Monthly Site Inspections

- No air monitoring equipment

10.1.3 Task 3 - Gauging of Monitoring Wells

- No air monitoring equipment

10.1.4 Task 4 - Sparge Tank Cleaning

- O_2/LEL Meter

10.1.5 Task 5 - Eastern Well Point/Western Well Point Equipment Repairs

- O_2/LEL Meter

10.1.6 Task 6 - Groundwater Sampling and Gauging

- No air monitoring equipment

10.1.7 Task 7 - Submersible Pump/Flow Meter Operation and Maintenance

- O_2/LEL Meter

10.1.8 Task 8 - Weekly Buffalo Sewer Authority and System Sampling

- No air monitoring equipment

10.1.9 Task 9 - Boat Activities with Anchors

- No air monitoring equipment

10.1.10 Task 10 - Boom Repair, Maintenance, and Inspection

- No air monitoring equipment

10.1.11 Task 11 - Booming Operations

- No air monitoring equipment

10.1.12 Task 12 – GWTF Cleaning

- O_2/LEL Meter/PID

10.2 Meteorological Monitoring

When applicable, Meteorological (MET) data will be collected to provide information on daily site conditions. The following parameters will be collected and documented:

- Wind direction
- Wind speed
- Temperature
- Barometric pressure
- Relative humidity
- Precipitation

For reference, there is a windsock located at the GWTF.

10.3 Personal Air Monitoring Plan

Staff and subcontractors routinely perform operations that may expose personnel to volatile organic compounds (VOCs) that are associated with uncontrolled releases of petroleum products. This plan presents the approach to be implemented for determining worker exposure levels to petroleum products, specifically benzene and tetraethyl lead (TEL). This plan will also focus on the methodology for the following:

- Personal air sample collection.
- Recommendations for the use of respiratory protective devices and personal protective equipment.

10.4 Site Specific Action Levels

Real-time air monitoring and integrated sampling results will be used to determine if levels of PPE and engineering controls are adequate to control contaminant migration and potential worker exposures. The action levels listed in the following sub-sections are based on available information.

10.4.1 Action Levels for VOCs

The action levels presented below are based on the premise that benzene may be present on site. If VOC concentrations exceed 5 ppm then benzene monitoring will be initiated. For sustained readings in the breathing zone (10 minutes) above background levels of:

0-5 ppm - remain in Level D.

5-50 ppm - implement vapor control measures and benzene monitoring, if control measures are not successful then upgrade protection to Level C and half-face, air-purifying respirator with organic vapor cartridges.

50-250 ppm - implement more aggressive vapor control measures, continue benzene monitoring, maintain Level C, but upgrade to full-face, air-purifying respirator with organic vapor cartridges.

> 250 ppm - sustained levels in the breathing zone of greater than 250 ppm, discontinue work and notify the Project Manager.

10.4.2 Action Levels for Benzene

If sustained levels of VOCs in the breathing zone exceed 4.5 ppm, work will be halted, and the concentration of benzene will be measured. Benzene concentrations will be measured using either color metric detector tubes or some other means that can identify and quantify the concentration of benzene. There is an established Occupational Exposure Limit (OEL) of 0.5 ppm, which is consistent with the ACGHI Threshold Limit Value (TLV). If benzene is detected, the following action levels will apply:

0-0.5 ppm - remain in Level D.

0.5-10 ppm - implement vapor control measures, if control measures are not successful than upgrade protection to Level C and half-face, air-purifying respirator with organic vapor cartridges.

10-50 ppm - implement more aggressive vapor control measures, maintain Level C protection, but upgrade to full-face, air-purifying respirator with organic vapor cartridges.

> 50 ppm - sustained levels in the breathing zone of greater than 50 ppm, evacuate work zone and notify the Project Manager.

10.4.3 Action Levels for Explosive Atmosphere

LEL and Oxygen will be monitored during those activities when a potential explosive atmosphere may be present. The following action levels will apply:

O_2 <19% - stop work, ventilate area and notify the Project Manager.

O_2 19.5%-23% - acceptable conditions.

O_2 >23.5% - evacuate work zone immediately, this atmosphere is extremely flammable, ventilate area and notify the Project Manager.

LEL <10% - acceptable conditions.

LEL >10% - evacuate work zone immediately, this atmosphere is extremely flammable, ventilate area and notify the Project Manager.

10.4.4 Action Levels for Particulates

Particulates will be monitored during activities that may create airborne dust. The following action levels will apply:

0 - 2.5 mg/M^3 - acceptable conditions, maintain Level D protection.

2.5 - 5.0 mg/M^3 - initiate dust suppression measures.

5.0 - 10 mg/M^3 - implement more aggressive dust suppression measures, notify the Project Manager, and upgrade personal protection to Level C with half-face, air purifying respirator with particulate HEPA cartridges until particulate levels drop below 2.5 mg/$M^{3.}$

> 10 mg/M^3 - excavation and associated activities will be terminated and notify the Project Manager for guidance.

10.4.5 Work Zone Air Monitoring Frequency

The above air quality parameters will be measured continuously and documented once every hour. If action levels are exceeded, air quality parameters will be recorded every 10 minutes until the air quality parameters return to background levels.

10.5 Perimeter Air Monitoring Program

Potential airborne emissions that may be released during excavation activities will consist primarily of three issues: fugitive dust, odors, and VOC releases. Each of these issues is a potential concern to residents living along Elk Street and other areas adjacent to the Site. The following sections describe the monitoring activities that will be implemented in order to ensure that any offsite releases are minimized; the following contingency plans and monitoring will be implemented.

10.5.1 Perimeter Monitoring Stations

Site perimeter air monitoring stations will be established along each fence line. The location of the monitoring stations will be based on meteorological data collected each day as described in Subsection 10.2 (Meteorological Monitoring). One station will be located along the fence up wind of the work area. The second station will be located along the downwind fence line. The third station will be located along the third fence line and monitored in the event that shifting or transverse wind currents may affect the migration of fugitive emissions.

There will be unrestricted airflow in an arc of 270° around each station. The stations will be at least five meters from public roads or site access roads. The air collection inlet will be between one and two meters above ground surface.

The upwind and transverse stations will be monitored with portable PID, Benzene Detector, LEL/O_2 and particulate monitors. The downwind station will be equipped with a stationary data logging PID/LEL/O_2 instrument, a particulate monitor, and a windsock. The alarm on PID/LEL/O_2 instrument will set to alert site workers when fugitive emissions exceed site-specific action levels.

10.5.2 Perimeter Action Levels

The following action levels are more stringent than the site-specific action levels to protect the community. If these action levels are exceeded, fugitive emission control measures discussed in Subsection 10.6 will be implemented.

- VOCs (non-benzene)

  0-5 ppm - no further action.

  5-50 ppm - initiate benzene monitoring, if the perimeter registers less than 5.0 ppm for non-benzene VOCs, no further action, implement vapor control measures, if the level of non-benzene volatile organics is not reduced below 5.0 ppm within 48 hours, excavation operations will be terminated.

  > 50 ppm - excavation and associated activities will be terminated, notify the Project Manager and the authorities that a potential evacuation situation exists.

- Benzene concentrations will be measured using either color metric detector tubes or some other means that can identify and quantify the concentration of benzene. The following trigger points will be used to establish when work will be stopped at the Site and the authorities notified that a potential evacuation situation exists:

  0-1.0 ppm - no further action.

  1.0-5.0 ppm - implement vapor control measures and notify the Project Manager. If the concentration of benzene is not reduced below 2.5 ppm within 30 minutes or 1.0 ppm within one hour, excavation operations will be terminated.

  5.0 ppm - excavation and associated activities will be terminated, the Project Manager and the authorities will be notified that a potential evacuation situation exists.

- Explosive Atmosphere

  O_2 <19% - excavation and associated activities will be terminated, notify the Project Manager.

  O_2 19%-23% - no further action.

  O_2 >23% - excavation and associated activities will be terminated, notify the Project Manager and the authorities that a potential evacuation situation exists.

  LEL <10% - no further action.
  LEL >10% - excavation and associated activities will be terminated, notify the Project Manager and the authorities that a potential evacuation situation exists.

- Particulates

  0 - 2.5 mg/M^3 - no further action.

  2.5 - 5.0 mg/M^3 - initiate dust suppression measures.

5.0 - 50 mg/M^3 - implement more aggressive dust suppression measures, excavation and associated activities will be terminated until particulate emissions are less that 5.0 mg/M^3, notify the Project Manager.

- Nuisance Odors

  Odors will be generated during the excavation activities and exposure to the atmosphere of soils containing APH. Unfortunately, a good method to quantify the odors is not available because, a person who frequently is exposed to petroleum odors may be affected differently from someone who has had limited exposure. Therefore, the Site Health and Safety Office will:

  - Maintain an open dialogue with nearby residents; and
  - Periodically walk the perimeter fence line to evaluate the odors.

  If it is determined that the odors have become a nuisance, based either on the opinion of the Site Health and Safety Officer or discussions with the community, then control measures will be implemented.

10.5.3 Perimeter Air Monitoring Frequency

The air quality parameters will be measured and documented at the up wind and transverse wind direction stations once per hour. VOCs and LEL/O_2 will be monitored at the downwind station continuously and recorded in the Perimeter Air Monitoring Log once per hour. The VOC and LEL/O_2 Meter(s) will be equipped with an alarm to notify site workers when action levels have been exceeded. Particulate monitoring will be performed one per hour and recorded in the Perimeter Air Monitoring Log. If action levels are exceeded, emission control procedures (Subsection 10.6) will be implemented, and air quality parameters will be recorded every 10 minutes until they return to background levels.

10.6 Control of Fugitive Emissions

If fugitive emissions exceed site specific and/or perimeter action levels, the excavation and associated activities will cease, and the following control measures will be implemented in ascending order:

- Wetting of the offending soils,
- Covering of the offending soils, and
- Site work stoppage.

In the event a strong odor is detected in the excavation, the Site Safety Officer will walk the perimeter to determine if unpleasant odors are emanating from the Site. In addition, odor control measures will be prepared for implementation. If a strong odor is detected emanating from the Site, the above control measures will commence in ascending order until the offensive odor is controlled. Likewise, if a complaint is received from the community, the perimeter of the Site will be checked, and odor control measures implemented as necessary.

10.7 Calibration and Maintenance

All air monitoring equipment will be maintained and calibrated according to the manufacturer's recommendations, which will be available in the site GWTF office. Calibration will be done

before and after use each day and under the approximate environmental conditions the instrument will be used. All air monitoring activities will be documented in the equipment calibration logs.

If an instrument is found to be inoperative or suspected of giving erroneous readings, the Site Safety Officer shall be responsible for immediately removing the instrument from service and obtaining a replacement unit. The specific operation for which this equipment is essential shall cease until an appropriate replacement unit is obtained. The Site Safety Officer will be responsible for ensuring a replacement unit is obtained and/or repairs are initiated on the defective equipment.

When applicable, only manufacturer-trained and/or authorized personnel will be allowed to perform instrument repairs or preventive maintenance.

11.0 TRENCHING AND EXCAVATION ACTIVITIES

11.1 Objective

The objective of this procedure is to ensure that all trenching/excavation activities are performed in accordance with the requirements of the OSHA Construction Standard for excavation and trenching 29 CFR 1926.650-.652. Furthermore, it is the responsibility of personnel to take all the required measures to delineate and locate underground and above ground utility and service lines prior to beginning trenching/ excavation activities.

11.2 Scope

This procedure must be implemented whenever trenching or excavation activities occur to protect site workers and ensure that underground or above ground utility and/ or service lines are not contacted or damaged. In order to ensure that this occurs, the requirements and measures described in the following sections must be implemented.

11.3 Management Responsibilities

11.3.1 Site Operations Manager Responsibilities

Site Operations Managers shall be responsible for implementing this procedure. This will include the following:

- Ensuring that only properly trained and qualified employees as defined in Section 3.0 (Employee Training Requirements) oversee site activities that involve digging and excavation work.
- Approving individuals to act as qualified personnel.
- Ensuring that individuals who oversee contractor activities have received the proper training before assignment.
- Ensuring that prior to beginning intrusive activities onsite, all underground and above ground utility and service lines have been located and marked.
- Ensuring that a project is properly staffed onsite when activities require contractor oversight and other duties. This can be delegated to the responsible Project Manager.

11.4 General Health and Safety Requirements, Warnings, and Cautions

This HASP was developed and will be implemented onsite for this project. The HASP contains the following information:

- Personal protective equipment requirements are defined in Section 9.0 of this document.
- Excavations shall be monitored for a hazardous atmosphere in accordance with the procedures outlined in Section 10.0 of this document.
- No personnel shall enter an excavation greater than four feet in depth unless the excavation is properly sloped or shored.
- Every project field person prior to beginning work shall review and sign the site-specific HASP.

- Traffic control devices, such as safety cones or barricades, shall be positioned to protect the workers in the work area.
- Temporary construction fencing will be placed around all excavations at the end of each workday. The fencing will remain in place until the excavation/trench is backfilled. The fencing may be removed for the completion of subsequent tasks but will remain up in those areas not involved in current work activities.
- Noise protection devices may be necessary due to equipment operation as specified in Subsection 8.2.4.
- Other potential site hazards that include lifting, pinch, trip, electrical, chemical (airborne and physical contact), and biological. All potential site hazards are detailed in the Section 8.0.

11.5 Project and Site Preparation

- The Project Manager or designee shall notify local utility one-call services in advance of the excavation activities in accordance with all state and local requirements. Also obtain a list of all known utilities in the area.
- The Project Manager or designee shall request from the Client, a copy of all site as-built drawings for review of utility locations. In addition, project files and CADD files shall be reviewed for plans with the location of underground utilities.
- Prior to the start of the project, the Project Manager shall conduct a site walk to delineate and determine all above ground utility and service lines. No excavating, drilling, or boring shall be done until a thorough onsite underground utility survey, conducted by knowledgeable persons or agencies, has been made and it is found safe to begin.
- Survey for and Identification of Utilities: As previously indicated, prior to beginning work on site or in or around facilities, buildings, or other structures that could be served by or connected to utilities, a search must be conducted by the Project Manager to determine and locate overhead, underground, in-workplace utilities, and service lines.
- The location of each of the systems and utilities indicated above shall be located or checked off as not being present in the work area. Utilities and service lines should be marked, or access otherwise restricted to avoid chance of accidental contact. The Project Manager should identify the location of the areas to be excavated/trenched by marking the boundaries of all areas to be excavated (typically via spray paint). Once the exact location of all trench and vault excavations are properly identified, the construction contractor will typically saw-cut along the marked-out lines prior to initiating excavation activities.

  Note: Although the project team may believe that all lines have been delineated, because there is a potential for lines to run in various directions, conduct all intrusive work with extreme caution.

- A private utility mark-out company should be contracted prior to performing excavation activities to identify the approximate location of any potential utility lines identified near the areas to be excavated if there is continued doubt regarding the line location. For any utility lines which are identified, a "soft-dig" contracted should be utilized to verify the location and depth of the lines as well as the size and type of line.
- The Project Manager and/or Project Engineer or Project Geologist shall conduct a project kick-off meeting. The kick-off meeting should be conducted to ensure that all field

personnel and sub-contractors understand the project scope of work and all health and safety requirements. Daily health and safety meetings should be conducted prior to work each day. The qualified person will review with the site personnel the site excavation, safety, and project work requirements. This review will be documented in the field logbook.

- For all areas to be excavated where utility lines have been identified or are expected to exist, the excavations/trenches should be hand-dug to a depth of at least five feet. The width of the hand-dug area should be at least the width of the bucket of the excavator (i.e., backhoe or track-hoe.)

- If underground utility or services lines are contacted, all operations shall cease, and notifications made.

  Note: Utilities shall be considered "live" or active until a reliable source has documented them to be otherwise. All electrical systems shall be locked and tagged out in the off (zero energy) condition.

11.6 Operations Adjacent to Overhead Power Lines

- Overhead transmission and distribution lines will be carried on towers and poles that provide safe clearance over roadways and structures.
- Clearances will be adequate for the movement of vehicles and for the operation of construction equipment.
- Overhead or aboveground electric lines shall be considered **"live"** or active until a reliable source has documented them to be otherwise.
- Elevated work platforms, ladders, scaffolding, man-lifts, drill, or vehicle super structures shall be erected a minimum of 20 feet from the line if the voltage is unknown. For overhead power lines confirmed in writing to be below 50 kV, the minimum distance is 10 feet. For overhead power lines above 50 kV, the minimum distance (10 feet) should be increased by four inches for every kV of energy above 50 kV.
- For other overhead or in-workplace utilities, workers must be instructed to use care in working under or around utilities to avoid hot surfaces, loud noises, pressured gases or air, leaking of pipelines, discharge of steam or hot liquids, and must work to prevent accidental contact with or breakage.

11.7 Personnel Field Requirements

- The qualified subcontractor shall perform excavation and trenching activities in the locations identified on the remediation system design drawings and specifications. The Project Manager must approve any deviation from the identified locations.
- At least one qualified person will continually observe subcontractor excavation activities. The qualified person must not conduct other site activities if they require their attention to be diverted from the subcontractor oversight. If other activities are required to be conducted, additional personnel will be assigned to the project.
- If subcontractor personnel are required to work in an excavation greater than four feet in depth, the work shall comply with the OSHA Excavation and Trenching requirements found in 29 CFR 1926.650-.652. This will include inspecting the excavation prior to work each day, ensuring that the proper safety systems are implemented such as shoring,

sloping, or benching the sides of the excavation to prevent cave-ins, and that a proper means of access and egress are provided to the workers.

11.8 Documentation

All site activities should be detailed in the site field book kept by the qualified person. The entry shall include (as a minimum) the date, time, weather, project name and number. Persons on site, task description, pertinent health and safety information, and all measured parameters and well observations. In addition to recording information in the field book, the following shall be completed:

- Provide a scaled drawing of as-built remediation trench and vault locations.
- Indicate the location and type of subsurface utilities that have been located.

12.0 DRILLING PROTOCOL

12.1 Objective

The objective of this procedure is to prevent damage to subsurface structures (including tanks, lines, water lines, gas lines, electrical service, etc.) during drilling, Geoprobing/direct push sampling, augering, sampling, or other advancement operations.

12.2 Scope

This protocol establishes the requirements for on-site drilling operations, addressing the key issues, and activities associated with safe drilling and boring operations.

12.3 Pre-Drilling Procedures

Key Personnel and Responsibilities: The Project Manager/Site Supervisor.

- Project Manager will be responsible for fulfilling the objectives of this protocol by ensuring that this procedure is carried out by all of the employees and sub-contractors.
- Project Manager will ensure that all individuals working on remediation projects are adequately trained and supervised.
- The Site Supervisor will practice sound investigation and drilling practices and employ all necessary measures to avoid damage to subsurface product systems and structures.
- The Project Manager will be the point of contact for the Site Supervisor in the event an exception to this protocol is requested.
- Preparation Tasks: Gather all relevant information about the site prior to the site visit.
- Obtain Permits: The Project Manager is responsible for following all local, state, and federal laws, obtaining all necessary permits and utility clearances, and securing site access permission.
- Obtain Site Plans: The Project Manager shall obtain as built drawings and/or site plans as available.

  NOTE: As-built drawings may not accurately depict the locations of improvements and subsurface features and should therefore not be solely relied upon to determine drilling locations.

12.3.1 Mark-outs:

The Site Supervisor must conduct a walkthrough of the site to locate all main electrical, gas, telephone, and all other subsurface utilities. On third party sites, close coordination with the site owner's representatives for mark-outs, review of as-builts, and other information reviews should be conducted prior to work. For any utility lines, which are identified, a “soft-dig” contractor should be utilized to verify the location and depth of the line as well as the size and type of line.

12.3.2 Site Visit

The Site Supervisor shall obtain information needed and prepare a vicinity map of the area. The walkthrough should include the following activities and others as determined by the Site Supervisor and Project Manager:

- Utilities;

- Underground storage tanks and associated vent and dispensing lines;
- Cable lines**;**

  NOTE: Drill Rigs and vehicle super structures shall be a minimum of 20 feet from the line if the voltage is unknown. For overhead power lines confirmed in writing to be below 50 kV, the minimum distance is 10 feet. For overhead power lines above 50 kV, the minimum distance (10 feet) should be increased by four inches for every kV of energy above 50 kV. (1926.550 (a) (15) (i & ii) Subpart N).
- Product Systems - If possible, speak with someone with historical Site knowledge to gain information about the Site (locations of former tanks, lines, etc.);
- Observe paving scars (i.e. fresh asphalt/concrete patches, scored asphalt/concrete); and

  NOTE: This may not indicate location of product piping.
- Existing Remediation Systems - visually inspect the location of above ground components. **Document the location of well manholes, sparge points, etc.**

12.3.3 Selection of Drilling Locations:

Document, communicate, and review the selected drilling locations. Define "Critical Zones" or Exclusion Zones. The Site Supervisor shall establish drilling critical zones. This shall consist of the following:

- 10-feet distance from the furthest edge of any operating tank;
- 10-feet distance surrounding operating dispenser islands;
- The Site Supervisor should utilize the information collected to this point in combination with regulatory requirements and investigation objectives to select drilling locations;
- If possible, the Site Supervisor should avoid selecting locations within the critical zone; and
- Review selected locations with the Client and with the Project Manager.

  NOTE: The Site Supervisor must not proceed with the investigation until the plan has been discussed with the Client and approval to proceed has been granted. If relocation of a boring is necessary at any time and for any reason outside approved limits, the Site Supervisor must contact the Client prior to proceeding.

12.3.4 Required Notifications

Notify affected parties of planned work and avoid scheduling conflicts with other remediation or facility activities at the site. The Site Supervisor will notify the following persons as applicable:

- Project Manager;
- Retailer/ Terminal Manager/Operator for active locations; and
- Property Owner for private properties, when possible.

12.4 Procedure for Drilling

Identify to the fullest extent possible any improvements present in the subsurface prior to advancing drilling tools in order to prevent damage to the improvements.

12.4.1 Safety

- This HASP must be available on-site at all times and all employees and subcontractors must be familiar with it.
- All work areas shall be secured with safety cones, safety tape, construction fence, other barriers, or signs as appropriate.
- A fire extinguisher must be present at all times.

12.4.2 Supervision

- The Site Supervisor will be responsible for drilling operations.
- All surface removal, hand augering, digging, and drilling will be performed, observed, or supervised by the Site Supervisor at all times.
- The Site Supervisor will ensure that the work is performed with due caution and will be alert for warning signs that could indicate the presence of underground tanks, lines, or other subsurface structures.
- If any such indications arise, the work should immediately cease in the area and the Project Manager shall be contacted.

12.4.3 Warning Signs

The following warning signs may indicate the presence of a subsurface structure such as tanks/lines:

- Pea Gravel/Sand/other fill material.
- The absence of soil recovery in the hand auger. This could indicate pea gravel that has spilled out of the auger.
- Any unexpected departure from the native soil conditions as established in other onsite excavation/trenching digging.

If any of the above warning signs or a suspicious condition is encountered, drilling in this area should immediately cease and the Project Manager shall be contacted.

12.4.4 Drill Boring Sequence

If possible, the boring sequence should be planned such that the boring furthest from any suspected underground improvements is carried out first. This is done to determine the natural subsurface conditions and to allow the Site Supervisor to recognize fill conditions. Least impacted locations should be done first if possible, to prevent possible cross contamination.

12.4.5 Surface Removal for Paved Areas - Paving Removal

Sufficient paving or surface improvement should be removed to allow clear visibility of the subsurface conditions during hand augering/digging and allow excavation with hand tools.

- Drilling in an area of high risk may warrant a larger pavement opening.
- Monitoring Well Installations: 2ft x2ft minimum removal is suggested.
- Soil Borings/Push Type Samplers: 8in minimum removal is suggested.

12.4.6 Surface Removal Technique

The technique used should not pose a threat to subsurface structures. The only approved methods for completing holes in pavement shall be to neatly saw-cut or cored unless otherwise directed by the Client.

12.4.7 Subsurface Evaluation

Ensure that no subsurface improvements exist where drill or auger will penetrate. In Critical Zones, a minimum evaluation to a depth of 8ft deep utilizing a non-destructive method such as hand clearing, or vacuum digging is required. In Non-Critical Zones, a minimum evaluation to a depth of 4 ft deep utilizing a non-destructive method such as hand clearing, or vacuum digging is required. Areas where utility or service lines have been identified, a minimum evaluation to a depth of 5 ft deep shall be completed utilizing a non-destructive method such as hand clearing or vacuum digging. The method used to identify the subsurface should be compatible with the inherent risk associated with the type of facility / property, and the location of the drilling. Only approved tools shall be used for probing and digging. The Site Supervisor should discuss tool requirements with the Client. The following methods have been approved for the subsurface evaluation of boring locations:

- Vacuum Digging: Vacuum digging has proven to be a very effective and safe means of digging and is recommended instead of probing and digging with hand tools.
- Probing: The probe should have a blunt or rounded tip and should be advanced by hand without excessive force.
- Hand Digging: Should be performed with a small spade shovel.
- Hand Augering: The auger is to be turned slowly and not forced through the soil. It is recommended that an auger without sharp points (some augers have rounded edges) be used.
- Post Hole Digging: Can be used for soil removal only in soil that has been probed and cannot be used to advance the hole beyond the depth or width of probing.

Approval to deviate from this work scope may be granted on an exception basis for specific situations, such as undeveloped land. The Site Supervisor is to discuss the situation with the Project Manager. Evaluation of the subsurface should ideally be accomplished by probing followed by soil removal using Critical and Non-Critical Zone guidelines as a minimum. Additional exploratory methods (e.g., water drilling, electronic screening, etc.), which will achieve at least the same level of precautionary investigation and/ or drilling safety, should be reviewed with the Project Manager prior to implementation.

Where natural subsurface conditions (e.g. cobbles/rocks, fill material, and/or bedrock) may prevent adequate probing and augering, a practical and sensible evaluation by the Site Supervisor will be the basis for determining if continuation of probing and augering is feasible. In all cases the Site Supervisor must employ all means necessary to prevent

damaging subsurface structures. When conventional means of probing and augering cannot be utilized or the Site Supervisor feels that additional probing/augering is not feasible; the Site Supervisor must cease work in that specific area and contact the Project Manager to discuss the matter.

12.4.8 Event Notification

- If any portion of an underground tank, line, utility, or other subsurface structures are encountered or if there is suspicion that one has been encountered, all work shall be halted, emergency conditions secured, and the Project Manager notified immediately.
- If there is suspicion that the structure has been damaged, if applicable, the emergency shut-off switch should be activated.
- The Project Manager should decide if additional hand clearing is required. If it is confirmed that a UST system has been encountered, the Client should be consulted to determine what actions should be taken.

Under no circumstance is the area to be backfilled without notifying the Client and receiving an approval to proceed.

12.4.9 Scheduling

While evaluating the subsurface may be time consuming, it may be appropriate to perform the subsurface evaluation prior to the drill rig's arrival on-site.

- If these activities are conducted prior to the actual drilling day, the augered holes must be adequately covered with road plates and/or backfilled. Care must be taken to prevent settlement of the material used to cover the holes.
- For remote, idled, or access-controlled sites, augered/ probed holes can be left open during fieldwork. A cone shall be placed over each penetration that will not be drilled the same day.
- No borings offsite will be left open at the end of the workday.

13.0 SUBCONTRACTOR HEALTH AND SAFETY REQUIREMENTS

13.1 Objective

The health and safety of employees and subcontractors working in potentially hazardous areas is of paramount importance. The objective of this procedure is to minimize risks to such employees through the development and implementation of the Project HASP and compliance with applicable OSHA regulations.

13.2 Scope

This procedure establishes the minimum Health and Safety requirements that each subcontractor(s) and their employee(s) must follow and implement. This will include the implementation of an equivalent (at a minimum) Health and Safety Program and an appropriate site-specific HASP.

13.3 Procedure

Each subcontractor will ensure that their employees are qualified in accordance with the OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) standard. This includes:

- 40-hour and if needed 8-hour Refresher Trained;
- Medically Qualified to be on-site and qualified to wear respiratory protection; and
- Respirator Fit-tested

13.3.1 Subcontractor Responsibilities

Each subcontractor implements an acceptable site HASP. Requirements will consist of the following:

- Subcontractor(s) will adopt the provisions of the Site HASP, as a minimum. In this case, the Site HASP becomes that of the subcontractor, and as an employer, the subcontractor is responsible for its implementation.

13.3.2 Site Control

No one shall be permitted by personnel to enter the site work area who is not part of the project team and who is not acting in strict accordance with the established project HASP. This is for the protection of the site personnel, subcontractor, as well as for the individuals who are not part of the work team. Depending on the site activities and hazards, this requirement could also apply to client personnel and government officials. In order to implement this policy, the following must be completed:

- The site HASP/Site Safety Plan must be discussed with any subcontractors at the job-opening meeting or during the initial site tailgate meeting.

This will ensure that there is a full understanding and mutual acceptance of the roles and responsibilities of each party.