DEPARTMENT OF THE NAVY
NAVAL WEAPONS STATION SEAL BEACH
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SEAL BEACH, CA 90740-5000

IN REPLY REFER TO:
3100
Ser N00/0131
October 2, 2018

Ms. Monica Der Gevorgian
Capital Project Coordinator, Public Works
City of Long Beach
333 West Ocean Boulevard
Long Beach, California 90802

Dear Ms. Der Gevorgian:

This letter is in response to your September 17, 2018 email regarding impacts to Navy operations in East San Pedro Bay as a result of proposed modifications to the Long Beach Breakwater.

The D8 explosives anchorage inside the Long Beach breakwater is required for Navy contingency operations in support of the National Defense Strategy. The D8 explosives anchorage is a unique national asset, strategically located to support Pacific Fleet homeport locations and ordnance supply points, in the event of regional conflicts or other international crisis scenarios. Because of its purpose as a strategic contingency asset, the anchorage must be available for use on short notice at any given time. The D8 anchorage is approved for use by the Navy for the transfer of ammunition by the Office of the Secretary of Defense (OSD) Department of Defense Explosives Safety Board (DDESB), in accordance with 32 CFR 186 and in compliance with DoD Manual 6055.09-M Ammunition and Explosives Safety Standards. None of the other Delta anchorage locations meet these explosives safety requirements. Any modifications to the breakwater resulting in an increase to wave energy will impact the Navy's ability to safely perform ordnance and fuel transfer operations as needed for national defense. The breakwater provides a protected bay environment consistent with the operating criteria set forth in Unified Facilities Criteria (UFC) 4-159-03 to facilitate safe and efficient ordnance and fuel transfer operations in support of mobilization requirements for the Pacific region.

Explosives anchorage operations involve the crane transfer of munitions between barges and larger ammunition-carrying cargo ships, such as the Military Sealift Command's T-AKE. The wave analysis completed by the U.S. Army Corps of Engineers (USACE) does not conform to the criteria the Navy would utilize to analyze the hydrodynamics between two vessels resulting from an increase in wave energy. UFC 4-159-03 provides the parameters for safe ordnance operations and recommends a dynamic analysis of swells, wave refraction, and wind to determine the specific motions anticipated based on the different hull forms for Navy vessels. Because barges and cargo ships have dramatically different hull forms, drafts and stabilities, they will react very differently to the same wave energy. Although the two vessels are tied together during operations, they do not ride the same part of a given swell at the same moment. Even small swells can generate sudden and random shifts in distance and height between the two vessels. Wave height is a negligible factor at anchorage D8 in its current state. The area is a well-protected bay environment and the Navy has the capability to operate at almost any time during the year. Any modifications to the breakwater would result in an increase in dynamic vessel

motion, a decrease in safety for Navy personnel conducting the operations, and would hinder the ability to perform ordnance and fuel transfer operations year-round.

Alternatives proposing any modifications to the breakwater exhibit a high probability of impacting the National Defense Strategy due to the increase in risk of performing Navy ordnance and fuel transfer operations at the D8 anchorage, especially during winter months. Based on the projected wave conditions provided by USACE, any modifications to the breakwater would impact the hydrodynamics between vessels. Wave conditions in excess of one foot are likely to result in relative vessel motion along the six degrees of freedom (pitch, heave, surge, sway, roll, yaw) above the safe handling tolerances per UFC 4-159-03—two feet relative motion between vessels during weapons loading/unloading. The projected conditions during typical summer months for the notched breakwater alternative may not result in wave height in excess of two feet; however, dynamic vessel motion along the six degrees of freedom require further evaluation to determine risk of continuing operations. In accordance with the UFC, other factors including wave period and direction, wind speed, vessel types, and even the weight distribution of any cargo the vessels have onboard can affect the hydrodynamics between vessels during ordnance and fuel transfer operations. Any increase in wave energy will increase the relative motion between the two vessels and decrease safety of the operations for Navy personnel. Wave heights in excess of two feet, as projected during 50-year northwest swells would likely require the Navy to cease operations. Lowering the eastern third of the breakwater would impact operations at D8 anchorage 100% of the time due to increase in wave height. Relocation of the D8 anchorage is not feasible due to explosive safety restrictions and the proximity to the shipping channel.

The D8 anchorage is approved for explosives operations since it meets the minimum separation distance from commercial port traffic and other non-Navy activities within the East San Pedro Bay. Other Delta anchorages or a new anchorage elsewhere within San Pedro Bay would not meet DoD Manual 6055.09-M Ammunitions and Explosive Safety Standards to be designated for ordnance activities due to the proximity of the Long Beach shipping channel. The approval process requires endorsement from the installation Commanding Officer, Naval Facilities Engineering Command, Naval Ordnance Safety and Security Activity, and final endorsement from OSD DDESB. The analysis requires consideration for public navigation traffic density and the ability to safely anchor Navy vessels. The safety criteria applicable to ordnance activities is not published due to operational security measures; see 10 U.S.C. § 130e.

The Navy previously evaluated the requirements to support ordnance transfer for Supply-class combatant support ships at alternative locations. An explosives anchorage is required to be within close range of Naval Weapons Station Seal Beach (NWSSB) since the installation is the primary supply point for ships homeported in Navy Region Southwest and strategically located in the Pacific region. In order to meet DoD ammunition and explosives safety standards, an offshore breakwater and new pier would be required to be constructed approximately 5,000 feet from the NWSSB/Surfside shoreline. The evaluation also anticipated impacts to water quality, tidal circulation to Huntington Harbour and Seal Beach National Wildlife Refuge, as well as impacts to recreational activities along the Orange County shoreline. The cost of this alternative

would likely exceed $1 billion and require significant mitigation, avoidance, and minimization measures. A multi-year and multi-agency analysis would be required to validate this alternative. An alternative for offshore facilities was previously proposed in 1990 and was met with significant public opposition (from residents of Seal Beach, Long Beach, and Huntington Beach) due to potential impacts to surfing and beach erosion. The Environmental Protection Agency recommended further analysis of longshore oceanography prior to moving this alternative forward and cited the potential impacts to sediment transport due to the large scale alteration of coastal processes anticipated from construction of a new offshore breakwater.

Any modifications to the breakwater will impact the Navy's mission due to the anticipated changes in wave energy and sea state. Potential alternatives would be cost-prohibitive and are unlikely to move forward due to public opposition. Impacts to operational readiness for response to national defense incidents cannot be quantified. The Navy must maintain the year-round readiness and capability for ordnance and fuel transfer operations at the D8 explosives anchorage. Any modification to the breakwater would bring on increases in wave energy affecting vessel motion and increasing the risk to safety of personnel and damage to vessels and equipment. This unwanted effect would severely impact the Navy's ability to respond during a time of national or international crisis.

The NWSSB point of contact for this matter is Ms. Kelly Finn, at (562) 626-7755 or email: kelly.l.finn@navy.mil.

Sincerely,

N. J. DAHLKE
Captain, U.S. Navy
Commanding Officer