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Alternative Analysis Houston Fuel Oil Terminal Proposed Ship Dock #5

Purpose and Need

HFOTCO LLC (Houston Fuel Oil Terminal Company) is proposing to construct a dock adjacent to the Houston Ship Channel. The proposed facility would ultimately be used to support the import and export of petroleum products for current and potential customers.

Scope of the Proposed Project

The proposed ship berth would be used for the import and export of petroleum products. The proposed terminal would require a trestle, pipe rack, dock, access platform, gangway support structure, seven fender piles, four mooring dolphins, four breasting dolphins, a 8.6-acre dredged basin and a 1,000-foot (ft) pipeline crossing.

In order to laydown the pipe structures and provide an efficient work area, approximately 10,000 cubic yards (cy) of crushed aggregate would be used to permanently fill eight work areas along the northern shoreline of the proposed project area.

Site Criteria

HFOTCO LLC designated the following site criteria in order to achieve the stated purpose and need:

- Efficient access to existing HFOTCO LLC infrastructure
- Access to ship channel
- Minimize environmental impacts and mitigation requirements
- Utilize available HFOTCO LLC Terminal operations

Alternatives for Placement of Proposed Facility

Alternatives considered included:

No Action Alternative
Offsite Alternative
Preferred Alternative

No Action Alternative

If the new ship dock was not constructed, HFOTCO LLC would not be able to provide services to support the import and export of petroleum products for current and potential customers.

Offsite Alternative

After taking into consideration the site criteria listed above, HOFTCO LLC found no offsite alternatives that provided convenient access to the ship channel in close proximity to existing HOFTCO terminals. Access to existing HFOTCO infrastructure was critical in order to provide a means to transport the transport of petroleum products to existing and potential customers.

An offsite alternative would result in the purchase of additional property and installation of significant infrastructure to accommodate the proposed facility at an alternative location offsite. In addition, developing an offsite location could potentially result in greater environmental impacts.

Preferred Alternative

This preferred alternative was selected because it meets the Site Criteria of providing the ship dock with efficient access to HFOTCO LLC infrastructure, adjacent to the Houston Ship Channel, minimizes environmental impacts, and utilizes available property in close proximity to support existing HFOTCO LLC terminal operations.

The construction of the ship dock would involve the hydraulic or mechanical dredging of a 8.6-acre area to a depth of -47 ft Mean Lower Low Water (MLLW) with a one ft over-dredge. The dredging activity would remove approximately 615,000 cy of new cut dredge material for the ship dock basin and approximately 65,000 cy from the pipeline trench. The dredging profile would consist of a 3:1 slope to the proposed bulkhead. HFOTCO is proposing to beneficially use approximately 15,000 cy of suitable dredged material to refill the excavated trench over the installed pipelines for protection from navigation traffic. The remaining dredged material, approximately 665,000 cy, would be hydraulically transported one of the following Dredged Material Placement Areas (DMPA):

- East and West Jones (private)
- Alexander Island (federal)
- Clinton (federal)
- Lost Lake (federal)
- Peggy Lake (federal)
- Pinto Lion/Jacintoport (federal)
- Rosa Allen (federal)
- Stimpson House Tract (federal)
- Spillman Island (federal)
- Texas Deepwater Industrial Port (private)

- Texas Terminals, LP (private)

After technical analysis, due to the required logistics, directional drilling was determined to not be a feasible option, therefore, HFOTCO LLC has chosen to laydown the pipelines through conventional methods. Due to available land restrictions, the proposed pipeline work area would be located along the northern shoreline of the proposed project area. In order to laydown the pipe structures and provide an efficient work area, approximately 10,000 cy of crushed aggregate would be used to permanently fill eight work areas along the northern shoreline of the proposed project area. There would be six 35-ft by 40-ft work platforms, each consisting of approximately 1,000 cy of crushed aggregate and two 35-ft by 80-ft work platforms, each consisting of approximately 2,000 cy of crushed aggregate, placed at -4 ft MLLW and surrounded by a 2:1 slope to existing grade. The aggregate would consist of large rock and be stabilized by a gabion-like metal grating to prevent sloughing into the channel. These work areas would be used for approximately one month and then remain in place along the northern shoreline to help maintain shoreline stability.

The proposed new ship dock would include a trestle, pipe rack, dock, access platform, gangway support structure, seven fender piles, four mooring dolphins, and four breasting dolphins. A 1,000-ft pipeline crossing would extend from the northern end of the proposed bulkhead to the HFOTCO LLC facility located across the channel to the north and reconnect along the existing barge dock bulkhead on the northern shoreline. Seven pipelines and fiber optics would be placed within the excavated trench, below the channel. The seven pipelines would consist of the following:

- 36-inch crude line
- 24-inch diesel line
- 24-inch unknown line (held for future potential purposes)
- 16-inch crude transfer line
- 8-inch oily water line
- 6-inch natural gas line
- 2-inch potable water line
- Fiber optics and utility conduit

Once the pipelines have been laid at the bottom of the trench (-70 ft MLLW), approximately 15,000 cy of suitable dredged material would be used to fill the trench to an elevation of approximately -62 ft MLLW.