

Response: NMFS agrees, noting that these proposed requirements were also contained in CALTRANS May, 2002 monitoring plan.

Comment 18: CALTRANS notes that no offsite monitoring sites (i.e. haul-outs) offer comparable conditions for use as a control site. Mowry Slough, for example, is quite different from the YBI haul-out as it is a pupping site, is located in a different environment, and has far less ambient human disturbance. If it is included as a comparison site, CALTRANS proposes that the frequency of monitoring at YBI be conducted twice a week during driving permanent in-Bay piles.

Response: In order to evaluate whether harbor seals use alternative hauling-out areas as a result of construction work at SF-OB, CALTRANS is required to monitor at least one additional harbor seal haul-out within the Bay. Since Mowry Slough has been designated as a control site for the Richmond-San Rafael Bridge seismic retrofit work, NMFS recommends that this site continue to be monitored using the same protocol designed by researchers for that project.

Comment 19: CALTRANS notes that land-based pile driving will involve hammer energy less than 100 kJ and believes that marine mammals are not likely to be harassed by land-based pile driving. Therefore, CALTRANS believes that monitoring should apply only to in-Bay pile driving.

Response: The piles on YBI for construction of the YBI Transition structures are on the northeastern side of YBI and will be conventional steel-driven piles requiring hammer energy levels less than 100 kJ. With each pile requiring about 30 minutes of driving time, the 2,950 piles will require about 1,500 hours at YBI. However, the YBI harbor seal haul-out site is located about 450 m (1,476 ft) from the closest planned piledriving activity and is separated from the activity by a large hill. Therefore, monitoring is unnecessary for this land-based pile-driving but monitoring will be conducted by the bi-weekly monitoring team from the Richmond Bridge project.

Comment 20: The Commission believes that NMFS' preliminary determinations are reasonable provided that the visual monitoring of the safety zone to be conducted prior to and during pile driving operations is adequate to detect all marine mammals within the safety zone. According to CALTRANS, since pile driving is scheduled to occur from 7 a.m. to 7 p.m., visual monitoring in the late afternoon and early evening would be compromised during the winter months.

The Commission recommends that this issue should be addressed in CALTRANS' detailed marine mammal monitoring plan to ensure that visual monitoring is effective during all periods in which pile driving activities are conducted.

Response: On December 13, 2001, and April 23, 2002, CALTRANS notified NMFS that there was a discrepancy between the time period for pile driving activities in the IHA application and the construction specifications and that the time period provided in the IHA application was not accurate. The construction specification states: "No pile-driving activities are to be conducted between the hours of 8 p.m. and 7 a.m. Therefore, CALTRANS requested the change be made in this document. In addition, CALTRANS clarified, on December 17, 2001, that the specification also states that if a pile driving episode has started before 8 p.m., and is not completed by that time, it can be finished. Finally, CALTRANS' May, 2002 Marine Mammal Monitoring Plan notes that marine mammal observers will have night-time infra-red (IR) scopes or other tools to conduct monitoring during low light conditions.

As noted by the Commission, night-time conditions may exist which will limit observations. In addition, IR-scopes have indicated limited usefulness. Marine mammal observers in other activities recently have employed Bushnell/ITT F5000 binocular night-vision devices (NVDs) (Lawson, 2000). Therefore, NMFS recommends that NVDs be available for use by each team as needed and, if not, additional work site lighting be provided to enhance visibility whenever NVD-trained observers are not available. It should be recognized that the safety zone needs to be visible only during the 30-minute period prior to the start of driving a pile segment, not at other times.

Visual monitoring has two purposes: (1) to monitor the safety zone, and (2) to conduct marine mammal behavioral observations. Since pile driving, whether a single pile or a segment of a pile, cannot be stopped once started until the pile reaches its predetermined depth, and because sufficient opportunities exist during daylight period to make behavioral observations, stopping pile driving during periods of darkness (or fog) is not warranted, provided the entire safety zone can be effectively monitored for the entire 30-minute period prior to startup of each pile segment being driven. Therefore, NMFS is requiring CALTRANS to conduct monitoring and detailed reporting on activities during

periods of darkness. NMFS will review this information prior to processing any subsequent requests for renewal of this IHA to determine if additional mitigation measures are necessary.

MMPA Concerns

Comment 21: The Commission believes that, in situations where a temporary threshold shift (TTS) may lead to biologically significant behavior effects (e.g., an increased risk of natural predation or ship strikes), the activity should be considered as having a potential for injury (Level A harassment).

Response: NMFS has addressed the issue of second order impact assessment in several previous small take authorizations, and without new scientific documentation on this issue, a detailed response is not warranted here. For reviewers interested in this discussion, refer to the small take authorizations for the USS WINSTON S. CHURCHILL shock trial (66 FR 22450, May 4, 2001) and the Surveillance Towed Array Sensor System Low Frequency Active sonar (67 FR 46712, July 16, 2002).

Comment 22: The Commission believes that an across-the-board reclassification of TTS from Level A harassment to Level B harassment raises questions both in terms of the activities that involve the potential for repeated TTS harassment and, in general, cumulative effects.

Response: First, whether TTS is Level B harassment or Level A harassment is irrelevant for this IHA since mitigation and monitoring requirements under the IHA should prevent TTS. While there is some recent published research to the contrary, the general state of knowledge indicates that a permanent shift in hearing threshold (PTS) can occur with repeated exposures of TTS without allowing animals to completely recover. However, in order for this to occur, the marine mammal would need to remain within a safety zone and not be detected by the marine mammal observer team for a significant period of time in order to incur repeated TTS sufficient to result in PTS injury from pile-driving source. Therefore, NMFS believes that, considering the previously observed behavior of pinnipeds in the vicinity of the PIDP, the monitoring and mitigation measures imposed and the transitory nature of those marine mammal species likely to be impacted, it would be very unlikely a marine mammal would incur a TTS impairment and virtually impossible for a marine mammal to incur a PTS injury. For proposed authorizations other than SF-OB, NMFS will review each of these as