



Contaminated Material Management Plan for In Situ Stabilization

Arkema Inc. Facility
Portland, Oregon

PREPARED FOR

Legacy Site Services LLC, agent for
Arkema Inc.

DATE

May 2025

REFERENCE

0732436



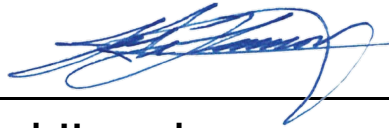
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Arkema Inc. Facility
Portland, Oregon
0732436



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CLIENT: Legacy Site Services LLC, agent for Arkema Inc.
PROJECT NO: 0732436 DATE: May 2025 VERSION: 01

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ACRONYMS AND ABBREVIATIONS

Acronym	Description
ACM	asbestos containing material
Arkema	Arkema Inc.
CMP	Contaminated Material Management Plan
Contractor	The successful bidder and company authorized by LSS to construct the work.
DDx	Sum of 2,4- and 4,4-dichloro-diphenyl-dichloroethane, 2,4- and 4,4-dichloro-diphenyl-chloroethane, and 2,4- and 4,4-dichloro-diphenyl-trichloroethane.
DNAPL	dense nonaqueous phase liquid
Engineer	The engineering company retained under separate contract by LSS to design the remediation work and to provide bidding and construction phase engineering support and construction quality assurance services during construction of the work. ERM will serve as Engineer.
ERM	Environmental Resources Management, Inc.
GWET	groundwater extraction and treatment
IRAM	Interim Remedial Action Measure
ISS	in situ stabilization/solidification
LSS	Legacy Site Services, LLC (LSS); is the Responsible Party for conducting cleanup work of the Property under the 2008 Order on Consent No. LQVC-NWR-08-04 between the Oregon Department of Environmental Quality and Arkema Inc..
MCB	monochlorobenzene
NAPL	nonaqueous phase liquid
PDI	Pre-Design Investigation

1. INTRODUCTION

On behalf of Legacy Site Services LLC (LSS), agent for Arkema Inc. (Arkema), Environmental Resources Management, Inc. (ERM) has prepared this Contaminated Material Management Plan (CMMP) in support of Interim Remedial Action Measure (IRAM) 1 at the former Arkema Portland Plant (the Site) at 6400 Northwest Front Avenue, Portland, Oregon.

The purpose of IRAM 1 is to address the monochlorobenzene (MCB) source area that originated in the former acid plant area of the Site, using a combination of excavation and in situ stabilization/solidification (ISS). The remediation area focuses on dense nonaqueous phase liquid (DNAPL) in unsaturated and saturated soil. The IRAM 1 treatment area (I1TA) was investigated in accordance with the *In Situ Stabilization Pre-Design Investigation Work Plan* (ERM 2024a). Pre-design investigation (PDI) Phase 1 results were discussed in the *In Situ Stabilization Pre-Design Investigation* (ERM 2024b), and PDI Phase 2 results will be discussed in the forthcoming *In Situ Stabilization Pre-Final Design Report*. I1TA is defined in the Pre-Final Design Report using the results of these investigations.

The following is a summary of the work associated with the CMMP. IRAM 1, its description, and requirements are described in detail in the project specifications, and should this summary or other descriptions or estimates of material quantities, etc. conflict with the specifications, the specifications will prevail:

The general scope of IRAM 1 is to address contamination in I1TA identified during PDI Phase 1 and PDI Phase 2 investigations. This will be achieved by in situ mixing using the amendment mix identified as part of the treatability study (ERM 2024a).

Excavated soil that passes field screening will be temporarily stockpiled onsite. This will facilitate the removal of historical utilities and other possible obstructions that could affect ISS operations, remove excavated soil that does not require ISS, and create space to accommodate soil swell resulting from the ISS work.

The CMMP describes the procedures for the management and handling of soil and other potential materials excavated during the implementation of IRAM 1. The components of this CMMP include:

- Erosion and sediment control preparations;
- Soil excavation, field screening, and handling;
- Debris and other material handling and field screening;
- Soil stockpiling;
- Handling and disposal of Site decontamination water/industrial water;
- Onsite material placement; and
- Transportation and offsite material disposal.

The CMMP addresses the handling of all material to be excavated from the Site (Figure 1). This material may include nonhazardous and potentially hazardous soil, debris, and materials that may require amendment prior to management, including water that may leach from excavated soil that was adjacent to the saturated zone or was generated during decontamination of other materials

and equipment. Based on the properties of the excavated material, materials will be managed as follows:

- Stockpiles 1, 2, 3, and 4 will store non-asbestos containing material (ACM) that passes soil field screening (see Section 3.2.1 for soil field screening criteria). This soil will be reused as backfill once the excavation is complete. If not all the excavated soil that passes field screening is able to be used as backfill, it will be graded and compacted to prevent erosion and left onsite in a permanent soil repository.
- Soil without ACM that fails field screening will be stabilized with the amendment mix within the excavation and managed as swell material (refer to Section 6.3).

Temporary storage areas will be used to segregate soil with ACM and debris. Additionally, a decontamination pad will be established at the temporary storage area for decontamination of potentially contaminated material.

2. EROSION AND SEDIMENT CONTROL

Erosion and sediment controls will be installed before any earthwork or Site disturbance and maintained throughout construction. Once ISS and subsequent earthwork are complete, all erosion and sediment control devices will be removed, as approved by Engineer. Erosion and sediment controls are designated and illustrated on Figures 1, 2a, and 2b.

2.1 PERIMETER CONTROLS

Site erosion controls will include fiber rolls or silt fencing placed downgradient of the ISS excavation areas, around stockpiles/staging areas, and on the work-sides of existing stormwater swales. Contractor will conduct daily visual inspections and verify the proper working order of the fiber rolls or silt fencing. Control repairs will be performed immediately upon inspection.

2.2 OTHER SOIL CONTROLS

Contractor will be responsible for keeping public roads used during construction activities clean and free of soil or other materials from the Site. Contractor will maintain the Site roads to mitigate tracking soil materials onto public roads and will inspect and clean public roads.

Contractor will also inspect the tires of exiting vehicles and use a wheel-wash station to clean tires as necessary. Water generated from the wheel-wash station will be containerized and stored onsite. Such water will be treated as described in Section 6.1. Sediment collected from the wheel-wash stations will be screened and stored in accordance with Section 3 of this plan.

3. SOIL EXCAVATION, FIELD SCREENING, AND HANDLING

A summary of the onsite soil excavation, field screening, and handling procedures is provided in this section.

3.1 SOIL EXCAVATION

Contractor will be responsible for properly handling all excavated material generated during construction. It is anticipated that approximately 43,000 bank cubic yards of soil, and possibly other debris, will be generated during the implementation of IRAM 1.

Handling and field screening procedures outlined in this CMMP apply to all materials excavated during IRAM 1. This section discusses the handling and field screening of soil. The following section of the plan discusses the segregation and handling of debris and other material that may be encountered.

3.2 SOIL FIELD SCREENING AND HANDLING

3.2.1 SOIL FIELD SCREENING AND ONSITE AND OFFSITE DISPOSAL

Monitoring and field screening will be conducted to allow for appropriate segregation, handling, and characterization of excavated soil. All soil will be screened and managed for onsite or offsite in accordance with parameters described on Figures 3a and 3b.

During drilling investigations in June 2022, Class II non-friable ACM was identified in the fill material near Groundwater Extraction Trenches 3 and 4. This material is associated with former cells used for chlorine production and is not insulating material, although it has an appearance similar to insulating material. ACM was also observed in some PDI Phase 1 and PDI Phase 2 soil borings within the fill material at depths ranging from 0.3 feet below ground surface to 33 feet below ground surface. If Class II non-friable ACM similar to what has been previously encountered is discovered, an asbestos inspector will be mobilized to the Site, and the ACM will be handled appropriately, stored in separate stockpiles in the temporary storage area, and tested before offsite disposal.

Contractor will be responsible for excavating ACM material under the supervision of a licensed and trained asbestos contractor in the state of Oregon. Contractor's staff must have the appropriate training to work with ACM. If friable ACM is encountered, Contractor must also be or use a Licensed Asbestos Abatement Contractor. ACM will be stored in the temporary storage area and will be hauled to the appropriate disposal facility under an approved waste profile. All trucks transporting ACM must be double-lined and sealed before departing the Site.

If potential ACM is encountered that is different from the previously identified Class II non-friable ACM, work will be stopped, Engineer notified, and an asbestos inspector will inspect the material. Based on classification of the ACM, the material will either be left in place or excavated and stored separately in the temporary storage area for further characterization.

Soil that passes field screening will be stockpiled in Stockpile Areas 1, 2, 3, or 4 for re-use as backfill, as indicated on Figures 1, 3a, and 3b. Soil field screening is to occur within the excavation footprint. Upon excavation completion, the remaining stockpile material will be graded, compacted, and capped with geotextile and 6 inches of clean gravel as described in the design specifications.

Debris encountered during excavation will be handled as discussed in Section 4, below.



3.2.2 SOIL FIELD SCREENING

Soil excavated from the Site will be screened for evidence of contamination, including the following:

- Visible free product (DNAPL);
- Presence of ACM;
- Discolored soil indicating MCB;¹
- White staining;² and
- Unusual odors.

If the excavated soil exhibits any of the listed characteristics, it will be considered to have failed the soil field screening. Work is to stop, and Engineer will be notified to determine appropriate material management. Soil without ACM that fails field screening will be stabilized with the ISS amendment mix within the excavation. Soil that fails field screening with ACM will be stockpiled in a distinct stockpile within the temporary storage area for characterization before offsite disposal.

In addition to the inspection criteria above, soil will also be screened with a photo-ionization detector equipped with an 11.7 electron volt lamp and a moisture trap during soil excavation activities. Soil within the excavation will be screened periodically using the photo-ionization detector within 6 inches of the freshly excavated surface, approximately every 30 minutes. The soil will be considered to have potentially failed field screening if the meter reading is 10 parts per million over background levels for 10 seconds. If this threshold is exceeded, headspace testing for volatile organic compounds will be conducted on a representative sample of this material in accordance with Site-Specific Operating Procedure 1 (Appendix A). If the headspace reading is 10 parts per million or higher, the soil will be considered to have not passed field screening.

3.2.3 SOIL HANDLING

Excavated soil that passes field screening may be temporarily stockpiled. Excavated soil without ACM that fails field screening will be managed within the excavation as described above. At the end of each workday, all stockpiles in the temporary storage area will be covered with suitably secured 6-millimeter (minimum thickness) low-density polyethylene sheeting. Stockpiles 1, 2, 3, and 4 will be covered with cellulose, soil tackifier, or other means, including wetting the soil, to prevent erosion and control fugitive dust, as identified by Contractor.

The soil in the temporary storage area will be managed in accordance with Code of Federal Regulations Title 40 §§ 262, 265.250, 265.251, and 265.253–265.260 (without the leachate collection system). No liquid waste or free liquids will be placed in the temporary storage area for potentially contaminated soils. The final disposition of temporarily stockpiled soil is outlined in Section 5 of this CMMP.

Any water that leaches from soil temporarily stockpiled near the IRAM 1 excavation will be prevented from flowing outside the limit of disturbance (i.e., will naturally infiltrate or be collected

¹ Staining (red, dark brownish red, pink, yellow) may be associated with the presence of MCB that can have elevated concentrations of DDx (sum of 2,4- and 4,4-dichloro-diphenyl-dichloroethane, 2,4- and 4,4-dichloro-diphenyl-chloroethane, and 2,4- and 4,4-dichloro-diphenyl-trichloroethane).

² White staining is indicative of potentially elevated concentrations of DDx.

and containerized until it can be treated as described in Section 6.1). Likewise, any leachate that accumulates within the temporary storage area will be collected and containerized for treatment as described in Section 6.1.

4. DEBRIS AND OTHER MATERIAL FIELD SCREENING AND HANDLING

Excavated materials may include debris and other materials not suitable for ISS or re-use as backfill. Examples of debris and other materials include concrete, asphalt, rebar, construction material, construction debris, demolition debris, decommissioned conduit and wiring, and other non-soil materials. This section of the CMMP addresses the field screening and handling of these materials.

Debris and other excavated non-soil material will be visually/olfactorily screened for contamination such as that of free product, dark staining, attached soil, or odors. All excavated debris unsuitable for ISS or backfill re-use that passes field screening will be staged in a distinct stockpile in the temporary storage area. If field screening reveals contamination on the debris, it will be staged in a distinct stockpile in the temporary storage area and decontaminated on the decontamination pad within that area (see Figure 1). Decontaminated debris will then be appropriately disposed of at an approved offsite facility. Handling of water resulting from decontamination will be in accordance with Section 6.1 below.

5. TRANSPORTATION AND OFFSITE DISPOSAL

Soil and debris stored in the temporary storage area will require characterization and profiling prior to disposal at an approved offsite facility. The following minimum requirements will apply to the transportation and offsite disposal of soil and debris.

5.1 TRANSPORTATION

LSS or their designee will be responsible for all waste transport to an appropriate offsite disposal facility. LSS will retain responsibility for the waste and sign all waste manifests and/or bills of lading. A properly licensed waste hauler, contracted by LSS will be used to transport waste materials for disposal. Contractor will load waste into truck trailers. No queueing of trucks will be permitted on Northwest Front Avenue during waste hauling operations. All loads will be covered before leaving the Site. No waste will be permitted to leave the Site unless it has been properly characterized and manifested in accordance with all applicable regulations and disposal facility requirements.

5.2 OFFSITE DISPOSAL

Waste facilities that may be used for offsite disposal will be approved by LSS prior to hauling waste. These facilities will meet the environmental, grading, safety, and health requirements of the state, county, and local political subdivisions where located. All disposal facilities will be legally licensed and permitted. Disposal facilities with significant Resource Conservation and Recovery Act violations or compliance problems (such as facilities known to be releasing hazardous constituents into groundwater, surface water, soil, or air) will not be used.

6. HANDLING AND DISPOSAL OF OTHER WASTE STREAMS

Other waste streams that will be generated during IRAM 1 work may include the following:

- Decontamination water and industrial wastewater;
- Swell;
- Solid waste; and
- Sanitary waste.

Each of these waste streams will be managed in accordance with applicable federal, state, and local regulations, and as described below.

6.1 DECONTAMINATION WATER/INDUSTRIAL WASTEWATER

To the extent possible, Contractor will minimize truck traffic outside of paved areas of the Site to reduce the need for equipment decontamination. Water generated from the cleaning of construction and excavation equipment (e.g., at the wheel-wash station) and/or from the cleaning of debris that may be encountered during soil excavation is considered industrial wastewater. This industrial wastewater will be containerized for treatment and discharged through the groundwater extraction and treatment (GWET) system following construction of IRAM 1 under the requirements of the existing National Pollutant Discharge Elimination System Waste Discharge Permit #103075.

Collected decontamination water and industrial wastewater will be pre-treated in the field to adjust the pH to between 7.0 and 7.5 and to remove sediment to a total suspended solids concentration of 150 mg/L or less (Figure 2B, detail 5). This pre-treated water will then be transferred to the existing GWET system for full treatment to treat remaining total suspended solids, metals, MCB, and DDx (Figure 2C). The treated water will be discharged via the GWET outfall and will be subject to the monitoring requirements and limits of the National Pollutant Discharge Elimination System Permit #103075.

6.2 SOLID WASTE

All solid waste, including wastepaper, garbage, and other nonhazardous debris/refuse, will be bagged in plastic garbage bags and placed in a solid waste dumpster provided by LSS. Contractor is prohibited from disposing of any items not allowed by Waste Management in the solid waste dumpster.

6.3 SWELL

It is estimated that 17,500 bank cubic yards of swell will be generated during ISS implementation, which will be managed within the ISS excavated area and is expected to remain in place. The excavated volume is estimated at 43,000 bank cubic yards. A minimum 2 feet of backfill is specified to provide a soil cap over the swell. If the swell volume generated exceeds the capacity of the excavated ISS area, excess swell will be placed in the temporary storage area, then characterized and hauled offsite as described in Section 5.

6.4 SANITARY WASTE

Contractor will be required to provide sanitary portable restroom and wash basin facilities adequate for the number of workers onsite. Restroom cleaning, disposal of restroom waste, and filling the wash basins will be conducted by a licensed and bonded sanitary restroom provider at a minimum of once per week.

7. REFERENCES

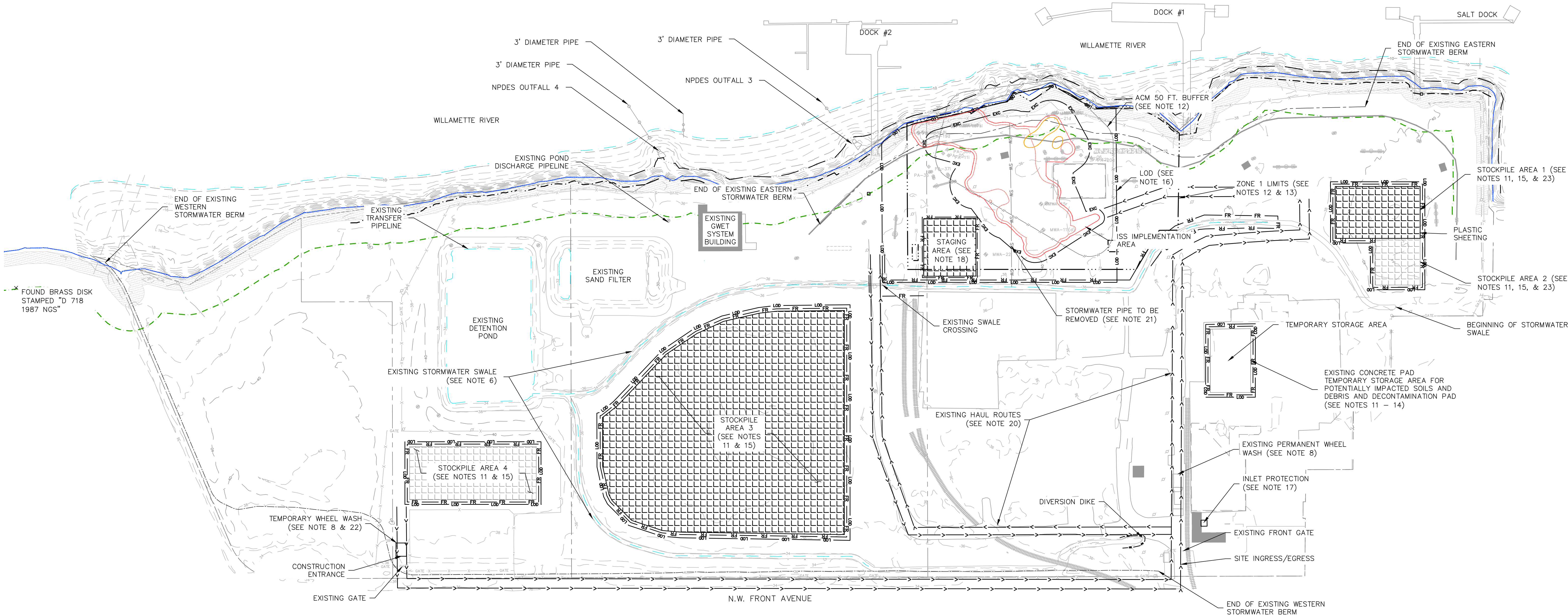
ERM (Environmental Resources Management, Inc.). 2024a. *In Situ Stabilization Pre-Design Investigation Work Plan, Arkema Inc. Facility, Portland, Oregon*. 2 July.

ERM. 2024b. *In Situ Stabilization Pre-Design Investigation, Arkema Inc. Facility, Portland, Oregon*. 6 December.



FIGURES

C:\Users\j\OneDrive\Documents\ERMA\0732436\CMMP.dwg FIGURE 1 - CMMP ESCP, Printed On 5/12/2025 By Josh Hyman

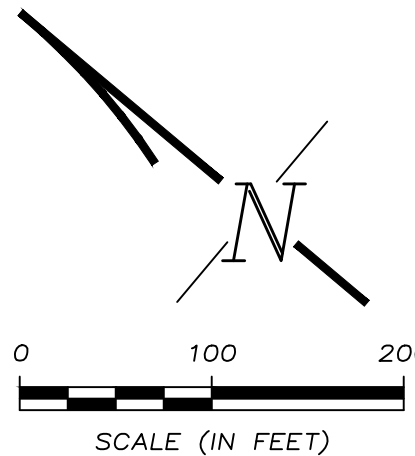


NOTES:

- SEE FIGURE 2A & 2B FOR EROSION AND SEDIMENT CONTROL DETAILS AND ESC GENERAL NOTES.
- FIBER ROLLS OR SILT FENCING SHALL BE PLACED WHERE DESIGNATED HEREIN, DOWNGRADIENT OF THE EXCAVATION AREAS, AROUND STOCKPILES, AND ON WORK-SIDE OF SWALES. SEDIMENT LADEN-SURFACE WATER SHALL NOT BE PERMITTED TO FLOW BEYOND THE ESC BMPS. THE CONTRACTOR SHALL VISUALLY INSPECT AND VERIFY THE PROPER WORKING ORDER OF THE FIBER ROLLS OR SILT FENCING AND OTHER CONTROLS ON A DAILY BASIS. REPAIRS OF THE CONTROLS SHALL BE PERFORMED IMMEDIATELY UPON INSPECTION.
- CONTRACTOR SHALL VISUALLY MONITOR THE EXISTING NPDES OUTFALL NO. 4 AND OTHER POTENTIAL CONDUITS ENCOUNTERED AND TERMINATED DURING CONSTRUCTION ON A DAILY BASIS AND IMMEDIATELY AFTER A SIGNIFICANT RAIN EVENT (E.G. GREATER THAN 0.5 INCHES OVER 24 HOURS) TO ENSURE COMPLIANCE WITH THE BEST MANAGEMENT PRACTICES (BMP) IDENTIFIED IN THE EROSION AND SEDIMENT CONTROL (ESC) MANUAL (2022) OF THE CITY OF PORTLAND, OREGON.
- ALL DISTURBED AREAS SHALL BE GRADED TO ENSURE POSITIVE DRAINAGE. SITE SOIL CLASSIFICATION: 50A-URBAN LAND, 0 TO 3 PERCENT SLOPES.
- THE IMPLEMENTATION OF THE ESC BMPS IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED.
- THE ESC BMPS SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, ESC BMPS SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
- CONTRACTOR IS RESPONSIBLE FOR ENSURING ROADS IMPACTED BY CONSTRUCTION ACTIVITIES ARE CLEAN AND FREE OF SOIL OR OTHER MATERIALS FROM THE SITE. THE CONTRACTOR SHALL MAINTAIN THE SITE ROADS TO MITIGATE THE TRACKING OF SOIL MATERIALS ONTO PUBLIC ROADS AND SHALL INSPECT AND CLEAN PUBLIC ROADS.
- CONTRACTOR SHALL INSPECT TIRES OF EXITING VEHICLES AND USE A WHEEL WASH STATION TO CLEAN TIRES AS NECESSARY. WATER GENERATED FROM WHEEL WASH AND COLLECTED SEDIMENT SHALL BE MANAGED ACCORDING TO THE CMMP.
- EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO ANY EARTHWORK OR SITE DISTURBANCE, AND MAINTAINED THROUGHOUT CONSTRUCTION.
- FOLLOWING STABILIZATION OF ALL DISTURBED AREAS, ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE REMOVED, AS APPROVED BY THE ENGINEER.
- ALL EXCAVATED MATERIALS SHALL BE MANAGED ACCORDING TO THE SITE-SPECIFIC CONTAMINATED MATERIAL MANAGEMENT PLAN (CMMP). EXCAVATED MATERIAL SHALL BE STOCKPILED IN STOCKPILE AREAS 1, 2, 3, AND 4 UNLESS IT FAILS SOIL SCREENING CRITERIA. MATERIAL FAILING SOIL SCREENING WILL BE STABILIZED WITHIN THE EXCAVATED AREA USING CARBON AND/OR CEMENT. THE CONTRACTOR SHALL BE PREPARED TO CHARACTERIZE AND APPROPRIATELY STABILIZE IMPACTED MATERIAL WITHIN THE EXCAVATION.
- EXCAVATED SOILS MAY CONTAIN POTENTIAL ASBESTOS-CONTAINING MATERIALS (ACM). ANY EXCAVATED SOIL WITH SUSPECTED ACM SHALL BE SEGREGATED AND PROPERLY CONTAINED WITHIN THE TEMPORARY STORAGE AREA FOR FURTHER CHARACTERIZATION AND DISPOSAL AT AN APPROVED OFF-SITE FACILITY.
- CONCRETE, DEBRIS, RUBBLE, REFUSE AND DELETERIOUS MATERIAL ENCOUNTERED DURING EXCAVATION SHALL BE STOCKPILED IN THE TEMPORARY STORAGE AREA. EXCAVATION DEBRIS THAT FAILS SCREENING SHALL BE DECONTAMINATED ON THE DECONTAMINATION PAD IN THE TEMPORARY STORAGE AREA FOR POTENTIALLY IMPACTED MATERIAL IN ACCORDANCE WITH THE CMMP.
- CONTRACTOR SHALL CONSTRUCT/INSTALL A DECONTAMINATION PAD IN THE TEMPORARY STORAGE AREA. THE DECONTAMINATION PAD SHALL BE SIZED TO DECONTAMINATE EQUIPMENT AND DEBRIS, SHALL FULLY CONTAIN WATER, AND HAVE ABILITY TO PUMP COLLECTED WATER TO AN ABOVE-GROUND TANK FOR STORAGE. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE, OPERATION AND REPAIR OF THE DECONTAMINATION PAD THROUGHOUT THE DURATION OF THE WORK. THE CONTRACTOR SHALL SUBMIT FOR REVIEW THE DESIGN OF THE DECONTAMINATION PAD NO LESS THAN TEN (10) DAYS PRIOR TO THE SCHEDULED CONSTRUCTION/INSTALLATION OF THE DECONTAMINATION PAD.
- IN ALL STOCKPILES, THE SOILS SHALL BE PLACED UNIFORMLY WITH SIMILAR THICKNESSES IN EACH STOCKPILE AND GRADED TO PROMOTE RUNOFF DRAINAGE. NO SURFACE WATER PONDING IS PERMITTED ON STOCKPILES. DEWATERING SHALL BE ACCOMPLISHED VIA AIR DRYING, WINDROWING, OR MIXING A REAGENT (I.E., LIME) AS APPROVED BY THE ENGINEER. THE IN-PLACE COVERS OF THE EXISTING STOCKPILE AREAS CONSIST OF GRAVEL AND GEOTEXTILE FABRIC. THE CONTRACTOR SHALL INSTALL AND MAINTAIN STOCKPILE COVERS CONSISTING OF NEW GEOTEXTILE FABRIC AND THE EXISTING GRANULAR MATERIAL TO THE EXTENT PRACTICAL AND AS SPECIFIED IN THE SITE SPECIFIC CMMP.
- CONTRACTOR SHALL NOT CAUSE ANY DISTURBANCE BEYOND THE LIMITS OF DISTURBANCE (LOD) UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- ONSITE STORM CATCH BASINS ARE FILLED, ABANDONED AND NO LONGER OPERABLE, EXCEPT FOR THE ACTIVE CATCH BASINS IN PROXIMITY TO THE ADMINISTRATION BUILDING. CONTRACTOR SHALL INSTALL INLET PROTECTION AROUND ACTIVE CATCH BASINS WHERE IN PROXIMITY TO WORK AND TRAFFIC TO COMPLETE WORK.

- STAGING AREA LOCATIONS ARE APPROXIMATE. EROSION PROTECTION SHALL BE INSTALLED AROUND STAGING AREA. CONTRACTOR SHALL USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE EQUIPMENT AND REFUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES.
- THE WORK AREA SURFACE MAINLY CONSISTS OF PAVEMENT, CONCRETE FOUNDATIONS, AND GRAVEL SURFACES. SUBSTANTIAL VEGETATION IS NOT ANTICIPATED TO BE ENCOUNTERED DURING THE WORK.
- HAUL ROUTE LOCATIONS ARE APPROXIMATE AND MAY BE FIELD ADJUSTED AS APPROPRIATE FOR THE PERFORMANCE OF THE WORK. HAUL ROADS SHALL UTILIZE EXISTING PAVED SURFACES TO THE EXTENT PRACTICAL. CONTROLLED ACCESS FOR CLEAN VEHICLES SHALL BE DELINEATED BY THE CONTRACTOR DURING CONSTRUCTION. VEHICLES ENTERING ACTIVE WORK AREAS SHALL ONLY EXIT SITE VIA PERMANENT WHEEL WASH.
- TOTAL PROPERTY BOUNDARY AREA APPROXIMATELY 53 ACRES.
- TOTAL LIMITS OF DISTURBANCE (LOD) 11 ACRES.
- EDGE OF STOCKPILE WITH FIBER ROLL SHALL BE AT LEAST 15 FEET AWAY FROM ANY EXISTING WELL OR STORMWATER FEATURE

ESCP PERSONEL	
ESCP DEVELOPER	ENVIRONMENTAL RESOURCES MANAGEMENT, INC.
BMP INSTALLER	TBD
CERTIFIED VISUAL MONITORING INSPECTOR	MANON LEGENDRE (ENVIRONMENTAL RESOURCES MANAGEMENT, INC) StormwaterOne, CESCL# 1979e8a6 EXPIRES: 25 OCTOBER 2027
CONTRACTORS ENGAGED IN CONSTRUCTION ACTIVITIES (POTENTIAL TO CHANGE DURING CONSTRUCTION)	TBD



ISSUED FOR PERMIT
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1 FIBER ROLL INSTALLATION DETAIL
FIG 2A

2 FIBER ROLL INSTALLATION DETAIL
FIG 2A

ESC STANDARD NOTES:

1. ONCE KNOWN, INCLUDE A LIST OF ALL CONTRACTORS THAT WILL ENGAGE IN CONSTRUCTION ACTIVITIES ON SITE, AND THE AREAS OF THE SITE WHERE THE CONTRACTOR(S) WILL ENGAGE IN CONSTRUCTION ACTIVITIES. REVISE THE LIST AS APPROPRIATE UNTIL PERMIT COVERAGE IS TERMINATED (SECTION 4.4.C.I). IN ADDITION, INCLUDE A LIST OF ALL PERSONNEL (BY NAME AND POSITION) THAT ARE RESPONSIBLE FOR THE DESIGN, INSTALLATION AND MAINTENANCE OF STORMWATER CONTROL MEASURES (E.G. ESCP DEVELOPER, BMP INSTALLER (SEE SECTION 4.10), AS WELL AS THEIR INDIVIDUAL RESPONSIBILITIES. (SECTION 4.4.C.I)
2. VISUAL MONITORING INSPECTION REPORTS MUST BE MADE IN ACCORDANCE WITH DEQ 1200-C PERMIT REQUIREMENTS. (SECTION 6.5)
3. INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQS 1200-C PERMIT REQUIREMENTS. (SECTION 6.5.Q)
4. RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. (SECTION 4.7)
5. THE PERMIT REGISTRANT MUST IMPLEMENT THE ESCP. FAILURE TO IMPLEMENT ANY OF THE CONTROL MEASURES OR PRACTICES DESCRIBED IN THE ESCP IS A VIOLATION OF THE PERMIT. (SECTIONS 4 AND 4.11)
6. THE ESCP MUST BE ACCURATE AND REFLECT SITE CONDITIONS. (SECTION 4.8)
7. SUBMISSION OF ALL ESCP REVISIONS IS NOT REQUIRED. SUBMITTAL OF THE ESCP REVISIONS IS ONLY UNDER SPECIFIC CONDITIONS. SUBMIT ALL NECESSARY REVISION TO DEQ OR AGENT WITHIN 10 DAYS. (SECTION 4.9)
8. SEQUENCE CLEARING AND GRADING TO THE MAXIMUM EXTENT PRACTICAL TO PREVENT EXPOSED INACTIVE AREAS FROM BECOMING A SOURCE OF EROSION. (SECTION 2.2.2)
9. CREATE SMOOTH SURFACES BETWEEN SOIL SURFACE AND EROSION AND SEDIMENT CONTROLS TO PREVENT STORMWATER FROM BYPASSING CONTROLS AND PONDING. (SECTION 2.2.3)
10. IDENTIFY, MARK, AND PROTECT (BY CONSTRUCTION FENCING OR OTHER MEANS) CRITICAL RIPARIAN AREAS AND VEGETATION INCLUDING IMPORTANT TREES AND ASSOCIATED ROOTING ZONES, AND VEGETATION AREAS TO BE PRESERVED. IDENTIFY VEGETATIVE BUFFER ZONES BETWEEN THE SITE AND SENSITIVE AREAS (E.G., WETLANDS), AND OTHER AREAS TO BE PRESERVED, ESPECIALLY IN PERIMETER AREAS. (SECTION 2.2.1)
11. PRESERVE EXISTING VEGETATION WHEN PRACTICAL, AND RE-VEGETATE OPEN AREAS. RE-VEGETATE OPEN AREAS WHEN PRACTICABLE BEFORE AND AFTER GRADING OR CONSTRUCTION. IDENTIFY THE TYPE OF VEGETATIVE SEED MIX USED. (SECTION 2.2.5)
12. MAINTAIN AND DELINEATE ANY EXISTING NATURAL BUFFER WITHIN THE 50-FOOT OF WATERS OF THE STATE. (SECTION 2.2.4)
13. INSTALL PERIMETER SEDIMENT CONTROL, INCLUDING STORM DRAIN INLET PROTECTION AS WELL AS ALL SEDIMENT BASINS, TRAPS, AND BARRIERS PRIOR TO LAND DISTURBANCE. (SECTIONS 2.1.3)
14. CONTROL BOTH PEAK FLOW RATES AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS AND DOWNSTREAM CHANNELS AND STREAMBANKS. (SECTIONS 2.1.1 AND 2.2.16)
15. CONTROL SEDIMENT AS NEEDED ALONG THE SITE PERIMETER AND AT ALL OPERATIONAL INTERNAL STORM DRAIN INLETS AT ALL TIMES DURING CONSTRUCTION, BOTH INTERNALLY AND AT THE SITE BOUNDARY. (SECTIONS 2.2.6 AND 2.2.13)
16. ESTABLISH CONCRETE TRUCK AND OTHER CONCRETE EQUIPMENT WASHOUT AREAS BEFORE BEGINNING CONCRETE WORK. (SECTION 2.2.14)
17. APPLY TEMPORARY AND/OR PERMANENT SOIL STABILIZATION MEASURES IMMEDIATELY ON ALL DISTURBED AREAS AS GRADING PROGRESSES. TEMPORARY OR PERMANENT STABILIZATIONS MEASURES ARE NOT REQUIRED FOR AREAS THAT ARE INTENDED TO BE LEFT UNVEGETATED, SUCH AS DIRT ACCESS ROADS OR UTILITY POLE PADS. (SECTIONS 2.2.20 AND 2.2.21)
18. ESTABLISH MATERIAL AND WASTE STORAGE AREAS, AND OTHER NON-STORMWATER CONTROLS. (SECTION 2.3.7)
19. KEEP WASTE CONTAINER LIDS CLOSED WHEN NOT IN USE AND CLOSE LIDS AT THE END OF THE BUSINESS DAY FOR THOSE CONTAINERS THAT ARE ACTIVELY USED THROUGHOUT THE DAY. FOR WASTE CONTAINERS THAT DO NOT HAVE LIDS, PROVIDE EITHER (1) COVER (E.G., A TARP, PLASTIC SHEETING, TEMPORARY ROOF) TO PREVENT EXPOSURE OF WASTES TO PRECIPITATION, OR (2) A SIMILARLY EFFECTIVE MEANS DESIGNED TO PREVENT THE DISCHARGE OF POLLUTANTS (E.G., SECONDARY CONTAINMENT). (SECTION 2.3.7)
20. PREVENT TRUCKING OF SEDIMENT ONTO PUBLIC OR PRIVATE ROADS USING BMPS SUCH AS: CONSTRUCTION ENTRANCE, GRAVELED (OR PAVED) EXITS AND PARKING AREAS, GRAVEL, ALL UNPAVED ROADS LOCATED ONSITE, OR USE AN EXIT TIRE WASH. THESE BMPS MUST BE IN PLACE PRIOR TO LAND- DISTURBING ACTIVITIES. (SECTION 2.2.7)
21. WHEN TRUCKING STURATED SOILS FROM THE SITE, EITHER USE WATER-TIGHT TRUCKS OR DRAIN LOADS ON SITE. (SECTION 2.2.7.F)
22. CONTROL PROHIBITED DISCHARGES FROM LEAVING THE CONSTRUCTION SITE, I.E., CONCRETE WASH-OUT, WASTEWATER FROM CLEANOUT OF STUCCO, PAINT AND CURING COMPOUNDS. (SECTIONS 1.5 AND 2.3.9)
23. ENSURE THAT STEEP SLOPE AREAS WHERE CONSTRUCTION ACTIVITIES ARE NOT OCCURRING ARE NOT DISTURBED. (SECTION 2.2.10)
24. PREVENT SOIL COMPACTION IN AREAS WHERE POST-CONSTRUCTION INFILTRATION FACILITIES ARE TO BE INSTALLED. (SECTION 2.2.12)
25. USE BMPS TO PREVENT OR MINIMIZE STORMWATER EXPOSURE TO POLLUTANTS FROM SPILLS; VEHICLE AND EQUIPMENT FUELING, MAINTENANCE, AND STORAGE; OTHER CLEANING AND MAINTENANCE ACTIVITIES; AND WASTE HANDLING ACTIVITIES. THESE POLLUTANTS INCLUDE FUEL, HYDRAULIC FLUID, AND OTHER OILS FROM VEHICLES AND MACHINERY, AS WELL AS DEBRIS, FERTILIZER, PESTICIDES AND HERBICIDES, PAINTS, SOLVENTS, CURING COMPOUNDS AND ADHESIVES FROM CONSTRUCTION OPERATIONS. (SECTIONS 2.2.15 AND 2.3)
26. PROVIDE PLANS FOR SEDIMENTATION BASINS THAT HAVE BEEN DESIGNED PER SECTION 2.2.17 AND STAMPED BY AN OREGON PROFESSIONAL ENGINEER. (SEE SECTION 2.2.17.A)
27. IF ENGINEERED SOILS ARE USED ON SITE, A SEDIMENTATION BASIN/IMPOUNDMENT MUST BE INSTALLED. (SEE SECTIONS 2.2.17 AND 2.2.18)
28. PROVIDE A DEWATERING PLAN FOR ACCUMULATED WATER FROM PRECIPITATION AND UNCONTAMINATED GROUNDWATER SEEPAGE DUE TO SHALLOW EXCAVATION ACTIVITIES. (SEE SECTION 2.4)
29. IMPLEMENT THE FOLLOWING BMPS WHEN APPLICABLE: WRITTEN SPILL PREVENTION AND RESPONSE PROCEDURES, EMPLOYEE TRAINING ON SPILL PREVENTION AND PROPER DISPOSAL PROCEDURES, SPILL KITS IN ALL VEHICLES, REGULAR MAINTENANCE SCHEDULE FOR VEHICLES AND MACHINERY, MATERIAL DELIVERY AND STORAGE CONTROLS, TRAINING AND SIGNAGE, AND COVERED STORAGE AREAS FOR WASTE AND SUPPLIES. (SECTION 2.3)
30. USE WATER, SOIL-BINDING AGENT OR OTHER DUST CONTROL TECHNIQUE AS NEEDED TO AVOID WIND-BLOWN SOIL. (SECTION 2.2.9)
31. THE APPLICATION RATE OF FERTILIZERS USED TO REESTABLISH VEGETATION MUST FOLLOW MANUFACTURER'S RECOMMENDATIONS TO MINIMIZE NUTRIENT RELEASES TO SURFACE WATERS. EXERCISE CAUTION WHEN USING TIME-RELEASE FERTILIZERS WITHIN ANY WATERWAY RIPARIAN ZONE. (SECTION 2.3.5)
32. IF AN ACTIVE DISCHARGE (FOR EXAMPLE, ELECTRO-COAGULATION, FLOCCULATION, FILTRATION, ETC.) FOR SEDIMENT OR OTHER POLLUTANT REMOVAL IS EMPLOYED, A SUBMIT AN OPERATION AND MAINTENANCE PLAN (INCLUDING SYSTEM SCHEMATIC, LOCATION OF SYSTEM, LOCATION OF INLET, LOCATION OF DISCHARGE, DISCHARGE DISPERSION DEVICE DESIGN, AND A SAMPLING PLAN AND FREQUENCY) BEFORE OPERATING THE TREATMENT SYSTEM. OBTAIN ENVIRONMENTAL MANAGEMENT PLAN APPROVAL FROM DEQ BEFORE OPERATING THE TREATMENT SYSTEM. OPERATE AND MAINTAIN THE TREATMENT SYSTEM ACCORDING TO MANUFACTURER'S SPECIFICATIONS. (SECTION 1.2.9)
33. TEMPORARILY STABILIZE SOILS AT THE END OF THE SHIFT BEFORE HOLIDAYS AND WEEKENDS, IF NEEDED. THE REGISTRANT IS RESPONSIBLE FOR ENSURING THAT SOILS ARE STABLE DURING RAIN EVENTS AT ALL TIMES OF THE YEAR. (SECTION 2.2)
34. AS NEEDED BASED ON WEATHER CONDITIONS, AT THE END OF EACH WORKDAY SOIL STOCKPILES MUST BE STABILIZED OR COVERED, OR OTHER BMPS MUST BE IMPLEMENTED TO PREVENT DISCHARGES TO SURFACE WATERS OR CONVEYANCE SYSTEMS LEADING TO SURFACE WATERS. (SECTION 2.2.8)
35. SEDIMENT FENCE: REMOVE TRAPPED SEDIMENT BEFORE IT REACHES ONE THIRD OF THE ABOVE GROUND FENCE HEIGHT AND BEFORE FENCE REMOVAL. (SECTION 2.1.5.B)
36. OTHER SEDIMENT BARRIERS (SUCH AS BIOBAGS): REMOVE SEDIMENT BEFORE IT REACHES TWO INCHES DEPTH ABOVE GROUND HEIGHT AND BEFORE BMP REMOVAL. (SECTION 2.1.5.C)
37. CATCH BASINS: CLEAN BEFORE RETENTION CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT. SEDIMENT BASINS AND SEDIMENT TRAPS: REMOVE TRAPPED SEDIMENTS BEFORE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT AND AT COMPLETION OF PROJECT. (SECTION 2.1.5.D)
38. WITHIN 24 HOURS, SIGNIFICANT SEDIMENT THAT HAS LEFT THE CONSTRUCTION SITE, MUST BE REMEDIATED. INVESTIGATE THE CAUSE OF THE SEDIMENT RELEASE AND IMPLEMENT STEPS TO PREVENT A RECURRENCE OF THE DISCHARGE WITHIN THE SAME 24 HOURS. ANY IN-STREAM CLEAN-UP OF SEDIMENT SHALL BE PERFORMED ACCORDING TO THE OREGON DEPARTMENT OF STATE LANDS REQUIRED TIMEFRAME. (SECTION 2.2.19.A)
39. THE INTENTIONAL WASHING OF SEDIMENT INTO STORM SEWERS OR DRAINAGE WAYS MUST NOT OCCUR. VACUUMING OR DRY SWEEPING AND MATERIAL PICKUP MUST BE USED TO REMOVE RELEASED SEDIMENTS. (SECTION 2.2.19)
40. DOCUMENT ANY PORTION(S) OF THE SITE WHERE LAND DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED OR WILL BE TEMPORARILY INACTIVE FOR 14 OR MORE CALENDAR DAYS. (SECTION 6.5.F)
41. PROVIDE TEMPORARY STABILIZATION FOR THAT PORTION OF THE SITE WHERE CONSTRUCTION ACTIVITIES CEASE FOR 14 DAYS OR MORE WITH A COVERING OF BLOWN STRAW AND A TACKIFIER, LOOSE STRAW, OR AN ADEQUATE COVERING OF COMPOST MULCH UNTIL WORK RESUMES ON THAT PORTION OF THE SITE. (SECTION 2.2.20)
42. DO NOT REMOVE TEMPORARY SEDIMENT CONTROL PRACTICES UNTIL PERMANENT VEGETATION OR OTHER COVER OF EXPOSED AREAS IS ESTABLISHED, ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED, ALL TEMPORARY EROSION CONTROLS AND RETAINED SOILS MUST BE REMOVED AND DISPOSED OF PROPERLY, UNLESS NEEDED FOR LONG TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE. (SECTION 2.2.21)

GENERAL EROSION CONTROL NOTES:

1. CONTRACTOR SHALL STABILIZE AREAS WHERE GRADING HAS BEEN COMPLETED AND AREAS DISTURBED BY TEMPORARY, SHORT ACTIVITY, AND NO LONGER OCCUPIED OR USED. WITH A VEGETATIVE GROUND COVER UNLESS A DIFFERENT COVER IS SPECIFIED (E.G. GRAVELLY AREAS AND SOIL STOCKPILE AREAS). CONTRACTOR SHALL STABILIZE THESE AREAS AS SOON AS IS REASONABLY PRACTICAL IN ORDER TO MINIMIZE THE POTENTIAL FOR EROSION.
2. THE PERMITTEE IS REQUIRED TO MEET ALL CONDITIONS OF THE 1200C PERMIT. THIS ESC PLAN AND GENERAL CONDITIONS HAVE BEEN DEVELOPED TO FACILITATE COMPLIANCE WITH THE 1200C PERMIT REQUIREMENTS, IN CASES OF DISCREPANCIES OR OMISSIONS, THE 1200C PERMIT REQUIREMENTS SUPERSEDE REQUIREMENTS OF THIS PLAN.

SITE SPECIFIC NOTES:

1. ALL STORMWATER WILL BE DISCHARGED THROUGH THE EXISTING STORMWATER SYSTEM, FOLLOWING PRE-TREATMENT IF NECESSARY.
2. THE SITE IS NOT VEGETATED AND VEGETATION WILL NOT BE EMPLOYED FOR EROSION CONTROL.
3. ENGINEERED SOILS WILL NOT BE USED FOR IMPLEMENTATION OF IRAM 1.
4. NO FERTILIZER WILL BE APPLIED TO VEGETATION BECAUSE VEGETATION WILL NOT BE USED FOR EROSION CONTROL.

SITE CONDITIONS	MINIMUM FREQUENCY
1. ACTIVE PERIOD	ON INITIAL DATE THAT LAND DISTURBANCE ACTIVITIES COMMENCE WITHIN 24 HOURS OF ANY STORM EVENT, INCLUDING RUNOFF FROM SNOWMELT, THAT RESULTS IN DISCHARGE FROM THE SITE. AT LEAST ONCE EVERY 14 DAYS, REGARDLESS OF WHETHER STORMWATER RUNOFF IS OCCURRING.
2. INACTIVE PERIODS GREATER THAN 14 CONSECUTIVE CALENDAR DAYS	THE INSPECTOR MAY REDUCE THE FREQUENCY OF INSPECTIONS IN ANY AREA OF THE SITE WHERE THE STABILIZATION STEPS IN SECTION 2.2.20 HAVE BEEN COMPLETED TO TWICE PER MONTH FOR THE FIRST MONTH, NO LESS THAN 14 CALENDAR DAYS APART, THEN ONCE PER MONTH.
3. PERIODS DURING WHICH THE SITE IS INACCESSIBLE DUE TO INCLEMENT WEATHER	IF SAFE, ACCESSIBLE AND PRACTICAL, INSPECTIONS MUST OCCUR DAILY AT A RELEVANT DISCHARGE POINT OR DOWNSTREAM LOCATION OF THE RECEIVING WATERBODY.
4. PERIODS DURING WHICH CONSTRUCTION ACTIVITIES ARE SUSPENDED AND RUNOFF IS UNLIKELY DUE TO FROZEN CONDITIONS	VISUAL MONITORING INSPECTIONS MAY BE TEMPORARILY SUSPENDED. IMMEDIATELY RESUME MONITORING UPON THAWING, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY.
5. PERIODS DURING WHICH CONSTRUCTION ACTIVITIES ARE CONDUCTED AND RUNOFF IS UNLIKELY DURING FROZEN CONDITIONS	VISUAL MONITORING INSPECTIONS MAY BE REDUCED TO ONCE A MONTH. IMMEDIATELY RESUME MONITORING UPON THAWING, OR WHEN WEATHER CONDITIONS MAKE DISCHARGES LIKELY.

YEAR		2025				2026			
BMPS	MONTH #	09	10	11	12	01	02	03	04
BIOBAGS		X	X	X	X	X	X	X	X
CONSTRUCTION ENTRANCE		X	X	X	X	X	X	X	X
DRAINAGE SWALES		X	X	X	X	X	X	X	X
EARTH DIKES (STABILIZED)		X	X	X	X	X	X	X	X
STORM DRAIN INLET PROTECTION		X	X	X	X	X	X	X	X
STRAW WATTLES (OR OTHER MATERIALS)		X	X	X	X	X	X	X	X
PLASTIC SHEETING		X	X	X	X	X	X	X	X

- ALL BMP'S SHALL BE INSTALLED AND ACTIVE FOR THE ENTIRE PERIOD OF CONSTRUCTION, PRIOR TO ANY GROUND DISTURBANCE. REFER TO DEQ MANUAL FOR A COMPREHENSIVE LIST OF AVAILABLE BMP'S
- A PERMANENT WHEEL WASH EXISTS ONSITE, LOCATED NEAR THE MAIN ENTRANCE, AND IS AVAILABLE FOR USE.
- A TEMPORARY WHEEL WASH MUST BE INSTALLED AT THE CONSTRUCTION ENTRANCE FOR STOCKPILE 4 BEFORE THAT STOCKPILE IS USED.

RATIONALE STATEMENT

A COMPREHENSIVE LIST OF AVAILABLE BEST MANAGEMENT PRACTICES (BMP) OPTIONS BASED ON DEQ'S GUIDANCE MANUAL HAS BEEN REVIEWED TO COMPLETE THIS EROSION AND SEDIMENT CONTROL PLAN. SOME OF THE DEQ'S GUIDANCE BMPs WERE NOT CHOSEN BECAUSE THEY WERE DETERMINED TO NOT EFFECTIVELY MANAGE EROSION PREVENTION AND SEDIMENT CONTROL FOR THIS PROJECT BASED ON SPECIFIC SITE CONDITIONS, INCLUDING SOIL CONDITIONS, TOPOGRAPHIC CONSTRAINTS, ACCESSIBILITY TO THE SITE, AND OTHER RELATED CONDITIONS, AS THE PROJECT PROGRESSES AND THERE IS A NEED TO REVISE THE ESC PLAN, AN ACTION PLAN WILL BE SUBMITTED.

INITIAL

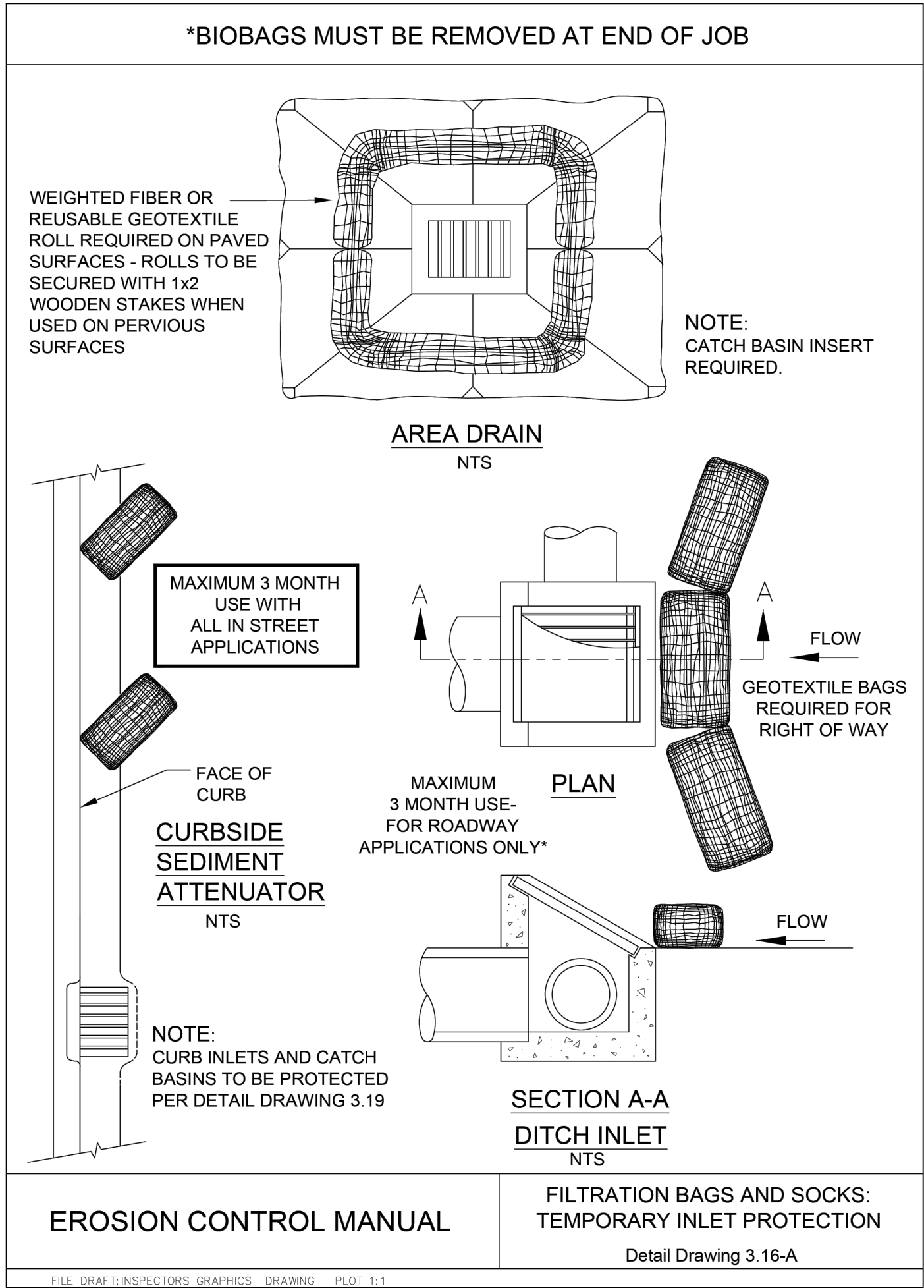
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IN-SITU STABILIZATION
ARKEMA INC.
PORTLAND, OR



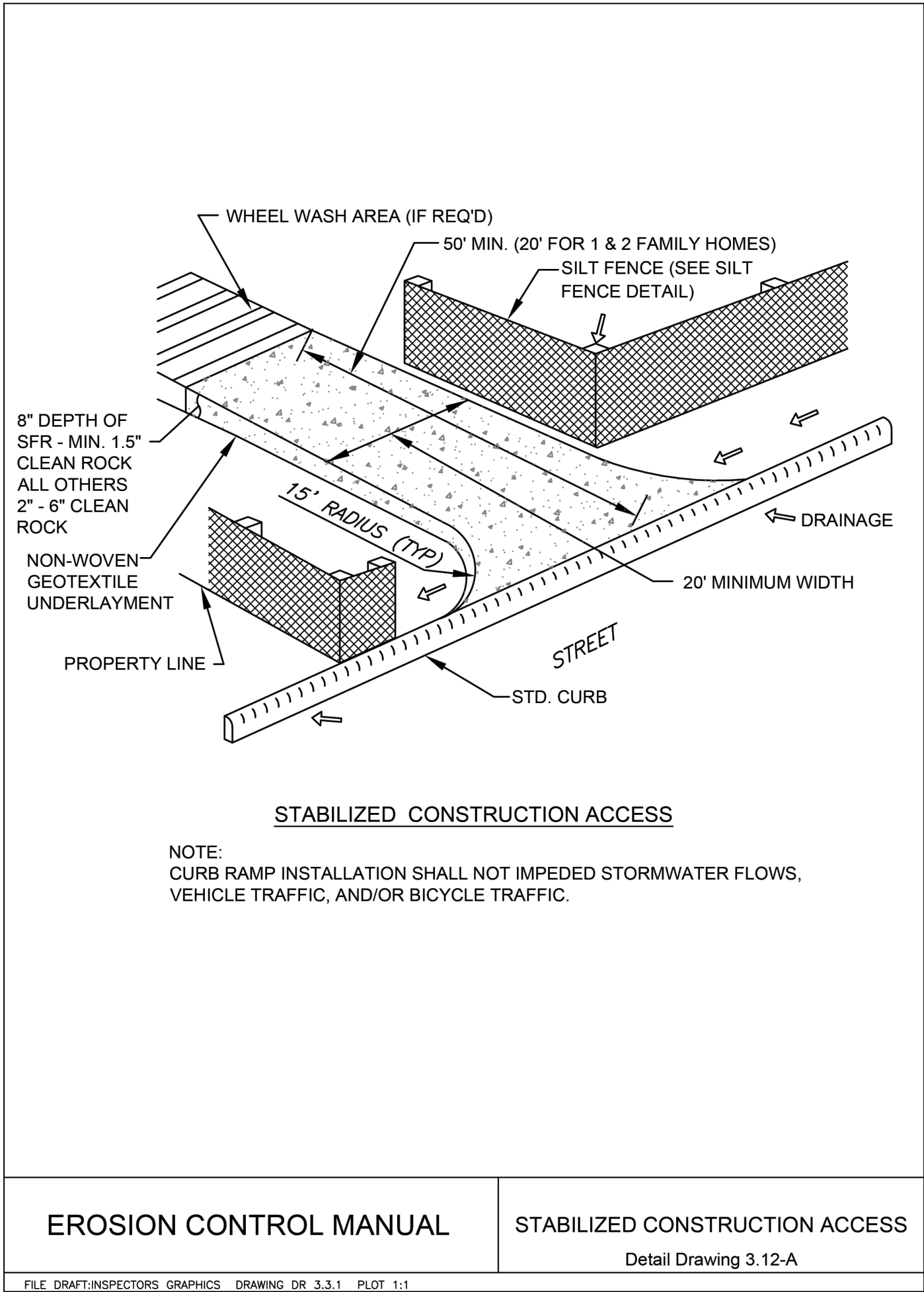
Environmental Resources Management



SOURCE: PORTLAND EROSION CONTROL MANUAL (2022)

3
FIG 2B

TEMPORARY INLET PROTECTION DETAIL



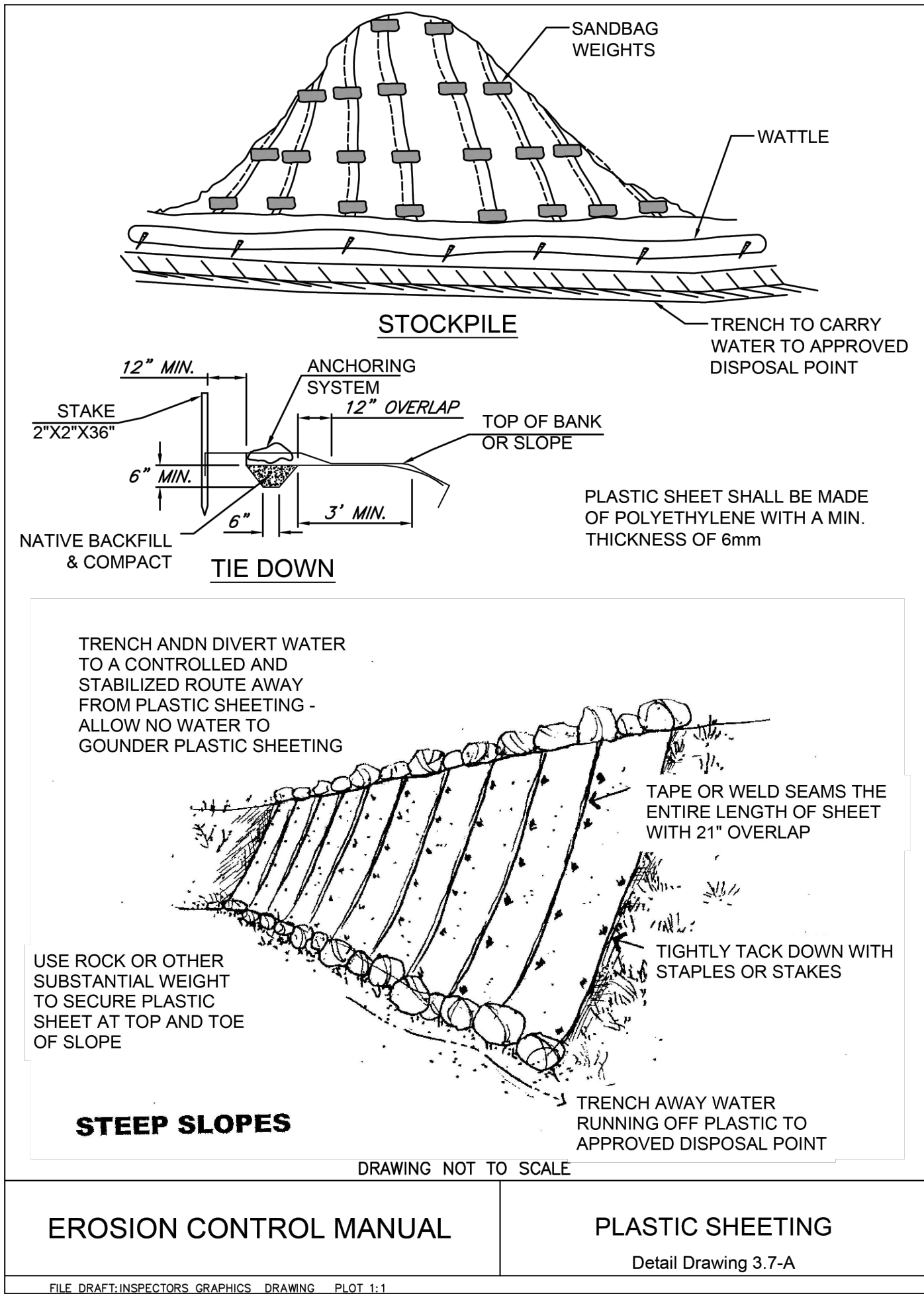
SOURCE: PORTLAND EROSION CONTROL MANUAL (2022)

5
FIG 2B

CONSTRUCTION ACCESS DETAIL

NOTES:

1. A CONSTRUCTION ENTRANCE SHALL BE INSTALLED AT THE ENTRANCE TO THE STOCKPILE 4 AREA. A DRY WHEEL WASH (ROCK BED, SHAKER RACK, OR SIMILAR) SHALL BE INSTALLED FOR USE BY ALL EXITING TRUCKS.



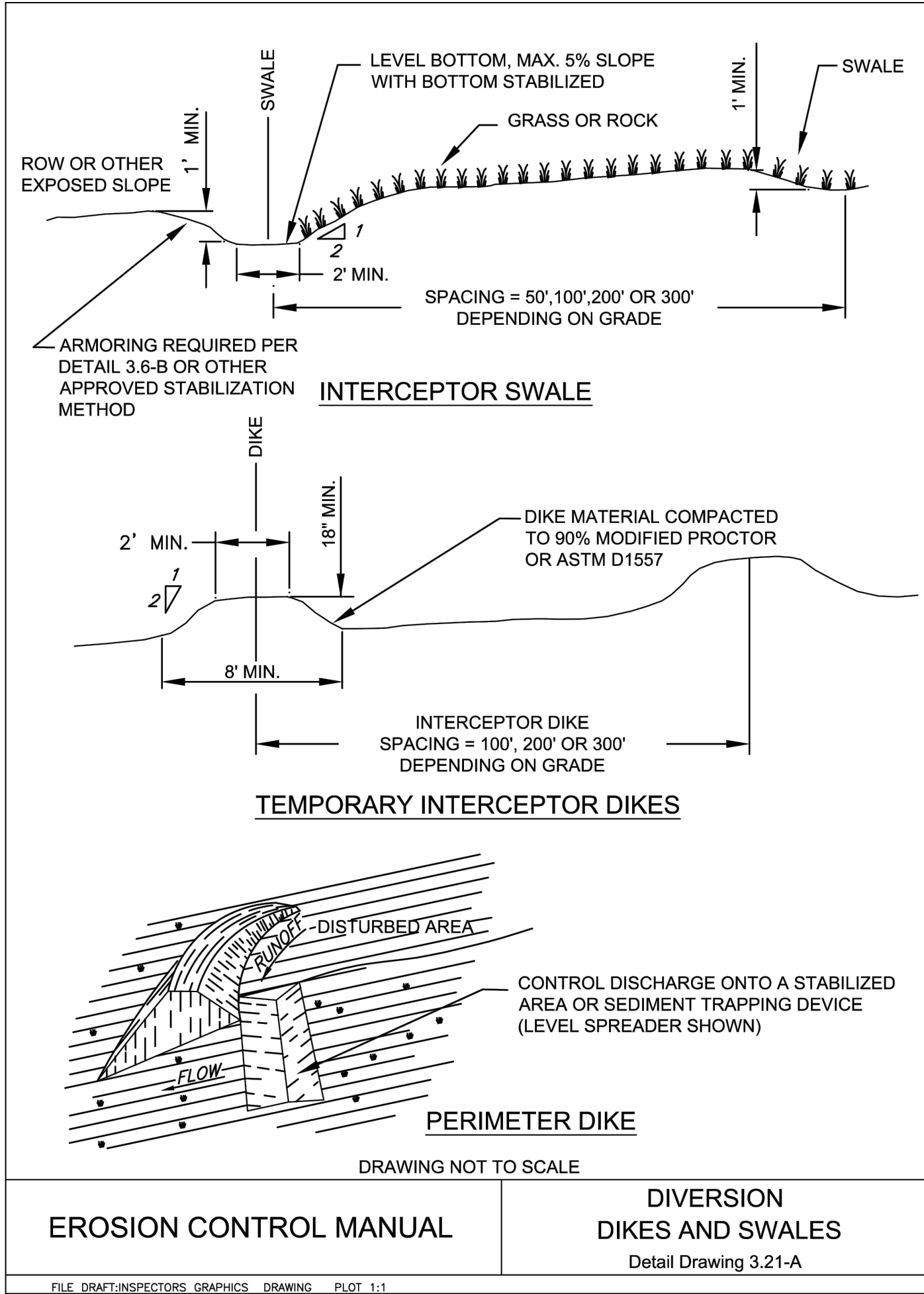
SOURCE: PORTLAND EROSION CONTROL MANUAL (2022)

6
FIG 2B

PLASTIC SHEETING DETAIL

NOTES:

1. PLASTIC SHEETING SHALL BE PLACED ON CONTAMINATED AND PENDING ANALYSIS STOCKPILES TO MINIMIZE TRANSPORT OF SEDIMENT TO THE STORMWATER SWALES, WILLAMETTE RIVER, AND STORM DRAIN INLETS, AND AROUND STOCKPILES AND STAGING AREA AS DESIGNATED ON DRAWING NO. 5, AND IN ACCORDANCE WITH THE CITY OF PORTLAND'S EROSION AND SEDIMENT CONTROL MANUAL.
2. CONTRACTOR SHALL USE WEIGHTS (E.G. SANDBAGS) ON PLASTIC SHEETING TO IMPROVE GROUND CONTACT ON IMPERVIOUS SURFACES. STAKES SHALL BE USED WHERE APPLICABLE ON PERVIOUS SURFACES. ENSURE THAT NO GAPS EXIST UNDER OR BETWEEN PLASTIC SHEETS THAT COULD BYPASS FLOWS. OVERLAP ENDS OF PLASTIC SHEETS WHERE POSSIBLE.
3. PLASTIC SHEETING COVERS SHALL BE INSPECTED DAILY. ANY UNCOVERED PORTIONS OF THE STOCKPILE SHALL BE RECOVERED WITH PLASTIC SHEETING.



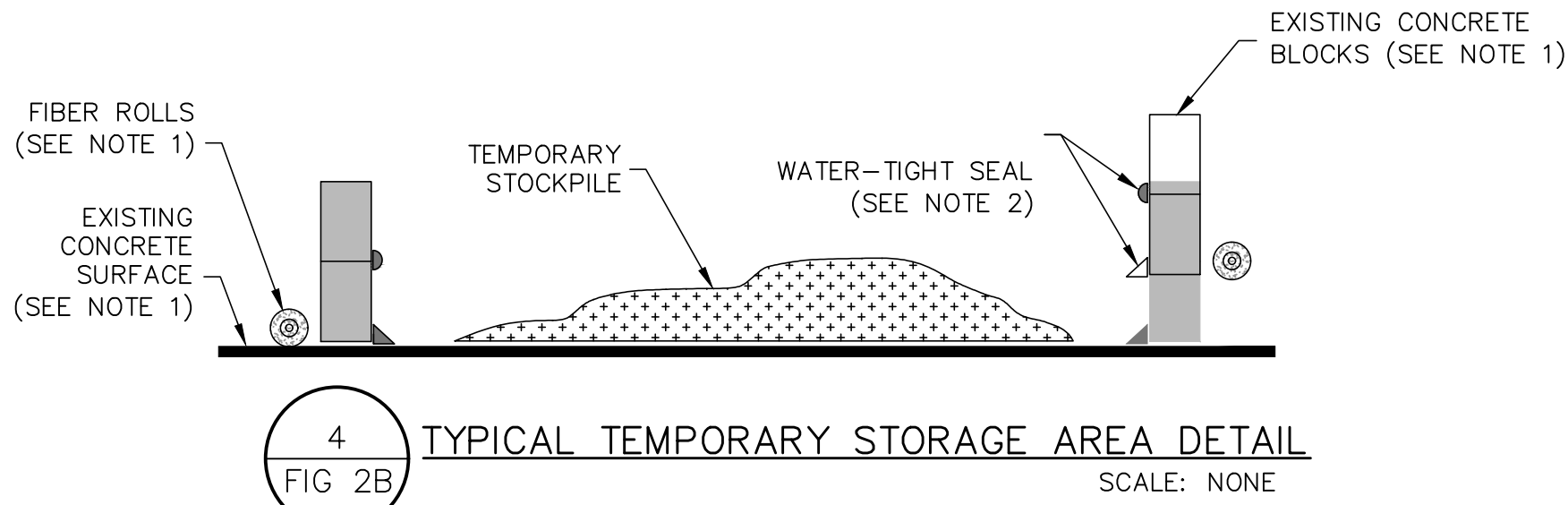
SOURCE: PORTLAND EROSION CONTROL MANUAL (2022)

7
FIG 2B

DIVERSION DIKE DETAIL

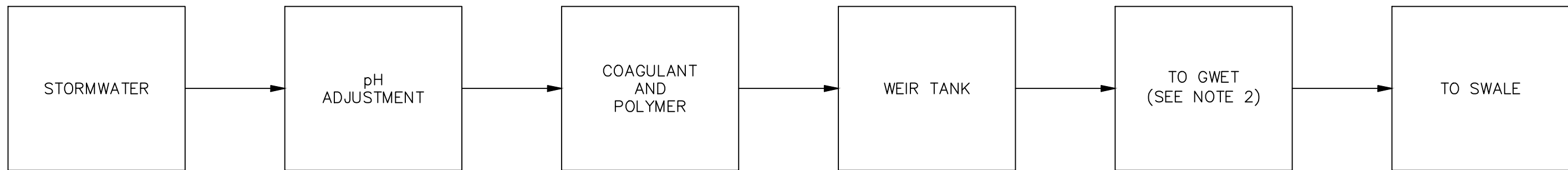
NOTES:

1. EXISTING STORMWATER SWALES AND DIKES SHALL NOT BE DAMAGED BY CONSTRUCTION ACTIVITIES. SWALES SHALL BE PROTECTED FROM SILT BY PLACING FIBER ROLL ON THE CONSTRUCTION SIDE OF SWALES.



NOTES:

1. THE CONTRACTOR SHALL LOCATE THE TEMPORARY STORAGE AREAS ON EXISTING CONCRETE SURFACE AND UTILIZE THE EXISTING CONCRETE BLOCKS AS MEANS TO SEGREGATE THE STORAGE AREAS.
2. CONTRACTOR SHALL ENSURE THAT FREE LIQUID IS CONTAINED WITHIN THE BOUNDARY OF THE CONCRETE BLOCKS BY GROUTING WHERE THE CONCRETE BLOCKS MEET THE CONCRETE SURFACE AND AT THE JOINTS BETWEEN CONCRETE BLOCKS, AND WITH THE USE OF SOIL CONDITIONING PRACTICES. CONTRACTOR SHALL PROVIDE IN THE PROJECT WORK PLAN THE MEANS OF CONTAINING LIQUID AND COLLECTING LIQUID (IF NECESSARY) FROM THE STORAGE AREA.
3. CONTRACTOR SHALL HAVE THE OPTION OF ADJUSTING THE SIZE OF THE TEMPORARY STORAGE AREA AS NEEDED FOR PLANNED EQUIPMENT AND VEHICLES. ALL ADJUSTMENTS MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL BY 10 WORKING DAYS PRIOR TO THE ADJUSTMENTS BEING MADE.
4. THE CONTRACTOR SHALL DEPLOY FIBER ROLLS ALONG THE PERIMETER OF THE STORAGE AREAS, AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN.




5
FIG 2B

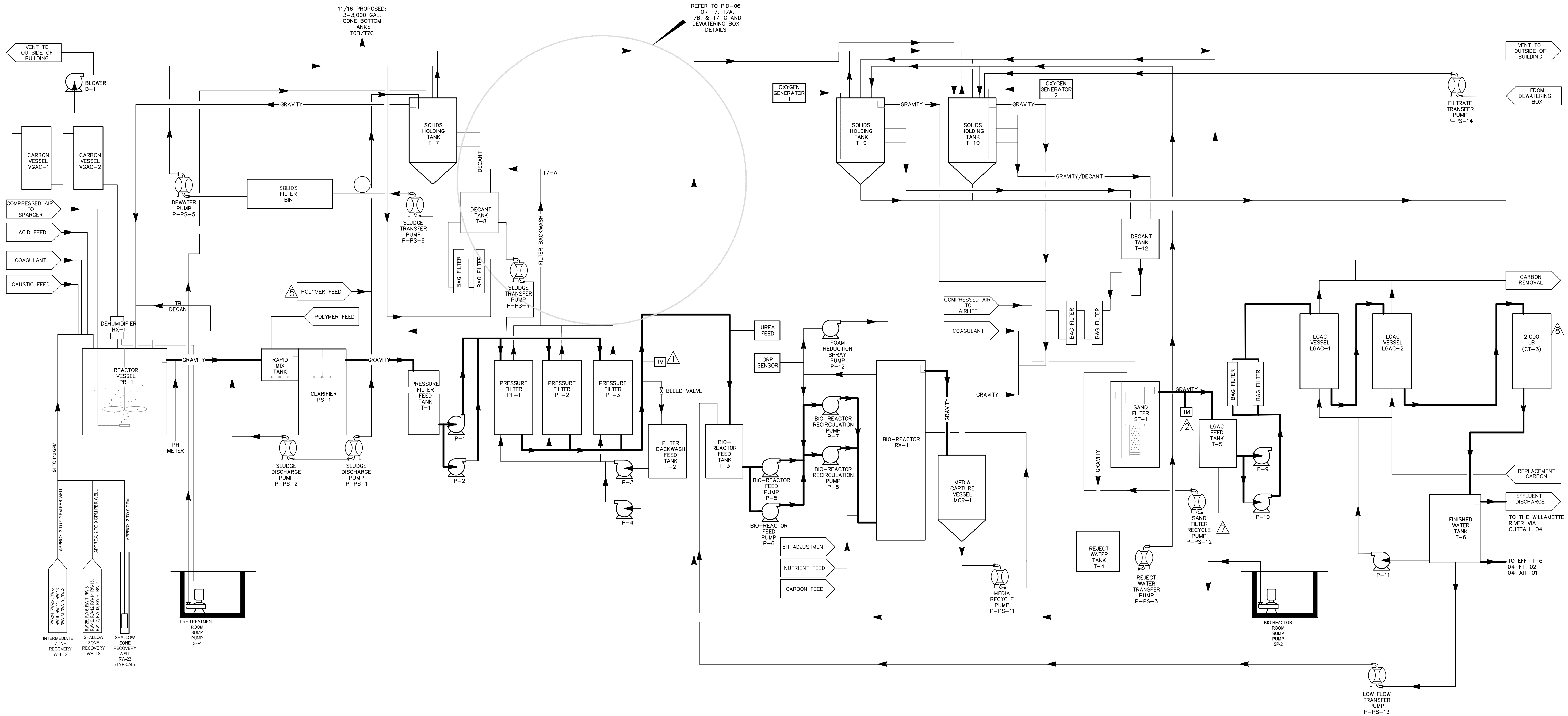
DECONTAMINATION WATER/INDUSTRIAL WASTE WATER TREATMENT PROCESS FLOW DIAGRAM

NOTES:

1. POTENTIAL PRE-TREATMENT FLOWN SHOWN HEREIN, FINAL PRE-TREATMENT CONFIGURATION TO BE DETERMINED
2. SEE FIGURE 2C FOR GWET PROCESS FLOW DIAGRAM.

**ISSUED FOR PERMIT
NOT FOR CONSTRUCTION**

							DETAILS: EROSION AND SEDIMENT CONTROL			DISCIPLINE NO.
							IN-SITU STABILIZATION			REV.
							ARKEMA INC. PORTLAND, OR			0
							SCALE AS NOTED	DESIGNED BY B. ROBINSON	PROJECT NUMBER	SHEET NO.
							DATE DRAWN 12/09/2024	DRAWN BY L. CALVO SANABRIA	0732436	FIG 2B
							Environmental Resources Management			
Rev.	Date	Description		By	Chk					



- △ TURBIDITY METER (IN-LINE) INSTALLED 8/15/2015 EFF-P-3
- △ TURBIDITY METER (IN-LINE) INSTALLED 9/30/2015 EFF-SF-1 ALARM FOR HIGH TURBIDITY 10/30/2015
- △ ACID FEED (HCl IN-LINE) INSTALLED 10/26/2015 INF-PR-1
- * △ BAG FILTERS 5m TO 1m, TWO VESSELS WITH H FILTERS PER VESSEL* LWAD-LAG IN // /. INSTALLED ~1 OR 2/2015 (?) 0.5M IN ALL FILTERS (SINCE 10/7/2015, AFTER CONDUCTING CARBON ISOTHERM TEST (10/5/2013).
- △ POLYMER FEED INSTALLED (IN-LINE) FROM PS-1 TO TANKT-7
- △ SURGE TANK (T7A) INSTALLED P-PS-1 DECANT/TANK T-7 SLUDGE-DATE?
- △ RECIRCULATION LINE OFF OF TANK T-5 INSTALLED 10/30/2015 FED BY PUMP P-PS-12. FLOW TOTALIZER + FLOW CONTROLLER DIAGRAM PUMP
- △

1
FIG 2C GWET PROCESS FLOW DIAGRAM

ISSUED FOR PERMIT
NOT FOR CONSTRUCTION


							DETAILS: EROSION AND SEDIMENT CONTROL			DISCIPLINE NO.
							IN-SITU STABILIZATION ARKEMA INC. PORTLAND, OR			REV. 0
							SCALE AS NOTED	DESIGNED BY B. ROBINSON	PROJECT NUMBER 0732436	SHEET NO FIG 2C
							DATE DRAWN 12/09/2024	DRAWN BY L. CALVO SANABRIA		
							Environmental Resources Management			
Rev.	Date	Description	By	Chk						

Figure 3a: Soil/Non-ACM Management (Without ACM)

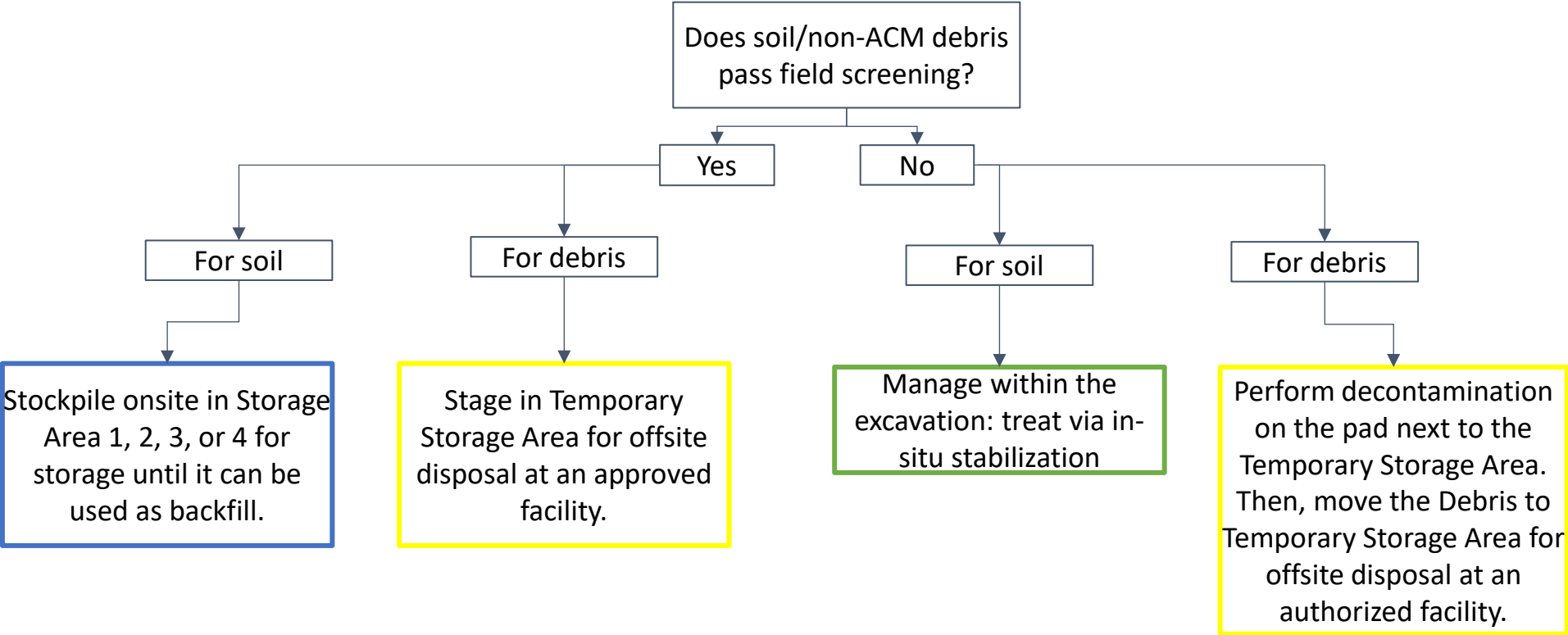
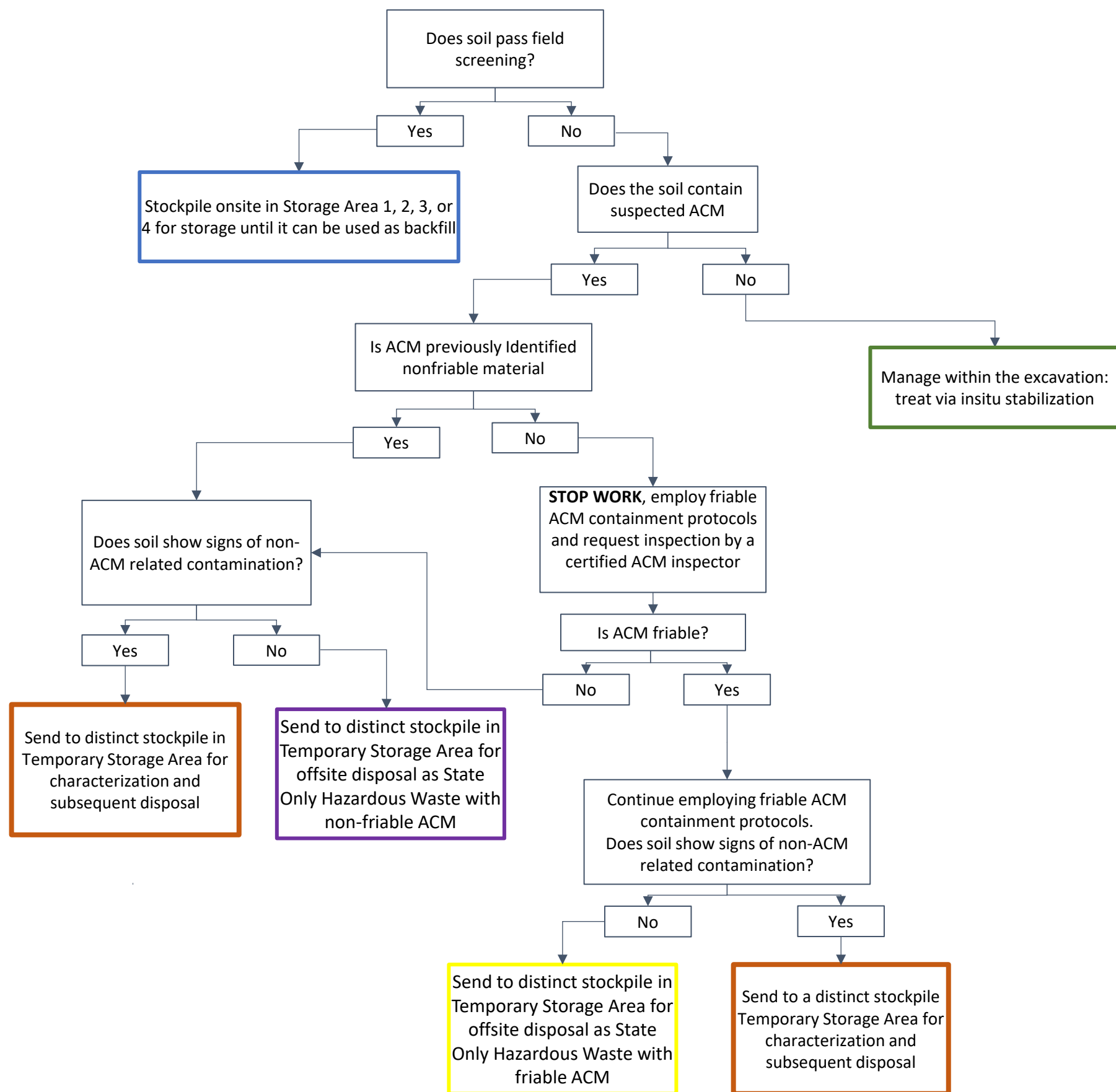


Figure 3b: Soil Management Decision Tree With ACM





APPENDIX A

HEADSPACE SCREENING FOR VOLATILE ORGANIC COMPOUNDS

SITE-SPECIFIC OPERATING PROCEDURE

SOP-1: HEADSPACE SCREENING FOR VOCs

Scope and Application

The purpose of this site-specific operating procedure is to present a standard method for headspace screening of excavated soils for volatile organic compounds. The headspace screening data will be used to determine whether soils need to be segregated and placed in Temporary Storage Area B for additional characterization.

Screening will be conducted using a photo-ionization detector (PID) meter within 6 inches of the freshly excavated soil. The soil will be considered potentially contaminated if the meter reading is 10 parts per million over background levels for 10 seconds. If this threshold is exceeded, headspace testing will be initiated in accordance with the procedures presented below.

Headspace Screening Procedures

1. Partially fill a clean sample jar with soil to be screened (one third to half full). Collect the soil sample from a freshly uncovered location to minimize volatilization.
2. Cover the jar with clean aluminum foil and tightly seal the jar lid.
3. Allow headspace vapors to accumulate in the jar for at least 10 minutes, but no more than 60 minutes.
4. Shake or agitate the soil jar for 15 seconds at the beginning and end of the headspace development period. Temperatures of the headspace must be warmed to at least 40 degrees Fahrenheit.
5. Calibrate the vapor meter (PID with an 11.7 electron volt lamp) in accordance with the manufacturer's recommendations at the temperature that will be used for the field screening.
6. After headspace development, insert the meter's sampling probe to a point about one-half the headspace depth. The sample jar opening will be minimized.
7. Record the highest meter reading in the site logbook or sampling form. The highest reading generally occurs within 2 to 5 seconds after the probe is inserted.



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