UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

INCIDENTAL HARASSMENT AUTHORIZATION

Chevron is hereby authorized under section 101(a)(5)(D) of the Marine Mammal Protection Act (MMPA; 16 U.S.C. 1371(a)(5)(D)) to harass marine mammals incidental to the Richmond Refinery Long Wharf Maintenance and Efficiency Project (WMEP) in San Francisco Bay, California, when adhering to the following terms and conditions.

1. This Incidental Harassment Authorization (IHA) is valid from June 1, 2018, through May 31, 2019. This IHA is valid only for pile driving and extraction activities associated with Chevron's WMEP project.

2. General Conditions

(a) A copy of this IHA must be in the possession of Chevron, its designees, and work crew personnel operating under the authority of this IHA.

(b) The species authorized for taking are the gray whale *(Eschrichtius robustus)*, bottlenose dolphin *(Tursiops truncatus),* harbor porpoise *(Phocoena phocoena)*, California sea lion (*Zalophus californianus*), northern fur seal *(Callorhinus ursinus)*, harbor seal (*Phoca vitulina*), and northern elephant seal (*Mirounga angustirostris)*.

(c) The taking, by Level A and Level B harassment, is limited to the species listed in condition 2(b). See Table 1 for number of takes authorized.

(d) The take of any other species of marine mammal not listed in condition 2(b) is prohibited and may result in the modification, suspension, or revocation of this IHA.

(e) Chevron shall conduct briefings between construction supervisors and crews, marine mammal monitoring team, and acoustic monitoring team prior to the start of all pile driving activities, and when new personnel join the work, in order to explain responsibilities, communication procedures, marine mammal monitoring protocol, and operational procedures.

3. Mitigation Measures

The holder of this Authorization is required to implement the following mitigation measures:

(a) Time Restrictions — For all in-water pile driving activities, Chevron shall operate only during daylight hours (7:00 a.m. to 7:00 p.m.)

resume or commence until either the animal has voluntarily left and been visually confirmed beyond the shutdown zone or 15 minutes have passed without re-detection of the animal. Pile driving activities include the time to install or remove a single pile or series of piles, as long as the time elapsed between uses of the pile driving equipment is no more than thirty minutes.

(j) Non-authorized Take Prohibited — If a species for which authorization has not been granted or a species for which authorization has been granted but the authorized takes are met, is observed approaching or within the monitoring zone, pile driving and removal activities must shut down immediately using delay and shut-down procedures. Activities must not resume until the animal has been confirmed to have left the area or an observation time period of 15 minutes has elapsed.

4. Monitoring

The holder of this Authorization is required to conduct visual marine mammal monitoring during pile driving activities.

(a) Visual Marine Mammal Observation — The following visual monitoring measures shall be implemented.

(i) Baseline biological monitoring shall occur within one (1) week before the project's start date.

(ii) Monitoring distances, in accordance with the identified shutdown zones, Level A and Level B zones, shall be determined by using a range finder, scope, hand-held global positioning system (GPS) device or landmarks with known distances from the monitoring positions.

(iii) Monitoring locations shall be established at locations offering best views of the monitoring zone.

(iv) At least two protected species observers shall be actively scanning the monitoring zone during all pile driving activities.

(v) Monitoring shall be continuous unless the contractor takes a break longer than 2 hours from active pile and sheet pile driving, in which case monitoring shall be required 30 minutes prior to restarting pile installation.

(vi) For in-water pile driving, under conditions of fog or poor visibility that might obscure the presence of a marine mammal within the shutdown zone or Level A zone, the pile in progress shall be

(i) Sound Source Verification (SSV) testing shall be conducted as stipulated in the Hydroacoustic Monitoring Plan.

(ii) Acoustic monitoring shall be conducted on a minimum of two of each pile type, except for 24-in square concrete piles that shall require monitoring of 8 piles.

(iii) Testing shall be conducted by an acoustical firm with prior experience conducting SSV testing.

(iv) Final results shall be sent to NMFS and may be used to establish shutdown and monitoring isopleths.

(v) Any alterations to the shutdown or monitoring zones based on testing data must be approved by NMFS.

5. Reporting

(a) A draft marine mammal monitoring report shall be submitted to NMFS within 90 days after the completion of pile driving and removal activities or a minimum of 60 days prior to any subsequent IHAs. A final report shall be prepared and submitted to NMFS within 30 days following receipt of comments on the draft report from NMFS.

(b) The report shall include an overall description of work completed, a narrative regarding marine mammal sightings, and associated marine mammal observation data sheets. Specifically, the report must include:

(i) Date and time that monitored activity begins or ends;

(ii) Construction activities occurring during each observation period;

(iii) Weather parameters (*e.g.,* percent cover, visibility);

(iv) Water conditions (*e.g.,* sea state, tide state);

(v) Deviation from initial proposal in pile numbers, pile types, average driving times, etc.

(vi) For each marine mammal sighting the following must be recorded:

(1) Species, numbers, and, if possible, sex and age class of marine mammals;

(vi) Photographs or video footage of the animal(s) (if equipment is available).

(vii) Activities would not resume until NMFS is able to review the circumstances of the prohibited take. NMFS would work with Chevron to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. Chevron would not be able to resume their activities until notified by NMFS via letter, email, or telephone.

(d) In the event that Chevron discovers an injured or dead marine mammal, and the lead PSO determines that the cause of the injury or death is unknown and the death is relatively recent (*e.g.*, in less than a moderate state of decomposition as described in the next paragraph), Chevron would immediately report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinator. The report would include the same information identified in section above. Activities would be able to continue while NMFS reviews the circumstances of the incident. NMFS would work with Chevron to determine whether modifications in the activities are appropriate.

(e) In the event that Chevron discovers an injured or dead marine mammal and the lead PSO determines that the injury or death is not associated with or related to the activities authorized in the IHA (*e.g.,* previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), Chevron would report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the West Coast Regional Stranding Coordinator within 24 hours of the discovery. Chevron would provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network.

6. This Authorization may be modified, suspended or withdrawn if the holder fails to abide by the conditions prescribed herein, or if NMFS determines the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals.

for Glenn Sayl

Donna S. Wieting
Director, Office of Protected Resources
National Marine Fisheries Service

MAY 3 1 2018

Date

Table 1: Species Authorized for Take

Species	Authorized Level A Takes	Authorized Level B Takes	Total
Harbor seal	40	6,977	7,017
California sea lion	--	429	429
Harbor porpoise	4	451	456
Northern elephant seal	--	28	28
Gray whale	--	2	2
Northern fur seal	--	10	10
Bottlenose Dolphin	--	30	30

Table 2: Radial Distances to Level B Isopleths during Impact and Vibratory Driving

Pile Type	Distance to Threshold (meters)
Impact Driving (160 dB threshold)	
24-inch square concrete	120
14-inch steel H pile	630
Vibratory Driving/Extraction (120 dB threshold)	
14-inch steel H pile	22,200
36-inch steel pipe pile	18,480
Wood and concrete pile extraction	1,600