

APPENDIX M

Onshore Pipeline Construction Best Management Practices, Revised August 2019

(Annex #107 – Response to Information Request #107)

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Annex #107 - Data Gap #107 Response



Sea Port Oil Terminal Project Offshore Brazoria County, Texas

VOLUME IIb
APPENDIX C

ONSHORE PIPELINE CONSTRUCTION
BEST MANAGEMENT PRACTICES

REVISED AUGUST 2019

C ONSHORE PIPELINE CONSTRUCTION BEST MANAGEMENT PRACTICES

1 INTRODUCTION

The intent of the Onshore Pipeline Construction Best Management Practices (Construction BMPs) is to provide SPOT Terminal Services, LLC (the Applicant) guidance to avoid, minimize, and mitigate environmental impacts as they relate to the construction of the onshore components of the Sea Port Oil Terminal (SPOT) Project. This document is intended to be implemented for the ECHO Terminal, the ECHO Terminal to Oyster Creek Terminal Pipeline, and the meter stations along the ECHO to Oyster Creek Terminal Pipeline.

Based on input from the U.S. Environmental Protection Agency (Region 6), a National Pollution Discharge Elimination System (NPDES) general permit for construction stormwater discharges will be required for the remaining onshore portions of the SPOT Project, which include the proposed Oyster Creek Terminal, the Oyster Creek Terminal to Shore Crossing Pipeline, and the meter stations along the Oyster Creek Terminal to Shore Crossing Pipeline. A Stormwater Pollution Prevention Plan (SWPPP) will be drafted and implemented, per NPDES permit requirements, for those components of the SPOT Project.

Once the SPOT Project is authorized, the Applicant may deviate from these BMPs in certain situations if:

- A different measure provides equal or better environmental protection; or
- It is necessary because a BMP is infeasible or unworkable based on Project-specific conditions.

At this time, these BMPs are considered DRAFT, as modifications or amendments may be necessary as agency consultation is completed and permit conditions are issued for the SPOT Project.

2 ENVIRONMENTAL INSPECTION

1. It is anticipated that a minimum of one designated Environmental Inspector (EI) would be required for the SPOT Project during construction and restoration.
2. An EI shall have the authority to stop activities that violate the environmental conditions of any applicable environmental permits and to order appropriate corrective action.
3. At a minimum, the EI shall be responsible for:
 - a. Inspecting construction activities for compliance with the requirements of these BMPs, the mitigation measures proposed by the Applicant, other environmental permits and approvals, and environmental requirements in landowner easement agreements;
 - b. Identifying, documenting, and overseeing corrective actions, as necessary, to bring an activity back into compliance;

- c. Advising the Chief Construction Inspector (or equivalent supervisory position) when environmental conditions (such as wet weather soils) make it advisable to restrict or delay construction activities;
- d. Verifying that the limits of authorized construction work areas are visibly marked before clearing and are maintained throughout construction;
- e. Verifying the location of signs and highly visible flagging marking the boundaries of sensitive resource areas, waterbodies, wetlands, or areas with special requirements along the construction work area;
- f. Identifying erosion/sediment control and soil stabilization needs in all areas;
- g. Ensuring that the design of erosion controls will not direct water or sediments into sensitive environmental resource areas;
- h. Verifying that dewatering activities are properly monitored and do not result in the deposition of sand, silt, and/or sediment into sensitive environmental resource areas; stopping dewatering activities if such deposition is occurring and ensuring the design of the discharge is changed to prevent reoccurrence; and verifying that dewatering structures are removed after completion of dewatering activities;
- i. Ensuring that appropriate topsoil segregation and restoration is completed in designated areas (i.e., agricultural, residential);
- j. Ensuring that erosion control devices are properly installed, monitored, and maintained to prevent sediment flow into sensitive environmental resource areas and onto roads, and determining the need for additional erosion control devices per U.S. Army Corps of Engineers (USACE) Section 404/401 permit conditions and the project’s BMP Plan and/or SWPPP that would be developed prior to construction to comply with Section 402 of the Clean Water Act, National Pollutant Discharge Elimination System;
- k. Identifying areas that should be given special attention to ensure stabilization and restoration after the construction phase; and
- l. Verifying that disposal of solid and hazardous waste is completed in accordance with federal, state, and local regulations.

3 PRECONSTRUCTION PLANNING

3.1 CONSTRUCTION WORK AREAS

1. Identify all construction work areas that would be needed for safe construction. The Applicant must ensure that appropriate cultural resources and wetland surveys are conducted, as determined necessary by the appropriate federal and state agencies.
2. Plan construction sequencing to limit the amount and duration of open trench sections, as necessary, to prevent excessive erosion or sediment flow into sensitive environmental resource areas.

3.2 DRAIN TILE AND IRRIGATION SYSTEMS

1. Attempt to locate existing drain tiles and irrigation systems.
2. Develop procedures for construction through drain-tiled areas, maintaining irrigation systems during construction, and repairing drain tiles and irrigation systems after construction.

3.3 ROAD CROSSINGS AND ACCESS POINTS

All public road crossings will be crossed by either the horizontal direction drill (HDD) or bore construction technique. Should an HDD or bore be unsuccessful the Applicant will coordinate with the relevant county or local highway department to determine the best times for temporary road closures in order to minimize impacts on local traffic.

3.4 DISPOSAL PLANNING

Methods and locations for the regular collection, containment, and disposal of excess construction materials and debris (e.g., timber, slash, mats, garbage, drill cuttings and fluids, excess rock) should be determined throughout the construction process. Disposal of materials for beneficial reuse must not result in adverse environmental impacts and is subject to compliance with all applicable survey, landowner, or land management agency approvals and permit requirements.

3.5 RESIDENTIAL CONSTRUCTION

For all properties with residences located within 50 feet (15.2 meters) of construction work areas, the Applicant shall:

- Avoid removal of mature trees and landscaping within the construction work area, unless necessary for safe operation of construction equipment, or as specified in landowner agreements;
- Fence the edge of the construction work area for a distance of 100 feet (30.5 meters) on either side of the residence; and
- Restore all lawn areas and landscaping immediately following cleanup operations, or as specified in landowner agreements.

If seasonal or other weather conditions prevent compliance with these time frames, then temporary erosion controls (sediment barriers and mulch) should be maintained and monitored until conditions allow completion of restoration.

4 INSTALLATION

4.1 APPROVED AREAS OF DISTURBANCE

Project-related ground disturbance shall be limited to the construction right-of-way and other approved workspaces. Any project-related ground disturbing activities outside these areas will require review to determine if there are any sensitive environmental or cultural resources.

Project use of additional limited areas is subject to landowner approval and compliance with all applicable survey and permit requirements.

4.2 TOPSOIL SEGREGATION

1. Unless the landowner or land management agency specifically approves otherwise, prevent the mixing of topsoil with subsoil by stripping topsoil from either the full work area or from the trench and subsoil storage area (ditch plus spoil side method) in:
 - a. Non-inundated jurisdictional wetlands;
 - b. Agricultural parcels;
 - c. Residential areas; and
 - d. Other areas, at the landowner's request.
2. In all areas, importation of topsoil is not an acceptable alternative to topsoil segregation unless otherwise requested by landowner.
3. Where topsoil segregation is required, the Applicant would:
 - a. Segregate at least 12 inches (30.5 centimeters) of topsoil in deep soils (more than 12 inches [30.5 centimeters] of topsoil) except in inundated or saturated wetlands;
 - b. Minimize the length of time that topsoil is segregated and the trench is open.; and
 - c. Make every effort to segregate the entire topsoil layer in soils with less than 12 inches (30.5 centimeters) of topsoil.
4. Maintain separation of salvaged topsoil and subsoil throughout all construction activities.
5. Stabilize topsoil piles to minimize water and wind erosion loss; and
6. If standing water or saturated soils are present, or if construction equipment causes ruts or mixing of the topsoil and subsoil in wetlands, use low-ground-weight construction equipment, or operate normal equipment on timber riprap, prefabricated equipment mats, or terra mats.

4.3 DRAIN TILES AND IRRIGATION SYSTEMS

1. Mark the locations of drain tiles or irrigation systems damaged during construction.
2. Repair damaged drain tiles or irrigation systems to their original or better condition.

4.4 ROAD CROSSINGS AND ACCESS POINTS

1. If crushed stone access pads are used in residential or agricultural areas, place the stone on synthetic fabric to facilitate removal.
2. Minimize the use of tracked equipment on public roadways. Remove any soil or gravel spilled or tracked onto roadways daily, or more frequently, to maintain safe road conditions. Repair any damage to roadway surfaces and rights-of-way.

4.5 TEMPORARY EROSION CONTROL

Install sediment barriers immediately after initial disturbance of the wetland, waterbody, or adjacent upland. Sediment barriers would be properly maintained throughout construction and reinstalled as necessary (such as after backfilling of the trench) until replaced by permanent erosion controls or restoration of adjacent upland areas is complete. The following specific measures would be implemented at stream crossings where trenching is proposed:

1. Install sediment barriers across the entire construction right-of-way at all waterbody crossings, where necessary, to prevent the flow of sediments into the waterbody. Removable sediment barriers (or driveable berms) would be installed across the travel lane. These removable sediment barriers may be removed during the construction day, but would be re-installed after construction has stopped for the day and/or when heavy precipitation is imminent;
2. Where waterbodies are adjacent to the construction right-of-way and the right-of-way slopes toward the waterbody, install sediment barriers along the edge of the construction right-of-way, as necessary, to contain spoil within the construction right-of-way and prevent sediment flow into the waterbody; and
3. Use temporary trench plugs at all open trench wetland and waterbody crossings, as necessary, to prevent diversion of water into upland portions of the pipeline trench and to keep any accumulated trench water out of the wetland or waterbody.

4.6 ADDITIONAL USACE - GLAVESTON PIPELINE CONSTRUCTION GUIDELINES

1. Where possible, excavated materials should be stored and contained on uplands. If storage in wetlands or waters of the United States cannot be avoided, alternating stockpiles should be used to allow continuation of sheet flow. Stockpiled materials should be stored on construction cloth rather than bare marsh surfaces, seagrasses, or reefs.
2. Excavated wetlands should be backfilled with either the same material as removed or a comparable material that is capable of supporting similar wetland vegetation. Original elevations should be restored. Topsoil and organic surface material, such as root mats, should be stockpiled separately and returned to the surface of the restored site. Adequate material should be used so that following settling and compaction of the material the proper pre-project elevation is attained. If excavated materials are insufficient to accomplish this, similar grain size material should be used to restore the trench to the required elevation. After backfilling, erosion protection measures should be implemented where needed to prevent fish and wildlife habitat degradation and loss.
3. Equipment access should be limited to the immediate project area. Tracked vehicles are preferred over wheeled vehicles. Consideration should be given to the use of mats and boards to avoid sensitive areas. Equipment operators should be informed to avoid environmentally sensitive areas.

5 RESTORATION

5.1 CLEANUP

1. Commence cleanup operations immediately following backfill operations. Complete final grading, topsoil replacement, and installation of permanent erosion control structures within 20 days after backfilling the trench (10 days in residential areas). If seasonal or other weather conditions prevent compliance with these time frames, maintain temporary erosion controls until conditions allow for the completion of cleanup.
2. A travel lane may be left open temporarily to allow access by construction traffic if the temporary erosion control structures are installed. When access is no longer required, the travel lane must be removed and the right-of-way must be restored.
3. Grade the construction right-of-way to restore pre-construction contours and leave the soil in the proper condition for revegetation seeding and planting.
4. Remove construction debris from all construction work areas.
5. Remove temporary erosion controls when replaced by permanent erosion controls in accordance with the project's BMP Plan and/or SWPPP that will be developed prior to construction.

5.2 PERMANENT EROSION CONTROLS

Permanent erosion controls should be installed in accordance with the USACE Section 404/401 permit conditions and in accordance with the project's BMP Plan and/or SWPPP that will be developed prior to construction.

5.3 SOIL COMPACTION MITIGATION

1. Soil compaction mitigation should be conducted in accordance with the USACE Section 404/401 permit conditions upon issuance and the project's BMP Plan and/or SWPPP that will be developed prior to construction.
2. In agricultural, residential, and wetland areas, ensure the subsoil has been decompacted via a plow or other deep tillage method prior to replacing topsoil.
3. As appropriate, determine additional soil compaction mitigation methods in severely compacted areas.
4. Should wetland revegetation efforts fail per requirements of the USACE Section 404/401 permit, the topsoil should be tested for compaction and should be restored through subsoiling or ripping.

5.4 REVEGETATION

1. Generally, the Applicant should revegetate all disturbed areas in accordance with permit conditions of the USACE Section 404/401 permit, landowner requests, or any other regulatory requirements obtained during the permitting phase of the SPOT Project.
2. In residential areas, restore all turf, ornamental shrubs, and specialized landscaping in accordance with the landowner's request, or compensate the landowner.
3. As needed, the Applicant may use soil additives, such as fertilizers or pH modifiers (i.e., lime), in accordance with recommendations obtained from the local soil conservation authority or landowner.

6 POST CONSTRUCTION MONITORING AND MAINTENANCE

1. Monitoring of revegetation should be completed in accordance with permit conditions of the USACE Section 404/401 permit, project's SWPPP, and/or any other regulatory requirements obtained during the permitting phase of the SPOT Project.
2. In uplands, routine vegetation mowing or clearing over the full width of the permanent right-of-way in uplands would be conducted annually, as practicable. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline may be cleared at a frequency necessary to maintain the area in an herbaceous state.
3. In wetlands, limit routine vegetation mowing or clearing adjacent to waterbodies to allow a riparian strip at least 25 feet (7.6 meters) wide, as practicable, measured from the waterbody's mean high water mark, to permanently revegetate with native plant species across the entire construction right-of-way. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline may be cleared at a frequency necessary to maintain the corridor in an herbaceous state. In addition, trees that have roots that could compromise the integrity of the pipeline coating may be cut and removed from the permanent right-of-way.
4. Do not use herbicides or pesticides in or within 100 feet (30.5 meters) of a wetland or waterbody, as practicable.