

# **Niagara Plant EXCAVATION PROCEDURE**

**Date:** February 1, 2024

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### SUMMARY

This regulation outlines procedures to be followed when performing excavations. Excavated materials and water which collects in excavations need to be handled in the proper manner to ensure that Occidental Chemical Corporation Environmental Regulations are met. Details of the procedures, including responsibilities, are described in the following sections. A summary of the major procedures that must be followed for excavations are:

- Excavation is restricted in areas of known dioxin, phosphorus, non-aqueous phase liquids (NAPL), mercury, and elevated pH and can only be performed with special approval from Health, Environment, Safety, and Security (HESS).
- Excavations that penetrate the native clay/till layer are not permitted unless special approval is received from HESS. Any penetration of the clay/till confining layer would also require approval from the New York State Department of Environmental Conservation (NYSDEC).
- Excavations must avoid impacting remedial systems and monitoring wells and cannot be performed within 20 feet of these structures unless special approval is received from HESS.
- If mobile NAPL is encountered during an excavation and/or if NAPL is encountered outside of a known NAPL area (i.e. in soil or in water), the NYSDEC will be notified. Such notifications will include, at a minimum, proposed method(s) for recovering mobile NAPL, mobile NAPL monitoring procedures, and provisions for proper off-site disposal.

The major procedures for handling excavated soils are:

- Excavated soils must be screened with a photoionization detector for organic vapors and visually examined for chemical presence (i.e., NAPL).
- Based on the screening, there are three soil handling classifications:
  - Category A - organic vapor < 10 ppm, no visual chemical presence.
  - Category B - organic vapor > 10 ppm, no visual chemical presence.
  - Category C - visual chemical presence (NAPL).
- All categories of soils from on-site areas can be used as backfill except for Category C soils where substantial quantities of NAPL are present (i.e., soils are saturated with NAPL). These soils must be disposed off-site. Category A soils generated from an on-site excavation can be used as both backfill and surface regrading. These soils can be used as backfill to the excavation from which they were generated without analytical

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testing. However, excess Category A soils used for surface regrading at other locations on site then analytical testing must be performed to demonstrate that the soils meet the requirements of 6 NYCRR Part 360.13(e).

- All categories of soils from off-site areas adjacent to the Plant in areas where major remedial components are situated can be used as backfill to the excavation from which they came without analytical testing except for Category C soils where any NAPL is present.
- Excess Category A soils generated from off-site areas adjacent to the plant can be used for on-site surface regrading in accordance with 6 NYCRR Part 360.13(d)(2).
- Excess Category B and C soils must be properly disposed of off-site.

The major procedures for handling water generated by excavation activity are:

- Water with visual chemical presence and chemical concentrations or pH level that exceed sanitary sewer guidelines must be treated at F-Area Groundwater treatment facility;
- Water with chemical concentrations or pH level that meet sanitary sewer guidelines established in the Plant's discharge permit with the Niagara Falls Water Board (NFWB) can be discharged to the sanitary sewer with permission from the HESS. The flow rate which the water can be discharged will be determined by HESS;
- Settled sediments must be stabilized (if necessary), containerized, characterized, and disposed appropriately.

The major health and safety procedures that must be followed during subsurface activities are:

- HESS must be notified prior to conducting excavation activities and must sign-off that appropriate health and safety protocols required to conduct the excavation have been communicated to the person responsible for the excavation;
- Excavations performed as part of the Corrective Action Program or in an area where excavation is restricted must follow the health and safety protocols presented in the document entitled, "Health and Safety Plan for Corrective Action Programs, Buffalo Avenue Plant." All other excavations must follow health and safety protocols defined by HESS.

### A. PURPOSE

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This regulation outlines procedures to be followed when performing excavations. Excavated materials and water which collects in excavations need to be handled in the proper manner to ensure that Occidental Chemical Corporation Environmental Regulations are met.

### B. ADMINISTRATION

This regulation shall be administered by the HESS, Occidental Chemical Corporation, Niagara Plant, Niagara Falls, New York.

### C. GENERAL STATEMENT OF PROCEDURE

The flow charts shown on Figures 1 and 2 provide an overview of the process to be followed during excavation activities. These flow charts need to be reviewed prior to excavation as some areas of the Plant have restrictions for excavations (i.e., special procedures are required) and some areas are restricted (i.e., excavation is not permitted without prior approval from HESS).

The attached "Environmental Soils Permit" must be completed by the person undertaking the excavation and submitted to HESS for approval prior to excavation activities. The Environmental Soils Permit will initiate the sampling and handling/treatment approval process and provide environmentally sound, mutually agreed upon storage methods and locations for the excavation materials.

The attached "Water Permit" must be completed by the person undertaking the excavation if water will be generated from an excavation. Water which has collected in an excavation must be sampled and analyzed before its final disposition can be determined by HESS. The water could be disposed of as follows, depending on the level and type of chemical presence in the water:

- a. into a sanitary sewer (to be treated at the Niagara Falls Wastewater Treatment Plant) if approved by HESS; or
- b. through the F-Area Groundwater treatment system.

### D. PROCEDURE

#### 1. RESPONSIBILITIES

- a. Person Undertaking the Excavation:

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An Excavation Permit, which includes an underground utilities check, must be obtained by the person supervising the excavation.

Once the Excavation Permit has been secured, an Environmental Soils Permit must be completed and submitted to HESS prior to the commencement of excavation activities. The person undertaking the excavation (requester) is responsible for filling out Section I of the permit and obtaining Area Supervisor approval to manage soils in their area of the Plant. A Water Permit must be completed and submitted to HESS if water will be generated during excavation activities. The person undertaking the excavation (requester) is responsible for filling out Section I of the permit.

The person undertaking the excavation is also responsible for the following:

- i. Notification of HESS regarding the excavation activities and implementation of all health and safety procedures required by HESS;
- ii. Provision of rolloffs for containing excess soil (if necessary) scheduled through HESS;
- iii. Provision of water storage equipment (tanks, modutank, tank trailers etc.);
- iv. Construction and maintenance of short-term soil stockpiles including underlying barrier and surface cover;
- v. Performance of excess soil screening to determine soil category;
- vi. On-site movement of soils from excavation to short-term stockpiles or to designated storage area (drums or rolloffs);
- vii. Discharge of excavation waters to sanitary sewer or F-Area Groundwater treatment facility once approval is obtained from HESS;
- viii. Stabilization (if necessary) and containerization of sediments from dewatering operations; and
- ix. Collection of representative water samples to determine disposition.

b. Area Supervisor or Designee:

The Area Supervisor or designee responsible for the area where the excavation is to be performed is required to approve the proposed soil and water storage locations or designate an alternate location that is acceptable near the excavation.

- c. HESS:  
HESS is responsible for the following activities:
- i. Completion of Section II of the Environmental Soils Permit and Water Permit; designate the material as hazardous or non-hazardous if it is to be disposed off-site; define storage, labeling, inspection, and discharge requirements (for water);
  - ii. Collection of representative sample(s) for materials destined for disposal or treatment and arrange for analysis as needed;
  - iii. Determination of on-site redistribution location or off-site disposal/treatment facility for soil materials;
  - iv. Determination of final disposition of generated waters;
  - v. Secure NYSDEC or NFWB approval if required;
  - vi. Ensure that selected off-site hazardous waste or non-hazardous waste treatment/disposal facility is on approved list per Corporate procedure HESP-312.
  - vii. Make arrangements for on-site redistribution and off-site treatment/disposal;
  - viii. provide manifest, bill of lading, land ban certifications, labels, and other regulatory documents;
  - ix. Make necessary arrangements for shipment in conjunction with requester;
  - x. If the material originates from a Solid Waste Management Unit (SWMU) or Corrective Action Program activity, contact Glenn Springs Holdings, Inc. (GSH) Project Manager for advice.
  - xi. Approval of final disposition of soils generated from a remedial, SWMU or Corrective Action Program activity whether redistributed on site or disposed/treated off-site;
  - xii. Approval of and assistance with developing a design for any NAPL collection systems that may be required; and
  - xiii. Approval from NYSDEC for reuse of soils on site.
  - xiv. Abandoning and replacing monitoring wells should this be required.

## 2. EXCAVATION PRECAUTIONS

- a. Excavation is restricted in the areas shown on Figure 3.

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- b. The native clay and till layers which form the lowermost strata of the overburden (Figure 4), provide a natural barrier against the migration of chemicals from the overburden into the bedrock groundwater flow system. The integrity of this natural barrier must be preserved to maintain chemical containment in the overlying soil layers. Excavations and construction which penetrate the native clay/till surface should be avoided. Permission must be received from HESS for activities which may penetrate the clay/till surface. Any penetration of the clay/till confining layer would also require approval from the New York State Department of Environmental Conservation (NYSDEC). The depth to the clay/till surface in the excavation or subsurface construction area can be estimated from stratigraphic logs of historic borehole and monitoring wells. Copies can be obtained through HESS.
- c. Precautions must be in place to avoid impacting operation of existing remedial systems during excavation. The locations of existing remedial systems are shown on Figures 5 and 6. Excavation cannot be performed within 20 feet of a remedial system without special permission from HESS.
- d. Excavation activities should not damage existing monitoring wells (Figure 6). Excavation cannot be performed within 20 feet of a monitoring well without permission from HESS. Wells which will be impacted must be properly abandoned prior to commencing excavation. The wells may require replacement at another location depending on the current or future use of the well. In the event that a monitoring well is inadvertently damaged beyond usability, blocked or broken, or fail to recharge properly, it shall be repaired or replaced if necessary.
- e. If mobile NAPL is encountered during an excavation and/or if NAPL is encountered outside of a known NAPL area (i.e. in soil or in water), the NYSDEC must be notified. Such notifications must include, at a minimum, proposed method(s) for recovering mobile NAPL, mobile NAPL monitoring procedures, and provisions for proper off-site disposal.

### 3. SOIL HANDLING

- a. Excavated soils will be screened with a photoionization detector for organic vapors and visually examined for chemical presence (i.e., NAPL). If elemental phosphorus is anticipated to be present in the excavated soil, or is observed during excavation, soil should immediately be replaced and HESS contacted as special handling requirements will be required.

- b. Sampling and analysis of the excavated soils may be required to determine off-site treatment/disposal requirements. HESS will determine if sampling and analysis are required and make the necessary arrangements.
- c. There are three classifications for excavated soils based on the organic vapor and visual screening results. These classifications are Category A, B and C. A description of each category and the method of handling the soils is summarized below.

i. Category C:

- \* Category C soils are soils that contain NAPL or soils generated by remediation of a known release that are hazardous based on process knowledge (i.e. generated by a listed process).
- \* Category C material cannot be used as backfill from areas located off-site.
- \* Category C materials generated from on-site areas can be used as backfill except if substantial quantities of NAPL are present (i.e., soil is saturated with NAPL). These soils must be placed in an appropriate container for disposal or, when container not immediately available, in a temporary stockpile adjacent to the excavation. The temporary stockpile will consist of successive layers of polyethylene sheeting, plywood and polyethylene sheeting. The stockpile will then be covered with a polyethylene sheet.
- \* Category C material that cannot be backfilled is to be sampled, placed in approved containers (rolloffs) and disposed/treated off-site.
- \* Prior to off-site disposal soils accumulated in rolloff containers will be stored in the main hazardous waste accumulation area designated at Building U-90.

ii. Category B: Soils without NAPL, organic vapors > 10 ppm.

- \* Category B soils are soils with greater than 10 ppm organic vapor concentration but no NAPL.
- \* Category B soils can be used as backfill within the excavation.
- \* Category B soils must be placed in a temporary stockpile adjacent to the excavation and underlain and covered by polyethylene sheeting prior to backfilling.
- \* Every effort should be made to replace excess material back into the excavation. If necessary, excess material can be sampled and disposed off-site.

- iii. Category A: Soils without NAPL, organic vapors < 10 ppm.
  - \* Category A soils are soils with less than 10 ppm organic vapor concentration and no NAPL.
  - \* Category A soils can be used as backfill in the excavation and have no special storage requirements.
  - \* Excess material can be used to grade Plant areas if approved by HESS and analytical testing has been completed to demonstrate that the soil meets the requirements of 6 NYCRR Part 360.
  - \* Excess material can also be sampled and disposed off-site.
- d. All categories of soils from off-site areas adjacent to the Plant in areas where major remedial components are situated can be used as backfill to the excavation from which they came without analytical testing except for Category C soils where any NAPL is present. These soils must be disposed off-site. Should off-site soils be generated outside of these areas, they will be characterized and disposed in accordance with applicable regulations.
- e. Excavations will be backfilled with excavated material as described above or with other suitable material for the intended purpose and the ground surface restored to meet pre-excavation conditions.

#### 4. WATER HANDLING

- a. Excavation water cannot be pumped to the outfall sewer system. Excavation water cannot be pumped directly to sanitary sewer system without proper analysis and approval from HESS. Water that is generated by excavation activities may be required to be pumped to temporary containment to allow sediment to settle and testing to be performed. A choice of the containment type (i.e. tanks, frac-tank, tank trailer, etc.) can be made based on the anticipated excavation water quantity.
- b. Water generated will be visually examined for the presence of NAPL. The NYSDEC must be notified if NAPL is encountered. Water which contains NAPL will be placed in temporary storage to allow NAPL to separate to the extent practicable. NAPL will be accumulated in drums and moved to Building U-90 prior to off-site disposal in accordance with applicable regulations.

- c. The preferred option to dispose of generated water is to discharge the water to the F-Area Groundwater Treatment Facility under the following conditions:
- The pH must be adjusted to 6.5-7.5 and water and solids must be agitated until reading is consistent.
  - After the water pH is adjusted, solids must be allowed to settle and the water decanted from either the baker tank, trailer, and/or vacuum truck. If needed, the decanted water will be filtered via a bag filter rack during discharge to the F-Area Groundwater Treatment Facility to prevent solids from entering the sump or decanter. A 10-micron filter bag would be attached to the end of the discharge hose to collect solids. The bag may need to be changed at intervals as solids accumulate.
  - If odorless, the water can be discharged directly to the building sump. The operator would then manually pump directly to the decanter.
  - Any solids that may accumulated in F-Area treatment facility included those solids collected in the filter bags noted above will be containerized and relocated to U-90 prior to off-site disposal in accordance with applicable regulations.
  - If a strong organic odor is present, the water will be discharged directly from the vacuum truck, trailer, and/or baker tank to the decanter via a portable pump and hose connected to a valve located at the building sump adjacent to the sand filters. The F-Area operator will identify the valve. A 125 HP Goodwin pump @ 400 gallons per minute (gpm) can be used. The vacuum truck, trailer, and/or baker tank must be vented for discharge.
- d. The second option to dispose of generated water is to discharge the water to the sanitary sewer system. Only water where NAPL was not observed can be discharged to the sanitary sewer system. The water must be sampled for Total Organic Carbon (TOC) and pH. Additional analysis (total phosphorus and gas chromatography (GC) for site-specific organics) may be required should additional chemical presence be suspected in order to control and evaluate discharge options. General Sanitary Guidelines for water are a pH of 5 to 10 and TOC of less than 15 ppm. Water which meets the Sanitary Guidelines can be discharged to the sanitary sewer only with the permission of HESS, otherwise the water must be discharged to the F-Area Groundwater Treatment Facility. The flow rate at which water can be discharged to the sanitary sewer will be determined by HESS.

- e. Settled sediments and NAPL must be stabilized (if necessary), containerized, characterized, and disposed appropriately.

5. HEALTH AND SAFETY PROGRAM OVERVIEW

- a. HESS must be notified prior to conducting any excavation activities as part of the process to obtain the Environmental Soils Permit. HESS will review the information contained in Section I of the Environmental Soils Permit and present specific health and safety procedures that must be followed to conduct the excavation. HESS will sign off on the Environmental Soils Permit that the procedures required to conduct the excavation have been communicated to the person responsible for the excavation.

NYSDEC will be notified at least 15 days in advance (unless in an emergency) of major excavation activities (i.e., greater than 10 cubic yards of soil to be generated). If an emergency excavation or other small excavation results in the generation of more than 10 cubic yards of soil, NYSDEC will be notified once this determination is made.

- b. All excavations (i.e., any ground penetrating activity in which soils are removed) to a depth of four feet or more are considered to be a confined space by HESS. Therefore, Safety Regulation No. 4 must be followed. Depending on the depth and size of the excavation, HESS may issue a variance which will state that confined space protocols are not required. Requirements for air monitoring and personnel protective equipment (PPE) will be established by HESS.
- c. Excavations conducted as part of a Corrective Action Program activity or in an area where excavation is restricted (see Figure 3) must follow the health and safety protocols presented in the report entitled “Health and Safety Plan for Corrective Action Programs, Buffalo Avenue Plant”(HASP). A copy of this can be obtained through HESS. All other excavations must follow the health and safety protocols defined by HESS. A summary of the major requirements of the HASP are presented below:
  - i. The type and level of PPE that is suitable for a given activity depends on an analysis of the risk levels associated with the activity, as well as the types, contact time and exposure routes of the chemicals which may be present. These guidelines are presented in the HASP. Minimum PPE for all excavation activities consists of chemical resistant over boots, safety boots, chemical resistant (Tyvek) clothing, inner and outer chemical resistant gloves, safety

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goggles, and hard hat. A full-face, air-purifying, canister-equipped respirator should be readily available.

- ii. Air monitoring should be performed to determine respirator requirements. The requirements are dependent upon the type of chemicals (which varies throughout the Plant) present in the area of the excavation. A guide to determining respirator requirements is presented in the HASP.
- iii. PPE must be donned and doffed in a particular order. The order for donning PPE is: (1) chemical resistant clothing, (2) safety boots, (3) gloves, (4) respirator, and (5) hard hat. The order for doffing PPE is: (1) wash boots and outer gloves prior to removal, (2) chemical resistant clothing, (3) hard hat, (4) respirator, and (5) inner gloves.
- iv. Three zones should be created within the excavation or subsurface construction zone.

1. Exclusion Zone

The Exclusion Zone (EZ) is the area immediately surrounding the work area. The work area includes the excavation and any soil stockpiles. Sufficient area must be provided for efficient movement of personnel and equipment, as well as provide chemical control. The boundaries are modifiable depending on the operational requirements. PPE suitable for the level of chemical presence in the area as outlined by the HASP must be worn. A wind direction indication device must be visible from the EZ.

2. Contaminant Reduction Zone

The Contaminant Reduction Zone (CRZ) is the location for the removal of contaminated PPE and final removal and decontamination of personnel and equipment. Storage for supplemental safety equipment such as fire extinguishers, portable eyewash and extra PPE should be provided in the CRZ.

3. Support Zone

The Support Zone (SZ) consists of clean areas where there is minimal risk of hazardous materials or conditions. PPE beyond standard construction safety equipment is not required.

Revision History

Date	Section	By Whom	Reason
1/10/19	Complete – New	T. Bathory	
3/18/19	Section1, Section 5 – Water Handling, Appendix A, Appendix B,	T. Bathory	
2/1/24	All	T. Bathory & F. Barone	Address comments from NYSDEC received in letter dated January 24, 2023.

**APPENDIX A  
WATER PERMIT**

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**Section I To be completed by the person generating the water**

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1. Location/source of water: \_\_\_\_\_
2. Name and telephone number of person completing form:  
Name: \_\_\_\_\_ Telephone No: \_\_\_\_\_
3. Estimated amount of water (gallons): \_\_\_\_\_
4. Project Disposal/Treatment Charge Number: \_\_\_\_\_
5. Answer the following questions in conjunction with Figure 2:
  - A. Was an Environmental Soils Permit completed?  YES  NO
  - B. What type of temporary containment will be used? \_\_\_\_\_
  - C. Do you expect the source area to contain visual chemical presence?  YES  NO  
(If yes, water must be discharged to F-Area Groundwater treatment system if approved by HESS)
  - D. Do you expect the water to meet sanitary sewer guidelines?  YES  NO  
(If yes, water can be discharged to the sanitary sewer if approved by HESS)
  - E. Was the water generated from a spill?  YES  NO
  - F. If yes, please describe chemicals and amounts involved: \_\_\_\_\_  
\_\_\_\_\_
  - G. Specify proposed temporary storage method and area for water: \_\_\_\_\_  
\_\_\_\_\_
6. **Approval of storage area by Area Supervisor.**

\_\_\_\_\_  
(Signature of Area Supervisor)

\_\_\_\_\_  
(Date)

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**Section II To be completed by the person generating the water with HESS Representative**

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1. Water Classification  
Based on preliminary information presented in Section I.5, the water is designated as:  
 Non-hazardous                       Hazardous
  
2. Analysis Required?                       YES                       NO
  
3. Storage of Material (check one)  
 Drums  
 Tank Description: \_\_\_\_\_  
  
Location: \_\_\_\_\_  
  
Labeling, inspection, air monitoring or other special requirements: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
4. Disposition  
 Direct discharge to sanitary sewer, only if approved by HESS  
 Treatment at F-Area Groundwater Treatment Facility and discharge to sanitary sewer  
 Handle in accordance with a remedial plan. Specify: \_\_\_\_\_  
\_\_\_\_\_  
  
 Settled sediments from temporary storage tank. Specify: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  
5. **Approval by HESS Representative:**  
  
\_\_\_\_\_

(Signature of HESS Representative)

(Date)

**APPENDIX B**  
**ENVIRONMENTAL SOILS PERMIT**

**Section I To be completed by the person generating the soil/excavation debris**

1. Location of excavation or subsurface construction:

\_\_\_\_\_

2. Name and telephone number of person requesting permit:

Name: \_\_\_\_\_ Telephone No: \_\_\_\_\_

3. Description and amount of material (>10 yards requires 15 day notice to DEC). Total amount of material in yards:

\_\_\_\_\_

Breakdown of material. Check as many as apply:

Stone: \_\_\_\_\_ cu.yds       Soil: \_\_\_\_\_ cu.yds

Concrete Foundations: \_\_\_\_\_ cu.yds       Concrete: \_\_\_\_\_ cu.yds

Blacktop: \_\_\_\_\_ cu.yds       Other: \_\_\_\_\_ cu.yds

4. Project Disposal/Treatment Charge Number: \_\_\_\_\_

5. Answer the following questions in conjunction with Figure 1:

A. Is the excavation to be performed in a restricted area as shown on Figure 3? (If yes, special approval from HESS is required to proceed)       YES       NO

B. Will excavation penetrate the native clay/till layer as shown on Figure 4? (If yes, special approval from HESS and NYSDEC is required to proceed) "Yes" is confirmation that NYSDEC approval was received.       YES       NO

C. What is the maximum depth of the excavation (feet)? \_\_\_\_\_

D. Will excavation occur within 20 feet of a monitoring well or remedial system as shown on Figures 5 and 6? (If yes, special approval from HESS is required to proceed)       YES       NO

E. Will any water be generated during excavation? (If yes, please fill out Water Permit)       YES       NO

F. Was the material generated from a spill?       YES       NO

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G. If yes, please describe chemicals and amounts involved:

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H. Do you expect the soil to contain visual chemical presence? [ ] YES [ ] NO  
(If yes, soils will be classed as Category C for handling)  
NYSDEC must be notified if mobile NAPL is encountered  
or observed outside of defined areas.

i) Do you expect the Category C soils to contain free-flowing  
NAPL? (If yes, a NAPL collection trench may be required) [ ] YES [ ] NO

ii) Are the Category C soils to be excavated from off-site or  
perimeter areas? (If yes, all excavated Category C soils  
must be disposed off-site) [ ] YES [ ] NO

I. Do you expect the soil to have greater than 10 ppm organic  
vapor presence but no visual chemical presence? [ ] YES [ ] NO  
(If yes, soils will be classed as Category B for handling)

J. Do you expect the soil to have less than 10 ppm organic  
vapor presence and no visual chemical presence? [ ] YES [ ] NO  
(If yes, soils will be classed as Category A for handling)

K. Can all the excavated material fit back into the excavation? [ ] YES [ ] NO

L. Are analytical results available for the material prior to  
surface regrading or disposal? [ ] YES [ ] NO

M. Has the HESS been notified of the excavation activity? [ ] YES [ ] NO

N. Have the health and safety procedures required for  
excavation activities been reviewed with the HESS? [ ] YES [ ] NO

O. Specify proposed storage area for material: \_\_\_\_\_

**6. Approval of storage area by Area Supervisor.**

\_\_\_\_\_  
(Signature of Area Supervisor)

\_\_\_\_\_  
(Date)

**7. Acknowledgement from HESS that health and safety procedures were discussed with person responsible for undertaking the excavation.**

\_\_\_\_\_  
(Signature of HESS Representative)

\_\_\_\_\_  
(Date)

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### Section II To be completed by the person generating the soil/excavation debris with HESS Representative

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1. Material Classification for on-site Handling  
Based on preliminary information presented in Section I.4, the material will be designated as:  
 Category A                       Category B                       Category C

2. Sampling and Analysis  
Sampling Required?                       YES                       NO  
  
Analysis Required?                       TCLP                       Total (ICR)

Is sampling required before excavation is started?                       YES                       NO  
(If >10 yds., sampling recommended and 15 day notice to DEC is required).

3. Material Classification for off-site Disposal/Treatment  
Based on preliminary information presented in Section I.4, the material for off-site disposal/treatment will be designated as:  
 Non-hazardous                       Hazardous

4. Staging of Material (check one)  
 Drums                       Rolloff  
 Onground stockpile                       Stockpile on prepared surface and covered

Location: \_\_\_\_\_  
\_\_\_\_\_

Labeling, inspection, air monitoring or other special requirements: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5. Disposition    (Sketch on-site Plan)

Backfill    Location: \_\_\_\_\_

On-site Redistribution    Location: \_\_\_\_\_

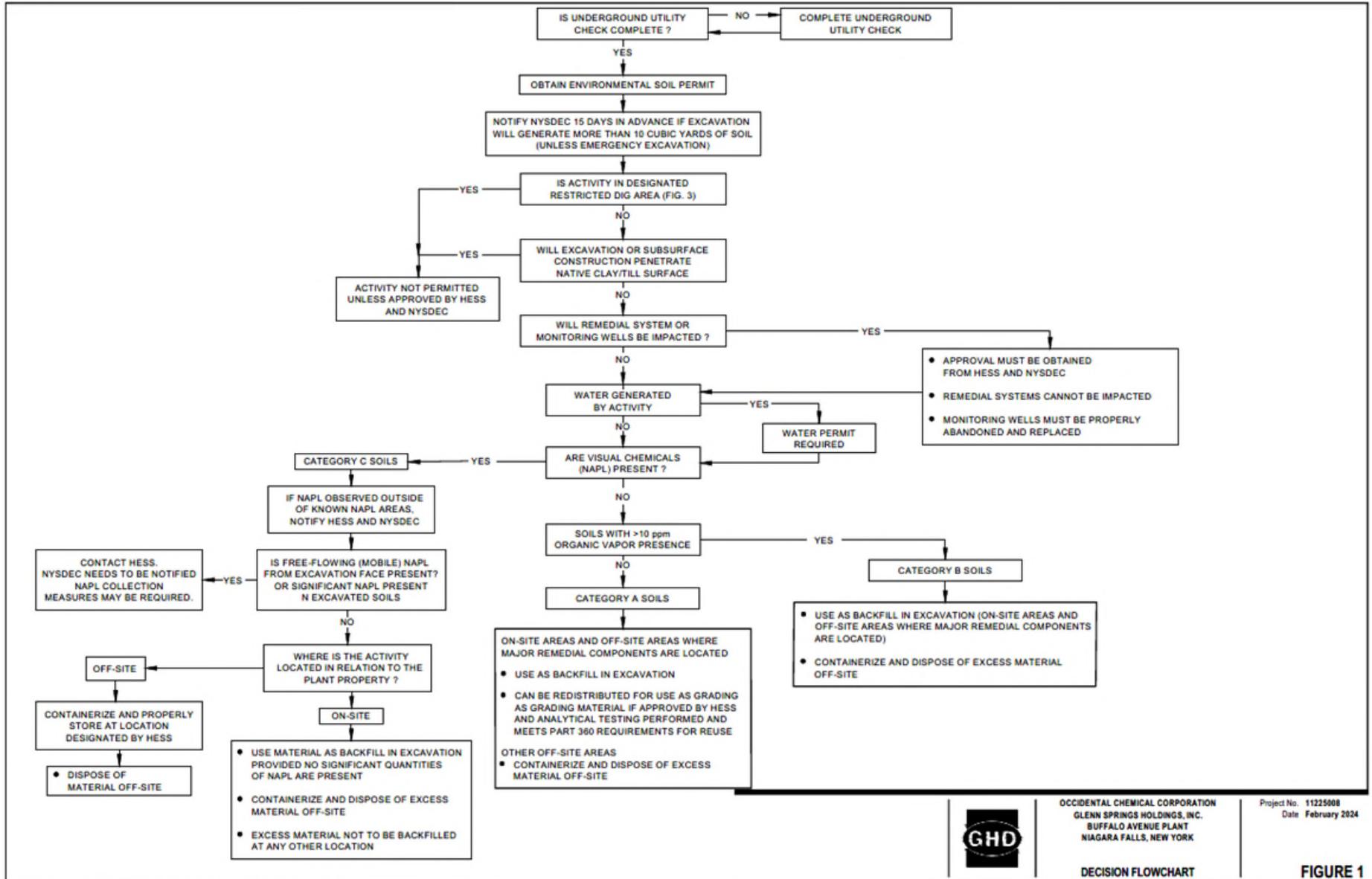
Off-site treatment/disposal    Location: \_\_\_\_\_

Handle in accord with a remedial plan. Specify: \_\_\_\_\_

### 6. Approval by HESS Representative:

\_\_\_\_\_  
(Signature of HESS Representative)

\_\_\_\_\_  
(Date)



File name: 11225008\CA\Assets\Flowchart\Fig 311225008.Dwg; Job: Design\AC\2\Fig 311225008 1225008 040-03-F32 426-D101\_004-010.dwg  
Plot Date: 26 February 2024 8:42 AM

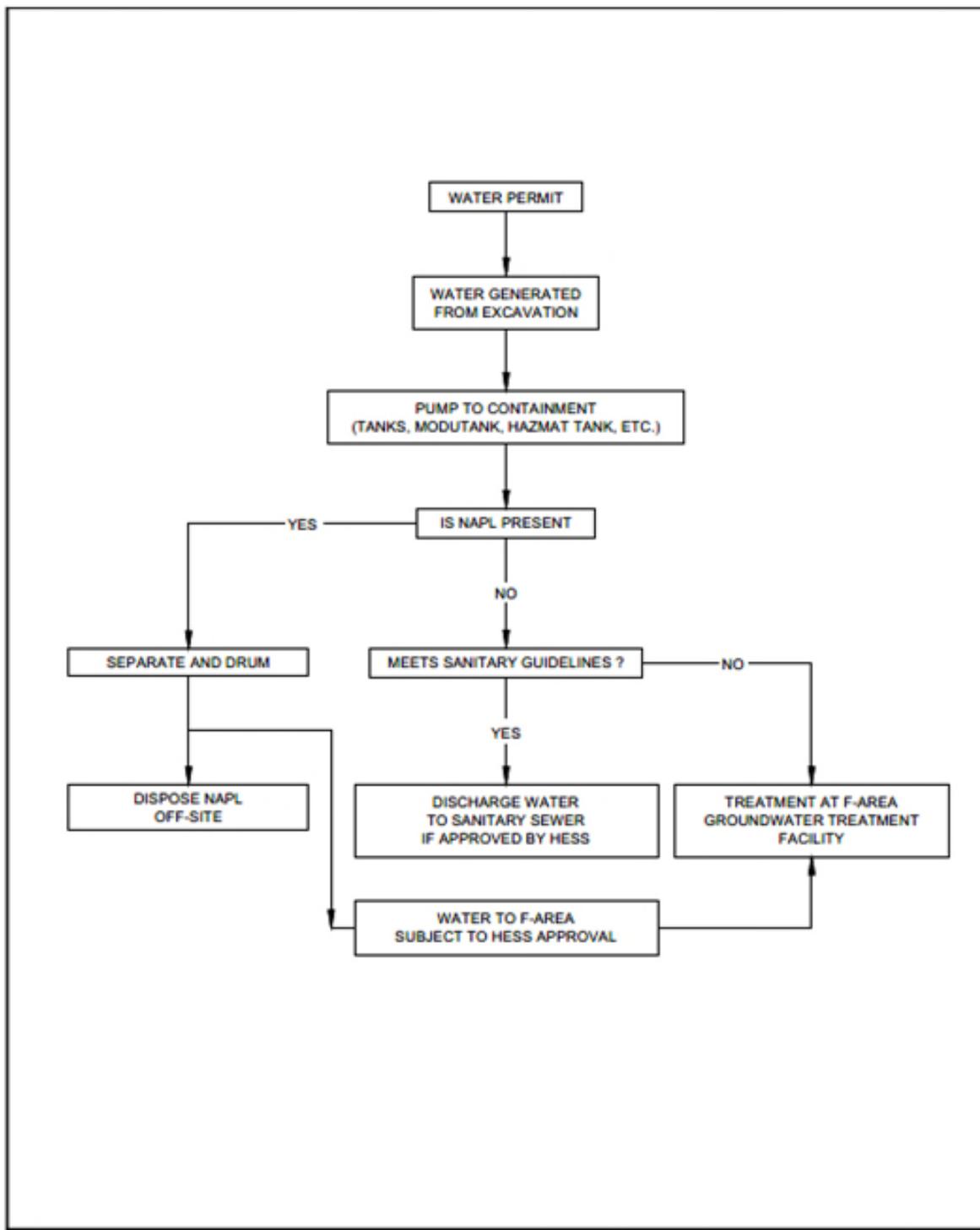


OCCIDENTAL CHEMICAL CORPORATION  
GLENN SPRINGS HOLDINGS, INC.  
BUFFALO AVENUE PLANT  
NIAGARA FALLS, NEW YORK

Project No. 11225008  
Date February 2024

DECISION FLOWCHART

FIGURE 1



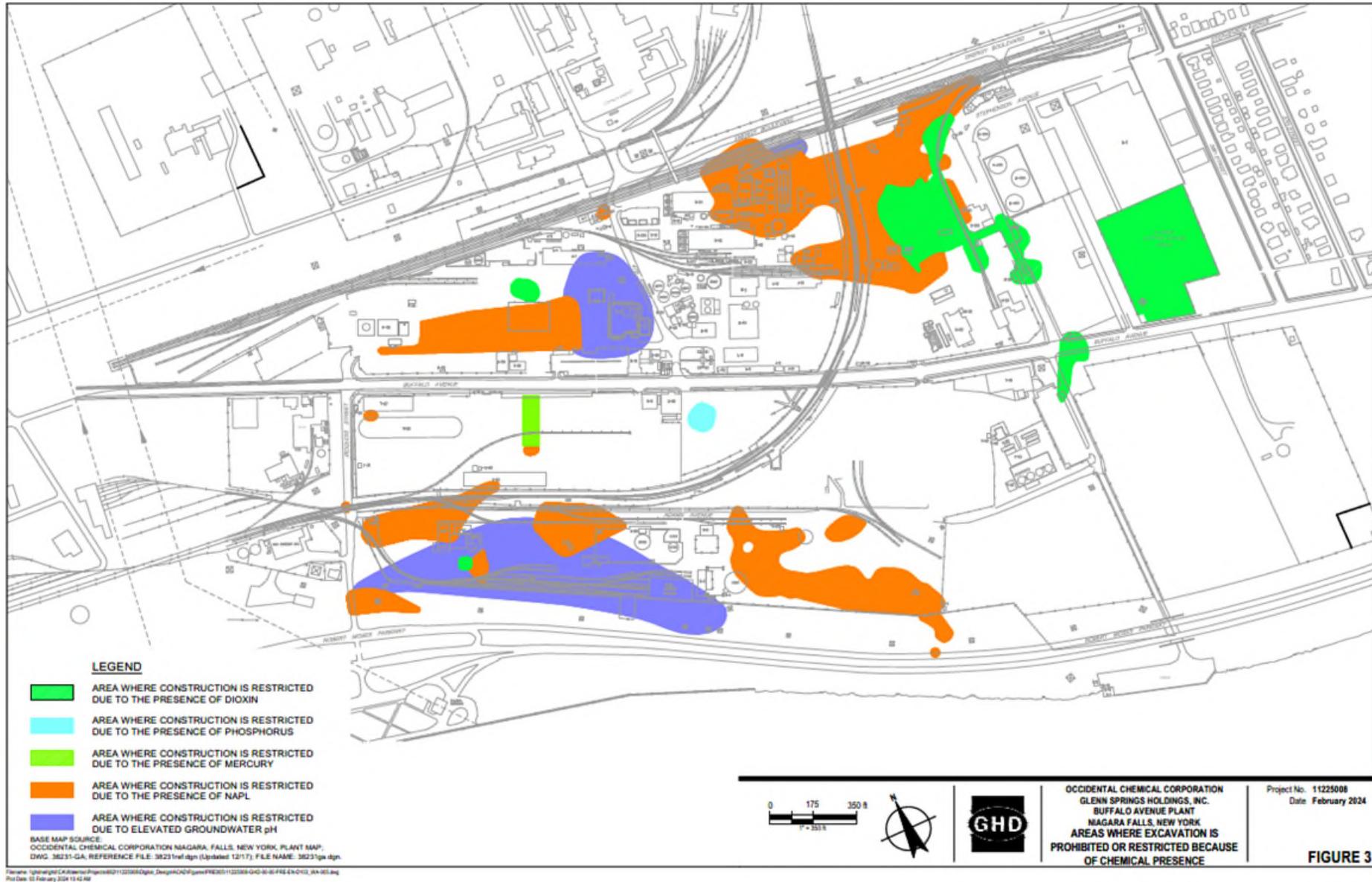
OCCIDENTAL CHEMICAL CORPORATION  
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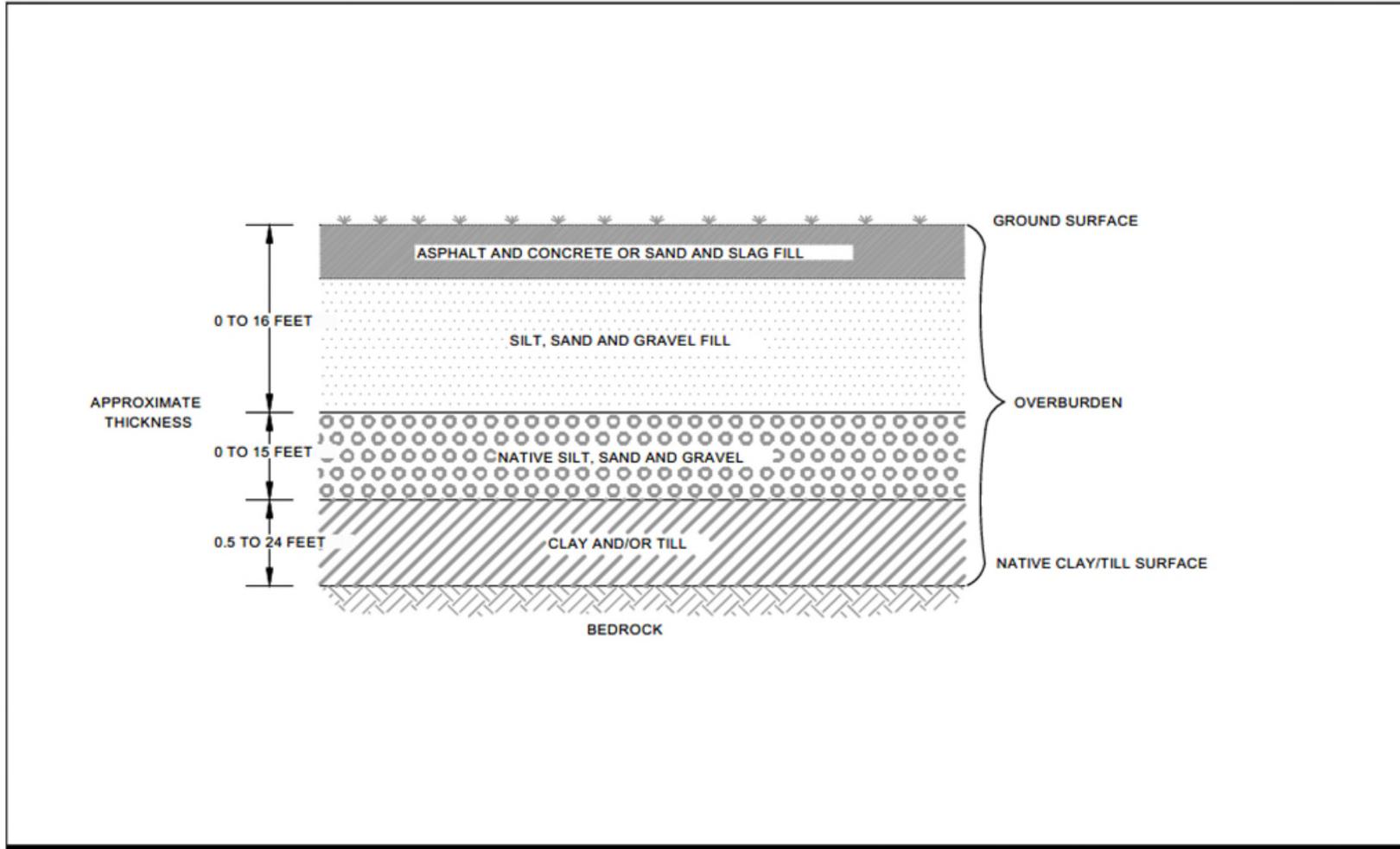
Project No. 11225008  
Date February 2024

WATER HANDLING FLOW CHART

FIGURE 2

Filename: I:\ghr\wghd\CK\Water\Project\11225008\Digital\_Design\CAD\Figures\Figure 2\Figure 2-11225008-GHD-00-00-FRE-EN-D102\_WA-002.dwg  
Plot Date: 02 February 2024 10:40 AM





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GLENN SPRINGS HOLDINGS, INC.  
BUFFALO AVENUE PLANT  
NIAGARA FALLS, NEW YORK

Project No. 11225008  
Date April 2023

GENERAL SITE STRATIGRAPHY

**FIGURE 4**

Filename: I:\ghd\hghd\CA\Water\Project\962\11225008\Digital\_Design\ACAD\Figures\PRE\005\11225008-GHD-00-05-PRE-EN-D104\_WA-005.dwg  
Plot Date: 21 April 2023 11:28 AM

EXCAVATION PROCEDURE	EFFECTIVE DATE: February 1, 2024	PAGE 23 OF 25
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