

CALIFORNIA COASTAL COMMISSION

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**STAFF REPORT
AMENDMENT**

APPLICATION NUMBER: 3-96-089-A1

APPLICANT: City Of Monterey, represented by Steve Scheiblaue, City Harbor Master

PROJECT LOCATION: Municipal Wharf II, Monterey Harbor

PROJECT DESCRIPTION: Request by City of Monterey to amend 5 year Operations and Maintenance Program (Coastal Development Permit No. 3-96-089) to include the replacement of approximately 50 of the existing creosote treated bearing and batter piles of Municipal Wharf II with plastic-wrapped creosote treated wooden piles.

LOCAL APPROVALS: None required

FILE DOCUMENTS: Coastal Development Permit File 3-96-089 (Monterey Harbor Operations and Maintenance Program); research studies regarding creosote cited in findings.

SUMMARY OF STAFF RECOMMENDATION

Staff recommends approval of the amendment, subject to conditions that address the potential impacts to marine resources and coastal water quality associated with the use of plastic wrapped creosote treated timber piles.

The requested amendment would expand the extent of repairs planned for Municipal Wharf No. II under the Monterey Harbor 5 year Operations and Maintenance program, to include the replacement of approximately 50 existing creosote treated timber bearing and batter piles and allow for the use of plastic wrapped creosote treated timber piles. Wharf II repairs previously authorized by the Commission in its approval of Coastal Development Permit 3-96-089 were limited to replacement of approximately 40 fender piles (i.e., pilings on the exterior of the wharf structure that come into direct contact with boats), and the repair of existing concrete pilings. As originally proposed by the City, all replacement piles would be creosote free.

The need to expand Wharf II repairs to include the replacement of existing timber bearing and batter piles (i.e., the interior piles which provide the structural support to the Wharf) was identified by a recent engineering study completed by the City. The existing wooden piles are treated with creosote preservative, which has documented toxic affects on certain marine wildlife. A new approach to addressing the toxic effects of creosote is to wrap the creosote treated pile in a tough plastic seal. In light of recent guidance provided by the California Department of Fish and Game allowing for the use of plastic wrapped creosote pilings in limited circumstances, and because the City believes that plastic wrapped creosote pilings are a superior and readily available product compared to other products, the subject amendment proposes to use plastic wrapped creosote treated timber piles for these repairs.

The staff recommends limited approval, for the remainder of the City's 5-year permit, with conditions that require: compliance with the California Department of Fish and Game Guidelines for the use of plastic-wrapped, creosote treated pilings (attached as Exhibit 2); and, the implementation of a piling inspection and reporting program, to ensure that the integrity of the plastic wrapping is maintained. In addition, the recommended conditions identify that if new or better scientific information reveals that less environmentally damaging materials are feasible to implement in Wharf repairs, the permittee is required to revise procedures or use new materials consistent with the new information, after consulting with the Executive Director.

These conditions ensure that the amended project will minimize adverse environmental affects, maintain marine resources and the biological productivity of coastal waters, and protect against the spillage of hazardous substances, consistent with Coastal Act Sections 30230, 30231, and 30232. The Commission will have an opportunity to re-evaluate the potential impacts to marine resources and coastal water quality associated with the use of plastic wrapped creosote treated pilings, and the effectiveness of permit requirements in addressing these potential impacts, at the conclusion of the five year permit period (November 14, 2001).

I. STAFF RECOMMENDATION

Staff recommends that the Commission adopt the following resolution:

Approval with Conditions

The Commission hereby **approves**, subject to the conditions below, an amendment to the permit on the grounds that the proposed amendment, as conditioned, will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976; will not prejudice the ability of the local government having jurisdiction over the area to prepare and carry out a Local Coastal Program in conformance with the provisions of Chapter 3 of the Coastal Act; is located between the sea and the first public road nearest the shoreline or is located in coastal waters, and is in conformance with the public access and public recreation policies of Chapter 3 of the Coastal Act; and, will not have any significant adverse impacts o the environment with in the meaning of the California Environmental Quality Act.

II. STANDARD CONDITIONS

1. Notice of Receipt and Acknowledgment. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. Expiration. If development has not commenced, the permit will expire two years from the date this permit is reported to the Commission. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the project during its development, subject to 24-hour advance notice.
6. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
7. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

1. Scope of Amendment. This amendment revises Coastal Development Permit No. 3-96-089 (Monterey Harbor 5 year Operations and Maintenance Program), to allow for the use of plastic wrapped creosote treated timber pilings as bearing and batter piles in repairs to Municipal Wharf II, subject to the following Special Conditions. All conditions of approval attached to the original permit continue to apply to all operations and maintenance activities (including Wharf II repairs), and are attached to this staff report as Exhibit 1.
2. Compliance with Fish and Game Guidelines. The use of plastic wrapped creosote treated pilings in Wharf II repairs shall comply with the guidelines established by the Department of Fish and Game for the use of such materials (Exhibit 2). PRIOR TO THE COMMENCEMENT OF PILING INSTALLATION, the permittee shall submit, for Executive Director review and approval, written evidence that the Department of Fish and Game has determined that the use of such materials at this specific harbor and in this particular circumstance is consistent with these guidelines.

3. Water Quality Review. PRIOR TO THE INSTALLATION OF PLASTIC WRAPPED CREOSOTE TREATED PILINGS, the permittee shall submit, for Executive Director review and approval, written evidence that the Regional Water Quality Control Board has reviewed and approved the use of such materials, or evidence that no such approvals are required.

4. Piling Inspection and Reporting Program. ON A BIENNIAL BASIS, beginning two years following the date that the first plastic wrapped creosote treated piling is installed, the permittee shall submit, for Executive Director review and approval, a piling inspection report that documents the integrity of the plastic wrapping for all creosote treated pilings installed under this permit, and all corrective actions that have or will be immediately undertaken to maintain an effective watertight seal. The inspections shall be synchronized, where feasible, to precede the periods of maximum expected harbor occupancy. Alternatively, the permittee may submit a different timeline for the piling inspection and reporting program, that ensures that the structural integrity of the plastic wrapping is properly maintained; the alternative timeline shall be reviewed and approved by the Executive Director PRIOR TO THE INSTALLATION OF PLASTIC WRAPPED CREOSOTE TREATED PILINGS.

5. New Information. If federal or state regulatory agencies, through new or better scientific information, determine that environmentally less damaging materials or methods are available for piling replacement, and are feasible to implement, the permittee shall, after consultation with the Executive Director, revise procedures or use alternative materials consistent with the new information. Such revisions may require an amendment to this permit.

IV. FINDINGS AND DECLARATIONS

A. Amendment Description.

Coastal Development Permit 3-96-089 for the Monterey Harbor 5 year Operations and Maintenance Program, approved by the Commission on November 14, 1996, authorized, among other harbor operations and maintenance activities, limited repairs to Municipal Wharfs I and II. As proposed by the City, this included the replacement of dilapidated wooden pilings with AZCA treated wood, plastic coated, or steel pilings. No creosote treated pilings were to be used.

The requested amendment would expand the previously approved Operation and Maintenance program to include the replacement of approximately 50 bearing and batter piles under Municipal Wharf II with plastic wrapped creosote treated pilings. In requesting this amendment, the City has stated its belief that plastic wrapped creosote piling are a superior, readily available product when compared to other products. The City also notes that as bearing and batter piles, the plastic wrapped creosote treated timber pilings will not be subjected to abrasion from boats, thereby reducing the risk that the plastic wrapping may not maintain a watertight seal.

B. Coastal Act Consistency.Applicable Policies

Coastal Act Section 30230 states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long term commercial, recreational, scientific, and educational purposes.

Section 30231 provides:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

In addition, Coastal Act Section 30232 requires:

Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

Coastal Act Section 30240 (b) states:

Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Furthermore, because the amended project includes development activities adjacent to the Monterey Bay National Marine Sanctuary, an environmentally sensitive habitat, National Marine Sanctuary Program Regulations should be considered. 15 CFR Paragraph 944.5(a)(3) of Sanctuary Regulations prohibits:

Discharging or depositing, from beyond the boundary of the Sanctuary, any material or other matter that subsequently enters the Sanctuary and injures a Sanctuary resource or quality....

Analysis

With respect to the above requirements, the proposed amendment has the potential to impact marine resources and coastal water quality through the use of creosote treated pilings, which have been shown to contribute polycyclic aromatic hydrocarbons (PAHs) to the marine environment, at levels that may be toxic to biological resources, as discussed in more detail, below. The toxicity of creosote to marine resources is not surprising, given the fact that the very purpose of creosote is to discourage organisms that may impair the wood product's integrity, such as wood borers, from coming into contact with the wood product.

The creosote that is used to treat and preserve wood products is a pesticide derived from coal tar that contains over 160 detectable hydrocarbon compounds. It is a hydrophobic, or relatively insoluble compound, and is therefore used in marine applications because it will not wash away. However, scientific studies have demonstrated that creosote is partially soluble, and mobile in aquatic environments. Even the small amounts of creosote constituents that dissolve and mobilize in water over time can have adverse affects on marine resources. Toxicity studies undertaken by Geiger and Buikema (1982) revealed that the amount of creosote which dissolves or mobilizes in water, when diluted to a 33:1 ratio, would kill 50% of the aquatic invertebrates exposed, with most deaths occurring in the first 8-24 hours (in this study, *Daphnia pulex* was used). This study also identified that non-lethal concentrations of creosote adversely affected reproductive success of the test organisms.

The fate of the PAHs that enter the marine environment from creosote treated products is a complex process dependent upon numerous variables. Exhibit D (attached) provides a simplified representation of the physical, chemical and biological processes that affect the fate of petroleum products (which PAHs are considered) in the marine environment. Most researchers agree that the heavier PAHs released from creosote treated products, such as benzo[a]pyrene, absorb onto the sediment particles and become a part of the hydrosol. While some of the PAHs can be metabolized by bacteria in aerobic conditions, the remainder can become persistent compounds of benthic sediments.

Adverse impacts to marine resources resulting from the presence of high PAHs levels on and near creosote pilings have been documented by numerous scientific studies. A five year study recently conducted by researchers from the U.C. Davis Bodega Marine Lab has found that virtually all of the herring eggs collected from creosote pilings near Fort Baker in the San Francisco Bay failed to develop properly and died. This study also documented adverse impacts to herring eggs spawned in close proximity to creosote pilings; laboratory analyses showed affects on eggs within 1 to 2 inches of creosote, although it is unknown how far the effects of creosote may spread under natural conditions. Other scientific studies documenting the toxic affects of creosote on marine resources include:

- Sved, et al (1997): This study compared the toxic affects of high molecular weight PAHs and low molecular weight PAHs found in creosote on fish exposed to creosote contaminated sediments. Fish exposed to high weight PAHs experienced mortality, epidermal lesions, and fin erosion. While no mortality or fin erosion was observed in fish exposed to low weight PAHs, they did develop lesions in areas surrounding the mouth, nares, and opercula.

- Kennedy, et al (1989): This study analyzed the influence of temperature on the uptake of benzo[a]pyrene (BaP, a high weight PAH found in creosote) by the Gulf toadfish (*Opsanus beta*). This study found that the uptake of BaP is proportional to the concentration of BaP in water, and is modulated by temperature-induced changes in respiration rate or convection volume. However, BaP was detected in all tissues examined, with the highest levels in the bile, the liver, the kidney and the gills.
- Swatz, et al (1988): This study evaluated the acute toxicity of sediments from sites in Eagle Harbor, Washington, which contain high levels of PAH compounds found in creosote. PAH contamination in this area was correlated with a high prevalence of hepatic lesions in English sole (*Parophrys vetulus*) as well as in other demersal fish and benthic invertebrates by other studies referenced by this report.
- Spies, et al (1985): This study found a variety of liver disorders in Starry flounder (*Platichthys stellatus*) collected from areas of the San Francisco and San Pablo Bays with extensive port and wharf facilities. Of all sampling locations, Berkeley had the highest concentrations of carcinogenic PAHs (such as BaP), which also correlated to the greatest extent of liver damage observed in fish.
- Dunn and Fee (1979): This study found a concentration of BaP in the tail tissue of lobsters held in enclosures of creosote coated timbers for up to 3 months. These concentrations exceeded the level that could be safely consumed by humans.
- Dunn and Young (1976): This study found that creosote wharfs represent a source of contamination to aquatic shellfish; mussels sampled from creosote pilings along the Southern California Coast contained high levels of BaP.
- Dunn and Stich (1975): This study determined that mussels in the immediate vicinity of a powerboat marina in Vancouver, British Columbia were heavily contaminated with BaP. The highest level of BaP contamination were found in mussels collected from creosote treated pilings. Fazio (1971), and Caymann and Kuratsume (1957) found similar impacts to oysters collected from Galveston Bay and Norfolk, Virginia, respectively.

Notwithstanding the above studies, a report prepared by Dr. Kenneth Brooks for the Western Wood Preservers Institute contends that if produced and used appropriately, creosote materials will not, in the majority of applications, result in substantial adverse affects to fish and wildlife. This report includes a review of existing literature pertaining to creosote use, and assesses the environmental risks associated with the release of PAH from creosote treated wood products. It concludes that the use of creosote treated wood products in aquatic environments pose environmental risks only when a large number of pilings will be placed in a body of water with extremely low flows and/or the sediments are oxygen deficient. This report also identifies that the implementation of *Best Management Practices for the Use of Treated Wood in Aquatic Environments*, developed by the Western Wood Preservers Institute and the Canadian Institute of Treated Wood, will further reduce the environmental risks associated with the use of conventionally treated wood products, upon which this risk assessment was based.

Nevertheless, there is a strong body of scientific literature which, contrary to the conclusions of Dr. Brooks, document that the use of creosote treated wood products in a variety of aquatic environments can have toxic affects on various marine resources. As a result, the use of creosote treated wood products has been subject to regulation by the California Department of Fish and Game under Section 5650 of the California Fish and Game Code, which states in part:

(a) Except as provided in subdivision (b), it is unlawful to deposit in, permit to pass into, or place where it can pass into the waters of this state any of the following:

(1) Any petroleum, acid, coal or oil tar, lampblack, aniline, asphalt, bitumen, or residuary product of petroleum, or carbonaceous material or substance.

(2) Any refuse, liquid or solid, from any refinery, gas house, tannery, distillery, chemical works, mill or factory of any kind.

(3) Any sawdust, shavings, slabs, or edgings.

(4) Any factory refuse, lime, or slag.

(5) Any cocculus indicus.

(6) Any substance or material deleterious to fish, plant life, or bird life.

(b) This section does not apply to a discharge or release that is expressly authorized pursuant to, and in compliance with, the terms and conditions of a waste discharge requirement pursuant to Section 13263 of the Water Code or a waiver issued pursuant to subdivision (a) of Section 13269 of the Water Code issued by the State Water Resources Control Board or a regional water quality control board after a public hearing, or that is expressly authorized pursuant to, or in compliance with, the terms and conditions of a federal permit for which the State Water Resources Control Board or a regional water quality control board has, after public hearing, issued a water quality certification pursuant to Section 13160 of the Water Code. This section does not confer additional authority on the State Water Resources Control Board, a regional water quality control board, or any other entity.

Under this provision of law, the California Department of Fish and Game, in 1993, released a guidance letter that was updated in 1994, which prohibited the Department from approving the use of creosote treated wood products in State waters. To date, this guidance appears to have been effective in curbing the use of creosote treated wood products in State waters. However, on March 26, 1996, the Department of Fish and Game sent a letter to the Port San Luis Harbor Manager that acknowledged the difficulties that the Department's position against the use of creosote created for users such as the Port San Luis Harbor District, and allowed for the use of plastic wrapped creosote treated wood products in limited situations. (This letter is attached as Exhibit 2, while other correspondence from the Department of Fish and Game regarding the use of creosote treated products, including the 1993 and 1994 guidance letters, are attached as Exhibit 3).

In response to the subject application, and in light of this new guidance provided by the Department of Fish and Game, it is now up to the Coastal Commission to determine whether or not the use of plastic wrapped creosote treated wood products is consistent with the Coastal Act provisions protecting marine resources, environmentally sensitive habitats, and coastal water quality previously identified. To date, the Commission is unaware of any scientific investigations that have specifically analyzed the potential

impacts associated with the use of plastic wrapped creosote treated pilings on marine resources and/or coastal water quality.

The principal behind the use of plastic wrapping is to add an additional layer of protection to marine wood products; it not only protects the pilings from wear caused by the abrasion of boats, but also helps to prevent infestation by wood borers. The plastic wrapping is a polyethylene material, approximately one tenth of an inch thick, that is nailed to the piling at the top, bottom, and along the longitudinal seam with non-corroding aluminum alloy nails. Polyurethane foam is installed along these seams to achieve a watertight seal. Typically, pilings are wrapped such that the plastic cover extends 5 feet below the sea floor surface, and either up to the top of the piling, or a minimum of 3 feet above the mean high tide line or storm wave height as applicable.

The technology used to manufacture plastic pile covers has advanced significantly since polyvinyl chloride (PVC) was first used to wrap timber piles in 1958. While PVC wraps proved to be somewhat effective against marine borer attack, they had durability problems, and could only be installed on existing in-place piles because they could not withstand pile driving.

The first polyethylene pile covers were installed on 600 piles at the Santa Barbara pier in 1979, and as of 1994, showed no signs of distress. Another example of the successful use of polyethylene pile covers has been in the reconstruction of the Seal Beach pier, which occurred in 1984; surveys conducted in 1994 confirmed that both the covers and interior piling maintained excellent condition. These are a few examples of the instances in which plastic wrapping has been used along the California Coast to preserve the integrity of wooden marine structures and boating facilities.

Durability of the pile covers directly relate to their ability to prevent the release of PAHs from the interior creosote treated pile into the marine environment; their ability to maintain a watertight seal is essential in preventing creosote constituents from becoming mobile in the water. This is reflected in the Department of Fish and Game's guidance on the use of these materials, which specifies that the type of plastic wrapping to be used must be expected to maintain its integrity for at least ten years. This guidance also requires that any holes or leaks that may develop in the plastic material must be repaired or replaced in a timely manner. Other provisions contained in the Department's guidance letter related to the need to maintain a watertight seal include requirements that measures be taken to: prevent damage to the plastic wrap from boat use (e.g., installation of rubber strips or bumpers); prevent creosote from dripping over the top of plastic wrapping (e.g., wrapping pilings to the top or installing collars to prevent dripping); and ensure that the plastic wrapping is sealed at all joints to prevent leakage.

A similar concern has been expressed by the Western Wood Preservers Institute. In a letter to Commission staff dated February 11, 1998, the Executive Director of this organization states: "In environments where creosote is appropriate, the amount of creosote and PAHs, (the compounds of concern) moving from the material will come into balance with the microorganisms which consume and bio-degrade the discharge. Environmental concerns only exist where there are major amounts of PAH which exceed the capacity of the system to process it. In theory, the plastic wrapping will confine the creosote which moves to the surface over time. However, when at some future date that

wrap is physically breached, a relatively large amount of creosote could move to the local environment in a short time with the potential of an adverse affect". (Complete letter attached as Exhibit 5).

Based on the importance of maintaining a watertight seal, the recommended special conditions not only require compliance with the Department of Fish and Game's guidance, but also require the implementation of a periodic inspection and reporting program. Where plastic wrapped creosote treated pilings may come into contact with boats, more frequent inspections are required. These provisions, combined with the demonstrated durability of the plastic wrapping materials, should ensure that the plastic wrapped creosote treated piles are appropriately installed and maintained, in a manner that will prevent the release of PAHs in the marine environment. It also is acknowledged that it is in the interest of the users to properly maintain the plastic wraps, as this will help to extend the life of the wooden piles.

If, during the 5 year permit period, new or better scientific information is developed which indicates that environmentally less damaging materials or methods are available for piling replacement, and are feasible to implement, Special Condition 5 requires the permittee to revise procedures or use alternative materials consistent with the new information, after consultation with the Executive Director. It is noted that such revisions may require an amendment to this permit.

Conclusion

Based upon the body of scientific literature documenting the adverse affects of creosote treated wood products on marine resources, and considering the restrictions placed on its use by the Department of Fish and Game, it is clear that its use conflicts with Coastal Act Policies 30230, 30231, 30232, and 30240(b) when located within or adjacent to an environmentally sensitive habitat. In most instances, there are environmentally superior materials that can be used in lieu of creosote treated wood products, such as reinforced plastic, steel, concrete, or arsenical treated wood. Therefore, the use of creosote treated products in the marine environment must be carefully regulated, and preferably phased out, as new, less environmentally products are developed.

However, there may be instances when the use of alternative materials are not feasible, or would create extreme hardships, in accomplishing the Coastal Act objective of maintaining boating facilities. The repair and maintenance of existing wooden pier structures is an example of such an instance; the use of alternative materials may not only be more expensive, but may jeopardize the structural integrity of these facilities. In cases such as these, it is appropriate to allow for the use of creosote treated wood products where provisions to ensure that the impact of such projects is avoided and or minimized to the greatest degree feasible. Such approvals should be on an interim basis to allow for the replacement of creosote treated materials with environmentally superior products should such products become available and feasible to implement.

The special conditions attached to this permit accomplish these objectives. With these conditions, the project is consistent with Coastal Act provisions protecting marine resources, coastal water quality, and environmentally sensitive habitats. The Commission will have an opportunity to re-evaluate the potential impacts to marine resources and

coastal water quality associated with the use of plastic wrapped creosote treated pilings, and the effectiveness of permit requirements in addressing these potential impacts, at the conclusion of the five year permit period.

C. California Environmental Quality Act (CEQA)

Section 13096 of Title 14 of the California Code of Regulations requires Commission approval of coastal development permits to be supported by a finding showing the permit, as conditioned, to be consistent with any applicable requirements of CEQA. Section 21080.5(d)(2)(i) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impact which the activity may have on the environment.

This amendment has been determined to be exempt from CEQA requirements by the City of Monterey. In approving this project, the Commission has attached conditions that will prevent the project from having a significant adverse impact on the environment. Therefore, the Commission finds that the proposed amendment is consistent with the requirements of CEQA.

CALIFORNIA COASTAL COMMISSION

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STAFF REPORT REGULAR CALENDAR

APPLICATION NUMBER: 3-96-089

APPLICANT: CITY OF MONTEREY

Agents: Steve Scheiblauber, City Harbor Master
Bill Fell, Advanced Planning

PROJECT LOCATION: Monterey Harbor Coast Guard Pier, Marina, Municipal Wharfs I and II.

PROJECT DESCRIPTION: Five year operations and maintenance program allowing for the upgrade of the existing landfill launch ramp at the Coast Guard Pier; the repair and upgrade of Municipal Wharf Numbers 1 and 2, Marina outer wall, and Marina outer wall moor pilings; installation of two small docks between Wharf No. 2; and, maintenance dredging.

LOCAL APPROVALS RECEIVED: City Council Approval (August 6, 1996)

SUBSTANTIVE FILE DOCUMENTS: Coastal Development Permit Files 3-95-53 (Monterey Harbor Marina Replacement Project), 3-92-67 (Yellow Boat Dock), 3-92-06 (Marina Dredging), 3-91-86 (Remedial Action Plan), and 3-90-27 (Fisherman's Wharf Reconstruction).

SUMMARY OF STAFF RECOMMENDATION

The staff recommends that the Commission approve the proposed 5 year operations and maintenance program, subject to the conditions below, which mirror conditions imposed on previous harbor projects and are needed in order to provide the protection of marine resources required by Coastal Act Sections 30230 and 30231. The components of the operations and maintenance program involving the repair and upgrade of existing facilities will enhance the resources available to recreational boaters and the commercial fishing fleet, as called for by Coastal Act Section 30234; the proposed dredging and piling replacement activities are allowed for such purposes by Coastal Act Section 30233.

EXHIBIT NO. 1, 87
APPLICATION NO. 3-96-089-A1
Original Permit

I. STAFF RECOMMENDATION

The staff recommends that the Commission adopt the following resolution:

Approval with Conditions.

The Commission hereby grants a permit for the proposed development on the grounds that the development will be in conformity with the provisions of Chapter 3 of the California Coastal Act of 1976, will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3 of the Coastal Act, is located seaward of the first public road nearest the shoreline and is in conformance with the public access and public recreation policies of Chapter 3 of the Coastal Act, and will not have any significant adverse impacts on the environment within the meaning of the California Environmental Quality Act.

II. STANDARD CONDITIONS

See exhibit A.

III. SPECIAL CONDITIONS

1. Final Project Plans. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF EACH RESPECTIVE ELEMENT OF THE OPERATIONS AND MAINTENANCE PROGRAM, the permittee shall submit, for Executive Director review and approval, final project plans for that component of the plan. Final plans shall identify the exact design and location of the development, materials to be used, and the disposal area for removed or demolished materials. Final plans for each component of the operations and maintenance program shall also be accompanied by a construction phasing plan, for Executive Director review and approval, which consists of a written description and supporting graphics outlining phasing and construction sequence; seasonal considerations; and location of equipment staging areas, employee restrooms, employee parking, temporary security fencing, concrete washdown facility, and any similar elements which would affect ocean water quality or public access to the shoreline. To the maximum extent feasible, construction phasing shall maintain opportunities for public parking and for shoreline access during construction.

Minor repair and maintenance activities included within the operations and maintenance plan (e.g., the replacement of a single piling), however, do not require the submission of a final plan; in these cases, the permittee shall notify the Executive Director of the repair and maintenance activity proposed to be undertaken PRIOR TO THE COMMENCEMENT OF CONSTRUCTION for a determination if the submission of any additional information may be needed.

2. Dredging Requirements. This permit includes approval of a five-year program of harbor maintenance dredging and sediment disposal, through November 14, 2001. Suitable dredge material (at least 80% sand and meeting EPA standards for ocean disposal) shall be deposited above the mean high tide line of Del Monte Beach for beach nourishment purposes. Dredge spoils not suitable for beach disposal shall be disposed of at an upland location approved by the Executive Director (if within the coastal zone).

PRIOR TO THE COMMENCEMENT OF EACH DREDGING EPISODE, the permittee shall submit for Executive Director review and approval, a detailed dredging plan, including maps which identify the specific areas of dredging (including the toe and top of side slopes, project

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Exhibit 1, p. 2

depth, overdredge depth, and the quantity of material to be dredged), and any sediment testing reports. Dredging plans shall be accompanied by written evidence that the necessary approvals by the following agencies have been secured for the proposed dredging operation (including spoils disposal) or that no such approvals are required: U.S. Army Corps of Engineers, Monterey Bay National Marine Sanctuary, Central Coast Regional Water Quality Control Board, Department of Fish and Game, and Monterey County Health Department.

3. Containment Requirements. Particular care shall be exercised to prevent foreign materials (e.g., construction scraps, wood preservatives, other chemicals, etc.) from entering state waters. Where additional wood preservatives must be applied to cut wood surfaces, the materials, wherever feasible, shall be treated at an onshore location to preclude the possibility of spills into state waters. **UNLESS AN ALTERNATIVE CONTAINMENT PLAN IS APPROVED BY THE EXECUTIVE DIRECTOR,** a floating containment boom shall be placed around all active portions of a construction site where wood scraps or other floatable debris could enter the water. Also, for any work on or beneath fixed wharf decks, heavy duty mesh containment netting shall be maintained below all work areas where construction discards or other material could fall into the water. The floating boom and net shall be cleared daily or as often as necessary to prevent accumulation of debris. Contractors shall insure that work crews are carefully briefed on the importance of observing the appropriate precautions and reporting any accidental spills. Construction contracts shall contain appropriate penalty provisions, sufficient to offset the cost of retrieving or clean up of foreign materials not properly contained.

4. Piling Installation Requirements. Piling installation shall be performed in accordance with Department of Fish and Game recommendations (Exhibit B, attached). Generally, the new pilings shall be installed according to the method that results in the least disturbance of bottom sediments. Where feasible, disturbed sediments shall be contained with a flexible skirt surrounding the driven pile. The installation contract and/or specifications shall incorporate the applicable portions of the containment requirements of Special Condition 2 above.

5. Procedures for Concrete Work. If pile installation, or any other portion of the operations and maintenance program, requires the pouring of concrete in, adjacent to, or over the water, the following methods shall be employed to prevent uncured concrete from entering the waters of the Bay:

- a. Complete dewatering of the pour site, within a cofferdam or other barrier; the site to remain dewatered until the concrete is sufficiently cured to prevent any significant increase in the pH of adjacent waters; or,
- b. the tremie method, which involves placement of the form in water, inserting a plastic pipe down to the bottom of the form, and pumping concrete into the form so that the water is displaced towards the top of the form. If this method is selected, the displaced waters shall be pumped off and collected in a holding tank. The collected waters shall then be tested for pH, in accordance with the following California Department of Fish and Game recommendations. If the pH is greater than 8.5, the water will be neutralized with sulfuric acid until the pH is between 8.5 and 6.5. This pH-balanced water can then be returned to the sea. However, any solids that settle out during the pH balancing process shall not be discharged to the marine environment; or,

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Exhibit 1, p. 3

- c. an alternative method, subject to review and approval by the Executive Director (in consultation with the California Department of Fish and Game) PRIOR TO THE COMMENCEMENT OF WORK.

In each case involving such concrete pours in or near the waters of the Bay, the permittee shall insure that a separate wash out area is provided for the concrete trucks and for tools. The wash out area(s) shall be designed and located so that there will be no chance of concrete slurry or contaminated water runoff to the adjacent waters of Monterey Bay.

6. Water Quality Review. Permittee shall be responsible for obtaining any necessary approvals from the Regional Water Quality Control Board, including any Section 401 water quality certification or waiver which may be required. PRIOR TO THE COMMENCEMENT OF PILE INSTALLATION, DREDGING, OR IN-WATER CONSTRUCTION, permittee shall provide written evidence that the Regional Water Quality Control Board (RWQCB) has reviewed the proposed work, and has determined that either: a) the disturbances of contaminated harbor sediments are not expected to be extensive enough to cause such pollutants to become significantly bioavailable; or, b) because of the site's proximity to the former lead slag deposit, a water quality monitoring program acceptable to the Department of Fish and Game and Regional Water Quality Control Board has been prepared. Such a monitoring program shall cover the entire time period during which bottom sediments are being disturbed by pile driving, dredging, or other operations; shall specify a threshold level for shutting down operations such that no significant increase in the bioavailability of the contaminants will result; and shall be subject to the review and approval by the Coastal Commission Executive Director PRIOR TO COMMENCEMENT OF WORK.

7. State Lands Commission Review. PRIOR TO COMMENCEMENT OF THE OPERATIONS AND MAINTENANCE PROGRAM, the permittee shall submit to the Executive Director a written determination from the State Lands Commission that the proposed activities are in full conformance with the tidelands grant given to the City of Monterey by the State Lands Commission.

8. Other Agency Approvals. PRIOR TO THE COMMENCEMENT OF CONSTRUCTION OF A SPECIFIC ELEMENT OF THE OPERATIONS AND MAINTENANCE PROGRAM, the permittee shall submit, for Executive Director review and approval, documentation from the U.S. Department of the Army, Corps of Engineers, that the project has been reviewed for conformance with Federal agency requirements, including U.S. Coast Guard requirements, and, if applicable Monterey Bay National Marine Sanctuary regulations; and, that the project is permitted or that no Corps, Coast Guard, or Sanctuary permits are necessary.

9. Additional Harbor Improvements. Additional installation of pilings, berthing spaces or moorings beyond that specified in this approval shall be submitted for a determination of the appropriate coastal development permit requirements (i.e., a separate Coastal Development permit, amendment to this permit, or waiver).

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Exhibit 1, p.4

IV. FINDINGS AND DECLARATIONS

A. Background and Purpose

From the earliest days of California recorded history, Monterey Harbor has been a pivotal port of call and a welcome refuge for mariners. In its current configuration, major components include the Coast Guard Breakwater, tourist-oriented Fisherman's Wharf (Wharf No. 1), commercial fishing-oriented Wharf No. 2, launch ramps, and mooring and berthing facilities, including existing space for approximately 450 vessels within the Monterey Marina (see Exhibit D for locations).

Due to the age of harbor facilities, and the corrosive nature of the marine environment, harbor facilities are in need of constant repair and maintenance. In addition, high levels of public and commercial use of harbor facilities demand that the design of these facilities be well thought out, and where possible, improved, in order to accommodate the numbers of recreational boaters, commercial fisherman, and tourists that utilize harbor facilities. Coastal Act Sections 30234 calls for the protection of such facilities, as well as upgrading such facilities where feasible.

As a result, the City of Monterey has prepared an operations and maintenance program which comprises the repair, maintenance, and improvement projects that are proposed to be undertaken over the next five years. The packaging of all of these development activities into one permit application has been encouraged by the Commission staff, and well received by the City, as a means of efficiently processing the routine development activities associated with the operation of a major port facility. Special conditions have been attached to this permit to ensure that these activities will not have an adverse impact on coastal resources from both an individual and cumulative standpoint, consistent with the Chapter 3 policies of the California Coastal Act of 1976.

B. Project Description and Location

The following elements comprise the development activities that will be undertaken under the 5 year operation and maintenance program.

1. Coast Guard Pier Launch Ramp Upgrade: Install an additional 8' x 50' staging float to maximize public use of the City boat launch ramp near the U.S. Coast Guard Station (Exhibit E). This float will be secured with two new pilings (previously installed as authorized by De Minimus Waiver No. 3-96-103-DM), and a separate access ramp to this staging float will be provided from the southern side of the adjacent rest rooms. This element of the operations and maintenance program is anticipated to be completed in 1998, and requires approval by the U.S. Army Corps of Engineers.

2. Harbor Dredging: Conduct harbor maintenance dredging in order to maintain adequate depths for access to berths between Wharfs No. 1 and 2 (Exhibit F), in an amount not to exceed 1,500 cubic yards per year (7,500 cubic yards over the 5 year period). Dredge spoils will be decanted in a temporary sediment settling basin, constructed with "K-rails" (highway barriers) and lined with filter fabric, located on the parking lot adjacent to the public restrooms on the east side of Wharf No. 2 (Exhibit G). After the dredge spoils have been sufficiently dried, they will be trucked to the Marina Regional Landfill.

The City currently has authorization to conduct dredging, in the manner described above, pursuant to Coastal Development Permit No. 3-92-06, until February 1997. This permit

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Exhibit 1, p. 5

extends the period in which maintenance dredging is authorized until November 15, 2001. The U.S. Army Corps of Engineers permit for this dredging operation expires in 1998; renewal of the Corps permit, or approval of a separate Corps permit will be required at that time.

3. Outer Wall Bracing: The north side of the marina outer wall may need to be braced, in the same manner as the bracing previously undertaken on the south side of the marina wall (Exhibit H). This involves the installation of pilings at a 45 degree angle as a means of structurally supporting the outer wall. The extent of such bracing will be determined by a survey to be completed within the next two years.

4. Outer Wall Mooring Piles: 6 concrete piles have recently been installed on the north side of the marina outer wall, as authorized by De Minimus Waiver No. 3-96-103 DM. The purpose of these piles are to provide one point of a two point mooring system that will improve the Harbor's ability to accommodate very large fishing vessels. The remaining development associated with this component of the operations and maintenance program is the placement of 6,000 lb. steel-reinforced concrete blocks approximately 200 feet north of the outer wall, which will be the second point of the two point mooring system (Exhibit H). This component of the operations and maintenance program is anticipated to be completed by the end of this year.

5. Wharf No. 1 Piling Replacement: Approximately 20 pilings within the City owned section of Wharf No. 1 (Fisherman's Wharf) will be replaced with AZCA treated, concrete, plastic coated, or steel pilings. Concrete footings for these piles will be installed using the tremie method. Additional cap and stringer work on topside may also be required. Piling replacement operations are scheduled to be undertaken throughout the 5 year timeframe of this permit.

6. Wharf No. 1 Dinghy Dock Upgrade: The existing dinghy dock on the northwest end of Fisherman's Wharf will be extended 100 feet to the south, and secured with an additional 4 piles installed immediately west of the existing wharf pile line. When completed the dinghy dock structure will measure 240' x 8', and will provide better dinghy space for existing moored vessels. Access from the wharf will be provided by the existing ramps found on the short-term visitor dock (Exhibit I). This component of the operations and maintenance program is scheduled to be undertaken in 1997-1998.

7. Wharf No. 1 Wake-Baffling: 300 square feet (maximum) of vertical wood stringers will be installed along Wharf No. 1, immediately opposite to the harbor entrance (Exhibit I). The purpose of these stringers is to prevent heavy surge and boat wake problems which adversely affect passenger loading operations in this area. Installation of the wake-baffling will take place in 1997.

8. Wharf No. 2 Fender-Pile Maintenance: Approximately 40 existing piles around Wharf No. 2, currently used as a fender line, will be replaced with AZCA treated wood, plastic coated or steel pilings. The exact number of piles to be replaced will be determined by a engineering survey to be conducted this year.

9. Wharf No. 2 Concrete Pile Maintenance: Up to 75 of the concrete piles used to support Wharf No. 2 will be repaired by resurfacing spauled sections. This is anticipated to be undertaken in 1998.

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Exhibit 1, p. 6

10. Wharf No. 2 Fender-Line Maintenance: Approximately 400 linear feet of stringers and cap rail, which serve as structural components of the fender piles of Wharf No. 2, will be replaced in 1998.

11. Wharf No. 2 Re-Asphalt Decking: Over the five year period of the operations and maintenance program, up to 5,000 square feet of Wharf No. 2 decking will be replaced, and the entire existing asphalt area will be re-paved.

12. Wharf No. 2 Dinghy Docks: Two small dinghy docks, approximately 4' x 50' each, will be installed under Wharf No. 2, and attached to "H" and "A" docks (Exhibit J); no new piles are needed. This additional dock space will be used for the storage of dinghys which serve the City's east mooring area, and will be installed in 1996-1997.

In order to minimize the impact that the above development activities will have on marine resources, the applicant has proposed the following remediation program:

- Sea Otter Monitoring. All job site employees, City staff, and inspectors will monitor for the presence of sea otters. If detected within 100 feet of a work site, work will cease and Dr. Tom Williams, veterinarian for the Monterey Bay Aquarium will be contacted to manage the situation.
- Water Quality Protection. In order to avoid and/or reduce the turbidity caused by the installation of pilings, the tremie method, involving the use of forms to funnel the concrete to the base of the pilings, will be used. The use of high pressure water jets to move silt/sand during piling installation will be avoided wherever possible. All pilings to be installed will be creosote free; existing creosote coated pilings to be removed will be properly disposed of at a suitable landfill.

C. Marine Resources.

1. Coastal Act Policies:

Several Coastal Act sections protecting marine resources apply to the subject project, including:

Section 30230.

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Section 30231.

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

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Exhibit 1, p. 7

Section 30232.

Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.

Section 30233.

(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps...

(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities....

(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems....

2. Analysis:

a). Development in Open Coastal Waters:

Components of the operations and maintenance program involve both dredging and filling (through the installation of pilings and mooring blocks) in open coastal waters. Section 30233(a)(4) of the Coastal Act allows such activities for new or expanded boating facilities "where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects".

Available alternatives include the no project alternative, or a revised operation and maintenance program involving the reduction or relocation of the proposed development activities. The no project alternative is not considered feasible because it will not maintain facilities used by recreational boaters and commercial fishermen, as required by Coastal Act Section 30234. Similarly, a reduced or relocated project would not adequately maintain existing boating facilities, or enhance their usability by the public and commercial fishing industry, and would therefore conflict with the objectives contained in Coastal Act Section 30234. As discussed below, mitigation measures to avoid and reduce adverse impacts on coastal resources are both proposed as a component of the project, and required as conditions of project approval. Therefore

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Exhibit 1, p. 8

the proposed project, as conditioned by this permit, is considered the least environmentally damaging feasible alternative available.

b.) Protection of Marine Resources:

With respect to Coastal Act requirements that mitigation measures be provided to minimize adverse environmental effects (Coastal Act Section 30233), and that marine resources and the biological productivity of coastal waters be maintained (Coastal Act Sections 30230 and 30231), the project has been designed in a manner which strives to avoid or reduce adverse impacts on such resources. Measures that have been incorporated into the project design in order to reduce impacts to marine resources include sea otter monitoring, replacement of creosote coated pilings with non-toxic piles, containment of concrete through the use of the "tremie" method, and avoidance of jetting during piling installation to minimize turbidity (see page 7 of this staff report for a more detailed description of these measures).

Nevertheless, additional measures that will minimize project impacts on marine resource and the biological productivity of coastal waters are available, and are required to be implemented by the conditions of project approval. The potential impacts, and the measures required by the conditions of this permit to avoid such impacts, are summarized in the following table:

Potential Impacts	Required Mitigation Measures
Construction activities, equipment, and staging and wash down areas have the potential to result in the discharge of harmful materials to the marine environment, thereby reducing water quality, and harming marine life.	Special Condition 1 requires Executive Director review and approval of construction phasing plans for each element of the project. This will ensure that construction activities will be conducted in a manner which minimize adverse impacts to the marine environment.
The disposal of dredge spoils has the potential to make contaminants (i.e., lead) contained in harbor sediments bioavailable, resulting in adverse impacts to the biological productivity of the marine environment.	Special Condition 2 allows dredge spoils to be deposited above the mean high tide line of Del Monte Beach only if dredged material has been determined to be suitable for such purposes and beach disposal has been approved by other relevant state and federal agencies.
The installation of piles has the potential to stir up sediments on the ocean floor. This increase in turbidity adversely affects marine resources by reducing the amount of light penetration, diminishing water quality, and burying living organisms. In addition, the presence of lead and other contaminants in harbor sediments become more bioavailable when suspended in the water column.	Special Condition 4 requires that piling installation be performed in accordance with Department of Fish and Game recommendations, and according to the method that results in the least disturbance of bottom sediments. Where feasible, disturbed sediments must be contained with a flexible skirt surrounding the driven pile.
The pH of marine water becomes elevated if it comes in contact with uncured concrete. Elevated pH levels can be toxic to marine life.	Special Condition 5 specifies procedures for concrete work designed to eliminate the possibility of marine water coming into contact with uncured concrete.

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Exhibit 1, p. 9

c. Containment of Hazardous Materials:

Coastal Act Section 30232 requires that development provide protection against the spillage of crude oil, gas, petroleum products, or hazardous substances. The subject project includes development activities which involve the use and transport of materials hazardous to marine resources, including concrete, asphalt, wood preservatives, and contaminated dredge spoils, as well as fluids and oils associated with mechanized equipment.

In order to ensure that the hazardous substances associated with the proposed development activities are adequately contained, consistent with Coastal Act standards, Special Condition 3 requires particular care to be exercised in order to prevent foreign materials from entering the water. Specifically, it requires that::

- the application of wood preservatives be undertaken at an onshore location, whenever feasible, to preclude the possibility of spills into Bay waters;
- a floating containment boom be placed around all active portions of a construction site where wood scraps or other floatable debris could enter the water;
- for any work on or beneath fixed wharf decks, heavy duty mesh containment netting shall be maintained below all work areas where construction discards or other material could fall into the water. The floating boom and net shall be cleared daily or as often as necessary to prevent accumulation of debris; and,
- project contractors insure that the work crews are carefully briefed on the importance of observing the appropriate precautions and reporting any accidental spills.

In addition, Special Condition 4 requires that construction contracts contain appropriate penalty provisions, sufficient to offset the cost of retrieving or clean up of foreign materials not properly contained.

Also, as addressed in part IV.C.2.c. of this staff report, special conditions 1,2,4, and 5 attached to this permit require that construction activities, piling installation, cement work, dredging and dredge spoils disposal take place in a manner which avoids, to the greatest extent feasible, the discharge of hazardous materials into the marine environment.

d. Dredging and Dredge Spoils Disposal:

Section 30233 of the Coastal Act allows for the dredging of harbor waters in order to maintain depths necessary for navigation where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects. Accordingly, dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.

In this case, the proposed project includes maintenance dredging of harbor areas identified in Exhibit F (attached), in an amount not to exceed 1,500 cubic yards per year. The applicant proposes to use a

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Exhibit 1, p. 10

"Toyo" pump for the removal of harbor bottom sediments. This type of pump, which is typically used for sand and gravel mining, has a higher ratio of sand to water than typical suction dredges, and also creates less turbidity in the water when being used. Sediments will be transported directly from the pump to the decanting basin, located on the east side of Wharf No. 2, north of the rest room facility (Exhibit G) through a pipe.

The 24' x 100' decanting basin will be constructed using "K-rail", which is 5' x 20' concrete barriers reinforced with tie rods, typically used as highway barriers. The basin will be lined with filter fabric, and surrounded with sandbags in a manner which allows for the flow of the decanted water to the upper portion of Del Monte Beach. When the basin is filled with dredged materials, dredging will stop, and the spoils will be allowed to dry out using this decanting method, until dry enough to be trucked to the upland disposal site (Marina landfill). This procedure will continue until the desired marina depths have been achieved.

The primary Coastal Act issues raised by the proposed dredging operation are: whether or not this method will avoid significant disruption to marine and wildlife habitats and water circulation; and, project consistency with the requirement that dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.

As proposed, the dredging component of the operations and maintenance program will utilize a dredge pump which causes the least amount of turbidity and disruption to the ocean floor, and has the highest ratio of sand to water. This will minimize impacts to marine and wildlife habitats and water circulation during dredging, consistent with Coastal Act requirements.

With respect to the disposal of the dredge spoils, Special Condition 2 authorizes the placement of dredged materials above the mean high tide line of Del Monte Beach only if such material has been determined to be consistent with EPA standards for ocean disposal and is at least 80% sand. Otherwise, dredged materials are required to be disposed of at an upland location approved by the Executive Director if within the coastal zone. In either case, specific dredging operation plans (including spoils disposal plans) for each dredging episode must be submitted for Executive Director review and approval, and accompanied by the necessary approvals from other relevant federal, state, and local agencies. This will ensure that the dredging component of the operations and maintenance program takes place consistent with Coastal Act standards.

e. Water Quality:

Coastal Act section 30231 specifies that the biological productivity and the quality of coastal waters, appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored. The subject project has the potential to adversely affect water quality through the discharge of harmful materials and disturbance of contaminated sediments.

As previously addressed by this staff report, construction activities associated with the project have the potential to adversely affect water quality. Therefore, special conditions have been attached to this permit which will minimize, to the greatest extent feasible, the impact of construction operations on water quality and marine resources. The remaining water quality issue that must be addressed is the potential impact of the water that will be decanted from the dredge spoils on the water quality of the Bay.

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Exhibit 1, p. 11

Due to the documented presence of lead and other contaminants within harbor sediments, the water that will be discharged through the dredge spoil decanting pen may provide a vehicle for the contaminants to enter bay waters. This is unlikely, however, due to the fact that contaminants such as lead bind to sediments, as opposed to being soluble within water. Therefore it is not expected that the contaminants will be suspended within the runoff from the decanting basin, but will settle to the bottom of the decanting basin and be disposed of in the landfill with the rest of the dredge spoils. In addition, the runoff from the decanting basin will be directed to the upper portion of Del Monte Beach adjacent to the harbor parking lot, this runoff will not be discharged directly into the marine environment, but will percolate through the sand, which will provide for additional filtration.

Nonetheless, in order to ensure that the proposed method of dredge spoil disposal, especially the decanting operation, is consistent with Federal, State, and Local regulations regarding the protection of water quality, Special Condition 2 requires that the submission of specific dredge plans, for each dredging episode to be undertaken over the five year period, be accompanied by written evidence that the U.S. Army Corps of Engineers, Central Coast Regional Water Quality Control Board, Department of Fish and Game, and Monterey County Health Department has reviewed and approved the proposed dredging operation, or that no such approval is required. In addition, Special Condition 6 identifies that the permittee is responsible for obtaining any necessary approvals from the Regional Water Quality Control Board for all work proposed under the operations and maintenance plan prior to the commencement of construction.

f. Monterey Bay National Marine Sanctuary:

Coastal Act Section 30240 (b) states:

Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreational areas.

The proposed development will be located in and over the open coastal waters of Monterey Bay. Except for the inner harbor area west of Wharf No. 2, most of Monterey Bay is included within the Monterey Bay National Marine Sanctuary (MBNMS), designated because of its environmentally sensitive habitats, recreational values, and other special attributes.

The bulk of this project lies within the inner Monterey Harbor, which according to Article II of the MBNMS Designation Document, is not included within the within the Sanctuary boundary (15 CFR Part 944, Sec. 944.2). However, because the project includes development activities adjacent to the MBNMS, Coastal Act Section 30240(b) applies. To help determine conformance with this Coastal Act Section, it is useful to examine Federal Regulations regarding activities from beyond the Sanctuary boundary. 15 CFR Sec. 944.5(a)(3) prohibits:

- (3) Discharging or depositing, from beyond the boundary of the Sanctuary, any material or other matter that subsequently enters the Sanctuary and injures a Sanctuary resource or quality....

As conditioned, this permit provides for containment of construction debris, precautionary requirements for contractors regarding accidental spills, water quality review regarding the disposal of dredge spoils, and Corps of Engineers and Regional Water Quality Control Board permit coordination. A Memorandum of Agreement establishing the Water Quality Protection Program as a component of the MBNMS requires the Regional Water Quality Control Board to consider the Sanctuary staff's input when determining

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Exhibit 1, p. 12

requirements for discharges to surface waters. These measures will minimize the risk of prohibited materials from entering the Sanctuary, and will therefore provide for conformance with Coastal Act Section 30240(b).

3. Conclusion:

The subject project represents a comprehensive program for operations and maintenance activities necessary to maintain and improve facilities for recreational boating and commercial fishing. Because there are no feasible less environmentally damaging alternatives available to adequately maintain, and appropriately improve, existing harbor facilities; and, because feasible mitigation measures will be provided to minimize adverse environmental effects, the 5 year operations and maintenance program, as conditioned, is consistent with Coastal Act provisions protecting Marine Resources.

D. Public Access

Coastal Act Section 30220 protects coastal areas for water oriented recreational activities; and, Section 30252 of the Act states:

The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing nonautomobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.

The Coastal Act provides that certain kinds of uses be given priority in the coastal zone. Some of these uses are dependent on a coastal location, e.g., commercial and recreational boating and fishing and other water oriented activities. Others are closely related to coastal dependent uses and activities, e.g., their support facilities. Other uses, such as restaurants, are not coastally related and do not require a shoreline or over-water location though they may serve visitors to the coast. Where public facilities are limited, priority uses must be accommodated first.

Therefore, coastally dependent boating and fishing industries and concessions have first priority for the limited public facilities within Monterey City harbor. Inadequate parking and circulation for these uses is not disputed. Competition for parking is acute. The Land Use Plan for this area states:

During the peak summer months and on weekends during the rest of the year, all facilities are heavily utilized. Parking directly around the marina area is often fully utilized.

Demand for the parking facilities around the marina area is primarily generated by visitors to Fisherman's Wharf. On weekends around the marina, persons having business on their boats often have difficulty finding a place to park, especially those with tools or supplies who have need to park close to the entrance gate.

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Exhibit 1, p.13

Users of Monterey Beach also often experience a shortage of parking around the entrance to Wharf No. 2 on peak weekends. Many users of the beach presently park on the Southern Pacific Property on the east side of Figueroa Street. The Southern Pacific property is not marked or designated for public parking, and all parking is on an informal basis as space permits. The area around the entrance to Wharf No. 2 is especially congested when there are special events on Monterey Beach such as the multi-hull sailing races." (LUP, p.II-D-3).

In this case, there will be no significant increase in the number of vessels using the harbor. Therefore, no increase in parking demand is anticipated. And, all parking attributable to this project will be coastally-related. Therefore, no parking mitigation plan is warranted; and, the permit is conditioned to require submittal of construction phasing plans in order to, among other things, minimize the obstruction of priority parking areas during the construction periods.

Therefore, as conditioned, the project will not substantially interfere with public access nor generate any additional parking demand, and is therefore consistent with Sections 30220 and 30252 of the Coastal Act regarding public access and parking.

E. CEQA/LCP

The City of Monterey previously determined that the subject project is categorically exempt from the California Environmental Quality Act. However, potential adverse affects to environmental resources were identified during the analysis of this permit application, as detailed in this staff report. These potentially negative environmental impacts are mitigated through the conditions attached to this permit. Accordingly, this project, as conditioned, will not have a significant adverse impact on the environment within the meaning of the California Environmental Quality Act.

This project falls within the Harbor area segment of the Monterey City Local Coastal Program Land Use Plan. This plan was heard and approved with modifications by the Coastal Commission on May 12, 1987. The Monterey City Council did not concur with the modifications adopted by the Commission, and the Harbor Area Land Use Plan has not been resubmitted for Commission consideration. Nevertheless, the subject project is in general conformance with the draft Harbor Land Use Plan and with the City's Wharf Master Plan, an element of the Land Use Plan.

As conditioned, the proposed development will not have any significant impact on coastal resources, is consistent with the policies of Chapter 3 of the Coastal Act, and will therefore not prejudice the ability of the City of Monterey to prepare and implement a Local Coastal Program consistent with the Chapter 3 policies of the Coastal Act of 1976.

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Exhibit 1, p.14

EXHIBIT-A

RECOMMENDED CONDITIONS

STANDARD CONDITIONS:

1. Notice of Receipt and Acknowledgement. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. Compliance. All development must occur in strict compliance with the proposal as set forth in the application for permit, subject to any special conditions set forth below. Any deviation from the approved plans must be reviewed and approved by the staff and may require Commission approval.
4. Interpretation. Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
5. Inspections. The Commission staff shall be allowed to inspect the site and the development during construction, subject to 24-hour advance notice.
6. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
7. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

EXHIBIT NO. 1, p. 15

APPLICATION NO.

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Standard Conditions

(Exhibit A from original permit)



California Coastal Commission

DEPARTMENT OF FISH AND GAME

1400 NINTH STREET

P.O. BOX 944209

SACRAMENTO, CA 94244-2090



November 17, 1994

Ms. Carol Foulkes, Associate Planner
City of Monterey Community
Development Department
City Hall
Monterey, California 93940

Dear Ms. Foulkes:

The Department of Fish and Game has reviewed the Negative Declaration for the replacement of the existing 412-berth boat dock/marina system in Monterey Harbor as part of the documentation included in your request for consultation under the California Endangered Species Act (CESA). The Department has attended the two public meetings (May 12 and 31, 1994) where the replacement project was discussed. The project proposes to replace the existing wood dock system with a concrete system that is prefabricated offsite and moved into place using a crane and barge. The existing docking system has 148 pilings (115 wooden, 33 concrete). The new docking system will have 250 new concrete pilings. The project start date is Spring 1995.

CESA states that it is the policy of the State that State agencies should not approve projects as proposed which would jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if there are reasonable and prudent alternatives available consistent with conserving the species or its habitat which would prevent jeopardy. The Department has had informal discussions with you regarding which species could potentially be found in the construction area and may be affected by construction activities. State-listed species that may be affected by the proposed project include the California brown pelican (Pelicans occidentalis californicus) and the Guadalupe fur seal (Arctocephalus townsendi). The endangered marbled murrelet is not expected to occur in the area as its known habitats are located in the following areas: 1) northern Santa Cruz and southern San Mateo counties; 2) south central Humboldt county; and 3) northern Humboldt and Del Norte counties to the Oregon border. There are no listed plant species known to occur in the project or staging areas.

(Exhibit B from
original permit)

EXHIBIT NO. 1, p.16

APPLICATION NO.
3-96-89-A1

DFG Recommendations

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CITY OF MONTEREY

The Guadalupe fur seal is a rare visitor to the Monterey Bay area. Its historic range was from Isla Revilla Gigedo, Mexico (18° North) to the Farallon Islands, California (37° North). Only on rare occasions are they seen north of the Channel Islands in southern California. The seal has a pelagic distribution most of the year. One siting on the Coast Guard breakwater occurred in 1993 and no documented sitings have occurred since. It is not expected that the Guadalupe fur seal will be affected by the proposed project.

The California brown pelican is a common inhabitant of the Monterey Harbor and Bay. It feeds on surface schooling fishes such as the Pacific mackerel, Pacific sardine, and northern anchovy. Breeding in the Monterey county area has not occurred since 1959. Adverse impacts to pelicans include: development, pesticides poisons, contaminants, human disturbance, and disease (Annual Report on the Status of California State Listed Threatened and Endangered Animals and Plants, 1994). Laboratory analysis of dredge materials sampled during the 1993 dredging of the Monterey Harbor found high levels of lead still remained in the area. Lead is known to bioconcentrate in marine species used by the pelicans as food. The removal of wooden pilings and subsequent replacement of concrete pilings has the potential to suspend lead contaminated sediments releasing deleterious levels of lead which then could become bioavailable to pelicans through ingestion of prey items.

The Department requests that the following reasonable and prudent alternatives be stipulated and implemented to mitigate or alleviate the impacts associated with this proposed project.

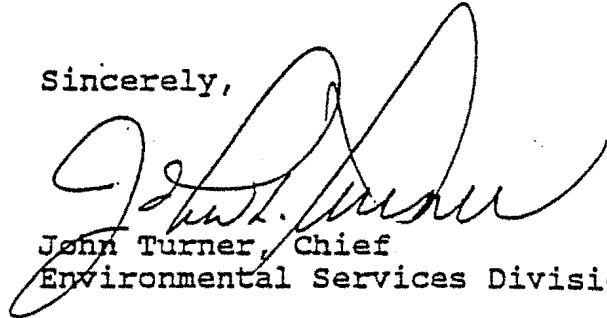
1. All concrete pilings are to be driven in place with a pile driver. No hydraulic jets will be used to place pilings.
2. All pilings removed that are creosote coated will be disposed of at an appropriate upland location where they will not enter State waters.
3. Should the steelhead become a State-listed species prior to or during the construction period, contact the Department to determine if additional reasonable and prudent measures are needed.

EXHIBIT NO. 1 17
APPLICATION NO. 3-96-89-A1
DFG
recommendations

Ms. Carol Foulkes
November 17, 1994
Page 3

Thank you for the opportunity to provide input into the project. Questions should be addressed to Ms. Deborah Johnston, Environmental Specialist, Department of Fish and Game, 20 Lower Ragsdale Drive, Suite 100, Monterey, California 93904, telephone (408) 649-7141.

Sincerely,



John Turner, Chief
Environmental Services Division

cc: Ms. Deborah Johnston
Department of Fish and Game
Monterey

Mr. Les Strnad
California Coastal Commission
Santa Cruz

EXHIBIT NO. 1, p. 18
APPLICATION NO. 3-96-89-A1
DFG
recommendations

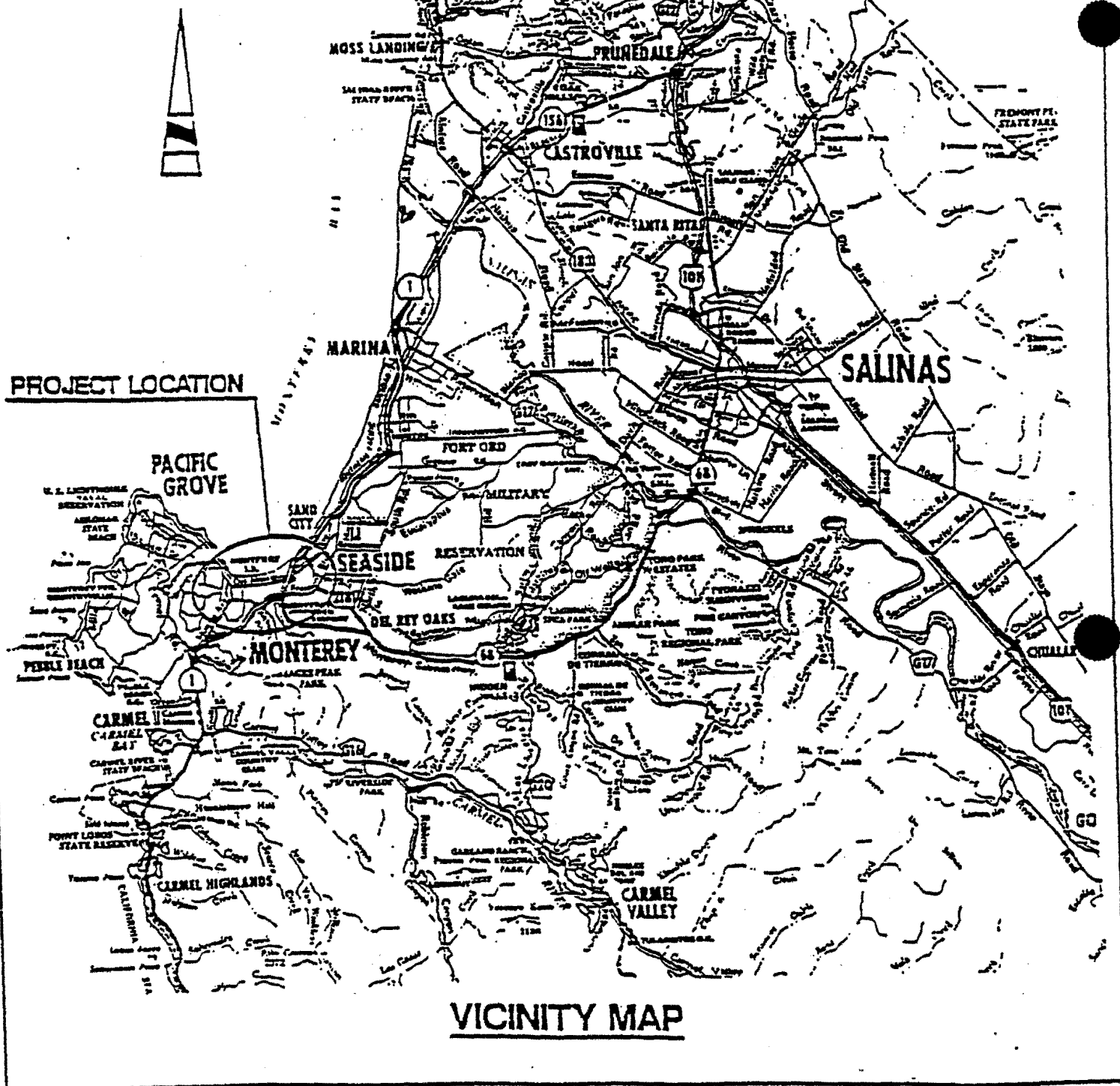


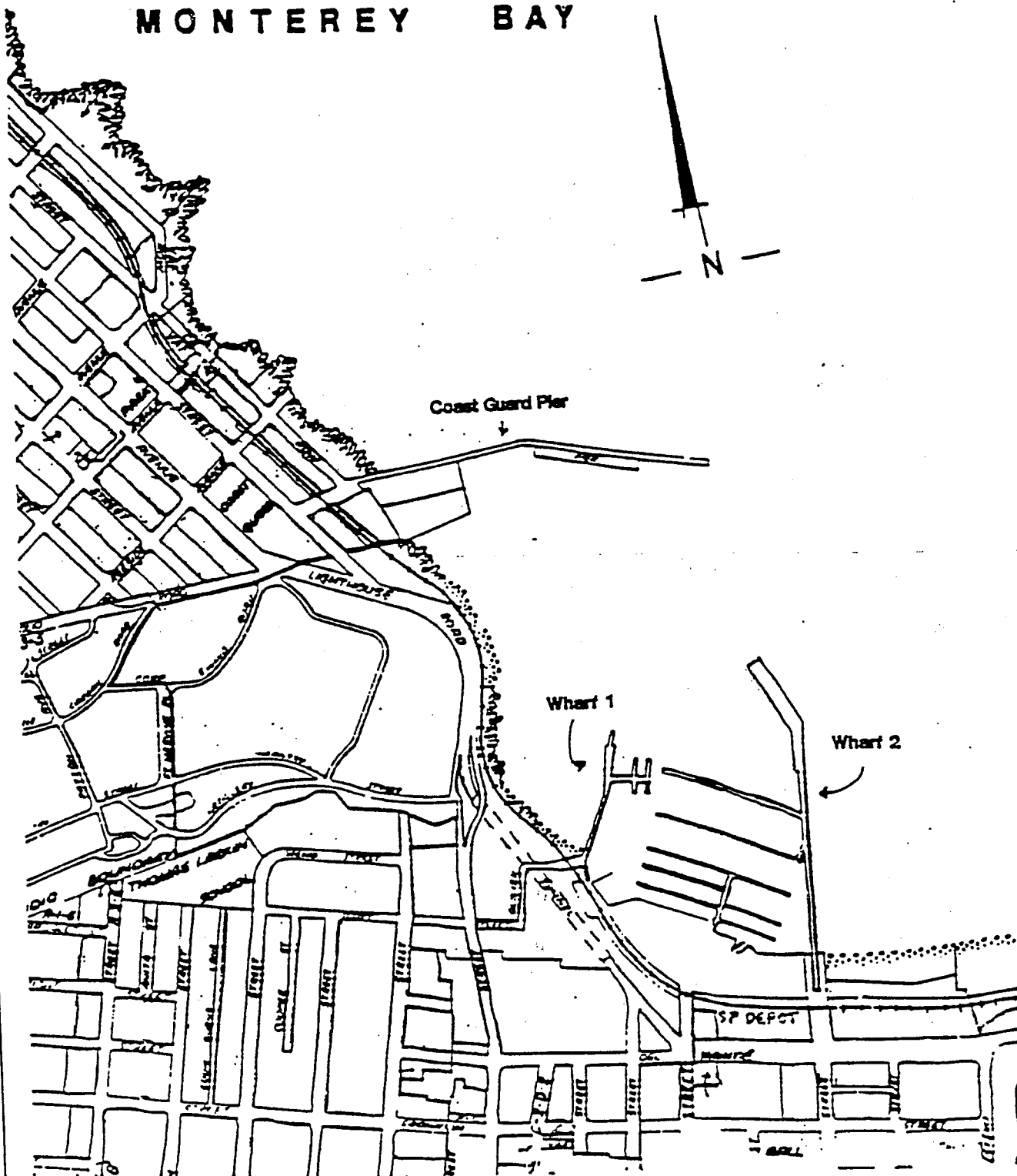
EXHIBIT NO. 1, P. 19

APPLICATION NO.
3-96-89-A1

Vicinity Map

(Exhibit C from original permit;
Marina 5-Year Maintenance Program

MONTEREY BAY



Location Map

EXHIBIT NO. 1, p. 20

APPLICATION NO.
3-96-89-A1

Location Map

(Exhibit D from
original permit)

Marina 5-Year Maintenance Program

DEPARTMENT OF FISH AND GAME

1114 NINTH STREET

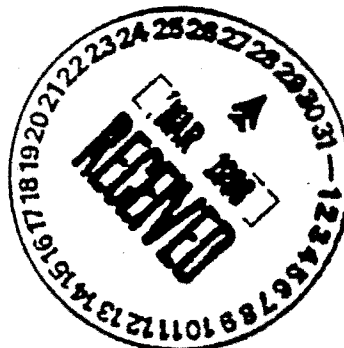
P.O. BOX 944209

SACRAMENTO, CA 94244-2090

(916) 653-7667



March 25, 1996



Mr. Jay K. Elder, Harbor Manager
Port San Luis Harbor District
P. O. Box 249
Avila Beach, California 93424

Dear Mr. Elder:

Thank you for your March 8, 1996 letter requesting information on the Department of Fish and Game's (DFG) policy regarding the use of creosote-treated wood products in marine waters. I have attached a copy of the DFG's guidance letter on this subject, dated March 8, 1994.

As you can see, the DFG has taken a position against the use of creosote-treated wood products in State waters. However, the DFG is very much aware of the difficulties this creates for users such as the Port San Luis Harbor District. To partially address these, the DFG will accept use of plastic-wrapped, creosote-treated wood products in marine waters of the State under the following conditions and situations:

1. For new projects that were designed or approved prior to DFG's guidance letter. This will help prevent hardships that would otherwise be caused by the need to re-engineer projects that originally contemplated using creosote-treated wood products.
2. For repair of existing projects constructed using wood products. This will help prevent hardships that would otherwise be caused by a need to redesign or replace existing structures if wood could not be used for repair work.
3. Where the use of plastic-wrapped creosote pilings is restricted to marine waters.
4. Where measures are taken to prevent damage to the plastic wrap from boat use. These measures may include installation of rub strips or bumpers.
5. Where measures are taken to prevent creosote from dripping over the top of plastic wrapping into State waters. These measures may include wrapping pilings to the top or installing collars to prevent dripping.
6. Where the plastic wrapping is sealed at all joints to prevent leakage.

EXHIBIT NO. 2, p. 1
APPLICATION NO. 3-96-089-A1
DFG guidance on use of plastic wrapped creosote piles

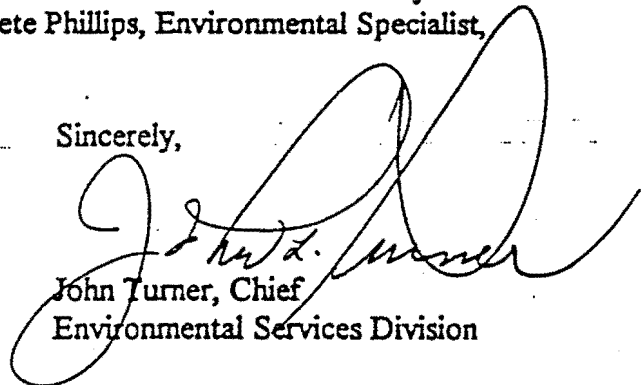
Mr. Jay K. Elder
March 25, 1996
Page Two

7. Where the plastic material is expected to maintain its integrity for at least ten years, and where plastic wrappings that develop holes or leaks are repaired or replaced in a timely manner.

Please note that this letter relates only to issues of concern to the DFG under Section 5650 of the Fish and Game Code. The use of creosote, as set forth in this letter, may be subject to other regulations administered by other agencies.

I hope this response addresses your questions on the use of creosote. If you would like to discuss this subject further, please contact Mr. Pete Phillips, Environmental Specialist, (916) 653-9714, or at the letterhead address.

Sincerely,



John Turner, Chief
Environmental Services Division

Attachment

cc: Mr. Pete Phillips
Department of Fish and Game
Sacramento

3-96-089-A1
Exhibit 2, p. 2



DEPARTMENT OF FISH AND GAME

http://www.dfg.ca.gov
1416 Ninth Street
Sacramento, CA 95814
(916) 654-3821

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FEB 10 1998

Ans'd.....

January 30, 1998

John Geogehan
Kahl Pownall Advocates
1115 11th Street
Sacramento, California 95814

Dear Mr. *John* Geogehan:

Director Schafer has asked me to respond to your letter of January 23, 1998 concerning the use of creosote treated wood in projects requiring approval under section 1603 of the Fish and Game Code.

The incidental discharge of creosote at levels that are not harmful to fish and wildlife is not a matter embraced by section 1603 of the Fish and Game Code. Additionally, the discharge of creosote, or any other substance, that is authorized by, and in compliance with, the terms of a waste discharge requirement under the Water Code is not prohibited by section 5650 of the Fish and Game Code. The determination of the necessity for, and issuance of, waste discharge requirements is a matter for the Regional Water Quality Control Boards, and not the Department of Fish and Game.

The use of creosote-treated wood products, whether plastic-wrapped or not, is not prohibited by section 1603 if fish and wildlife will not be substantially adversely affected by such use.

I hope this answers your concerns.

Sincerely,

Craig Manson
CRAIG MANSON
General Counsel

HCM/rkh

Conserving California's Wildlife Since 1870.

EXHIBIT NO. 3, p. 1
APPLICATION NO. 3-96-089-A
Other DFG correspondence regarding the use of creosote treated wood products.

To: Steve Monowitz

January 9, 1998

Mr. Jay K. Elder, Harbor Manager
Port San Luis Harbor District
P.O. Box 249
Avila Beach, California 93424

Dear Mr. Elder:

Thank you for your December 10, 1997, letter requesting an information update on the Department of Fish and Game's (DFG) policy regarding the use of creosote-treated wood products in marine waters.

DFG's policy has not changed since we last corresponded with you on March 25, 1996. The law regarding discharges from creosote-treated wood products into State waters is unchanged since the original 1915 enactment. If discharges occur to marine waters of the State from plastic-wrapped, creosote-treated wood products under the conditions and situations presented to you in our March 25, 1996 letter, but they remain below the actionable standard and therefore are not deleterious to fish and wildlife, there should be no water quality issue.

The legislature has recently amended Fish and Game Code section 5650 in a manner that requires that DFG coordinate more closely with the State Water Resources Control Board and the Regional Water Quality Control Boards. This may require that you contact the appropriate Regional Water Quality Control Board for a determination as to whether it is appropriate to continue to discharge creosote-treated wood products into waters of the State.

I hope this response addresses your questions on the use of creosote. If you need to discuss this subject further, please contact Mr. John Turner, Environmental Program Manager, (916) 327-3200, or at the letterhead address.

Sincerely,

Don Lollock, Chief
Scientific Division
Office of Spill Prevention
and Response

3-96-089-A1
Exhibit 3, p.2

Chron

Mr. John H. Sullivan, Chief Deputy Director;
Mr. Banky Curtis, Deputy Director;
Mr. Al Petrovich, Deputy Director
Regional Managers, Regions 1, 2, 3, 4, and 5;
Division Chiefs: WPD, WMD, MRD, NHD, IFD, BDD, and ESD;
Mr. John Schmidt, Wildlife Conservation Board
Engineering

March 2, 1994

Resource Agency Letter
to Port Authority
CO's state wide
W.R.G. Penetration
COP 10/93
Boring W.D. Camp
R2006's

Creosote

This supersedes my July 19, 1993 Memorandum and provides further guidance to Department of Fish and Game (DFG) staff regarding the use of creosote-treated wood products in State waters. This Memorandum addresses three subjects:

1. DFG use of creosote-treated wood products. DFG shall not use creosote-treated wood products in State Waters, or where creosote from treated wood products can enter State Waters.
2. DFG comment or approval of the use of creosote-treated wood products. DFG shall not approve the use of creosote-treated wood products in State waters, or where creosote from treated wood products can enter State Waters. When commenting on proposed uses of creosote-treated wood projects for which no DFG approval is needed, DFG shall recommend against the use of creosote products. Alternatives that may be appropriate include steel, concrete, plastic, or wood products treated with preservatives that do not contain creosote.
3. DFG response to placement of creosote-treated wood products into State waters. If DFG staff observe or are informed of placement of creosote-treated products into State waters, DFG staff shall inform the DFG wildlife protection staff responsible for the area. Wildlife protection staff have two response options. In instances of clear harm to wildlife, such as an observed fish kill, wildlife protection staff may immediately issue a citation to the responsible party. If harm to wildlife is not obvious, wildlife protection staff may prepare an arrest report and submit it through their supervisor to the District Attorney's Office. The District Attorney's Office will determine if it is appropriate to prosecute the responsible party. Wildlife protection staff will cooperate with the District Attorney's Office when they make their determination.

In all cases where DFG learns of the use creosote products in State waters, the appropriate DFG Regional Manager will notify the local Regional Water Quality Control Board.

3-96-089-A1
Exhibit 3, p. 3

Mr. John H. Sullivan, Chief Deputy Director;
Mr. Banky Curtis, Deputy Director;
Mr. Al Petrovich, Deputy Director
Regional Managers, Regions 1, 2, 3, 4, and 5;
Division Chiefs: WPD, WMD, MRD, NHD, IFD, BDD, and ESD;
Mr. John Schmidt, Wildlife Conservation Board
Engineering
March 2, 1994
Page Two

DFG is continuing to investigate this subject, and you will be notified of any future changes in DFG's position on the use of creosote products. If you have any questions regarding this Memorandum, please call me at (916) 653-7667, or call Mr. John Turner, Chief, Environmental Services Division, Department of Fish and Game, 1416 Ninth Street, Sacramento, California 95814, telephone (916) 653-4875.

Original Signed By
JOHN H. SULLIVAN for

Boyd Gibbons
Director

cc: Mr. Robert Treanor
Fish and Game Commission
Sacramento, California

Mr. Walt Pettit
California State Water Resources Control Board
Sacramento, California

Ms. Karyn Meyreles
Department of Fish and Game
Sacramento, California

3-96-089-A1
Exhibit 3, p.4

P.P. Misc.

Mr. John H. Sullivan
Chief Deputy Director
Mr. Banky Curtis, Deputy Director
Mr. Al Petrovich, Deputy Director
Regional Managers: Regions 1, 2, 3, 4, and 5
Division Chiefs: WPD, WMD, MRD, NHD, IFD, BDD,
and ESD
Mr. John Schmidt, Wildlife Conservation Board
Engineering

July 19, 1993

Creosote

Effective for all projects occurring after the date of this letter, Department of Fish and Game (DFG) staff shall not approve the use of creosote-treated wood products in State waters.

Activity by the Solano County District Attorney has raised the question of whether the use of creosote-treated wood products in State water violates Section 5650 of the Fish and Game Code. (Section 5650 provides that it is unlawful to deposit in, permit to pass into, or place where it can pass into the waters of the State, any of several specified materials, including coal tar, or any substance or material deleterious to fish, plant life, or bird life.)

To determine what DFG's permanent position should be on creosote, DFG is conducting field and lab research and intends to work with interested parties, including the State and Regional Water Quality Control boards. You will be advised when there is any change in DFG's position on this material. If you have any questions about this memorandum, please call me at (916) 653-7667 or call Mr. John Turner, Chief, Environmental Services Division, at (916) 653-4875.

Original Signed by:
COPY Boyd H. Gibbons
Boyd Gibbons
Director

cc: Mr. Robert Treanor
Fish and Game Commission
Sacramento, California

Mr. Walt Pettit
State Water Resources Control Board
Sacramento, California

Mr. Stuart Lott
Department of Fish and Game
Sacramento, California

3-96-089-A1
Exhibit 3, p.5

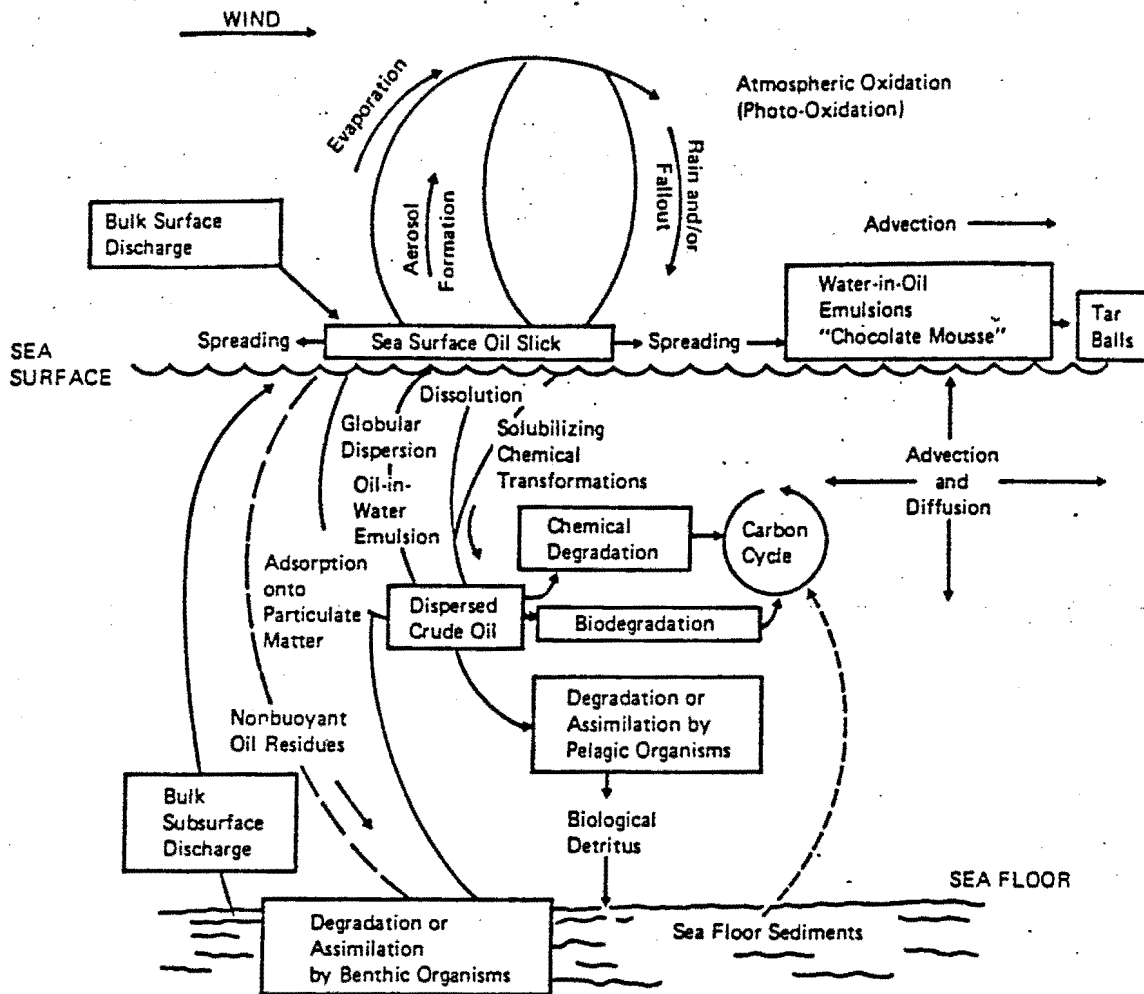


FIGURE 4-1 Schematic of physical, chemical, and biological processes.

SOURCE: Adapted from Burwood and Speers (1974).

Figure 4-1 presents many of these processes in a simple schematicized form.

PHYSICAL AND CHEMICAL FATES

Physical and Chemical Characteristics of Petroleum

The chemical composition of petroleum was discussed in detail in Chapter 3. There are, however, several critical physical properties (given below) that are important when considering the fate of petroleum in the marine environment.

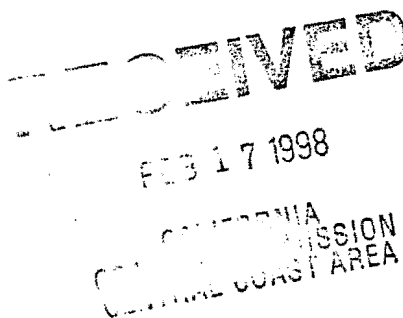
EXHIBIT NO. 4

APPLICATION NO.
3-96-089-A1

Diagram re. fate
of petroleum products
in the marine environment

February 11, 1998

Mr. Steve Monowitz
California Coastal Commission
Central Coast Area Office
726 Front Street, Suite 300
Santa Cruz, California 95050



Dear Mr. Monowitz:

The Western Wood Preservers Institute represents the pressure treated wood products industry in western North America. A major focus of our effort in recent years has been the evaluation of environmental impacts associated with the use of treated wood in aquatic applications, and the promotion of policy which assures the products are used appropriately in such applications.

The purpose of this letter is to share our views and to provide information in response to your Memorandum dated February 9, 1998 Re: "Use of Wrapped Creosote Pilings in the Marine Environment." We have significant information which we believe will shed light on both the policy issues and criteria for use of the products.

- First you should be aware of recent clarification of policy from the Department of Fish and Game which releases the constraints of the March 25, 1996 letter. Attached is correspondence from Mr. Craig Manson, General Council for the Department of Fish and Game on behalf of Director Schafer. The letter is self explanatory, but makes it clear that the use of creosote treated material, whether plastic-wrapped or not, is not prohibited if fish and wildlife will not be substantially adversely affected by such use. It makes it clear that such materials may be used under both the provisions of Fish and Game codes 1603 and 5650. This clarifies an ongoing legal dispute.
- There is a large, growing and scientifically sound body of science which demonstrates that, produced and used appropriately, creosote materials will not, in the majority of applications "substantially adversely affect fish and wildlife." The Institute contracted with Aquatic Environmental Sciences to conduct a world wide review of all information on the aquatic impacts of several preservative systems, including creosote. The effort was conducted by Dr. Kenneth Brooks and resulted in a full bibliography of materials, an assessment of the impacts and creation of a Risk Assessment Model. The most updated version of the material, in a package entitled,

Literature Review, Computer Model and Assessment of the Potential Environmental Risks Associated With Creosote Treated Wood Products Used in Aquatic Environments, is being shipped under separate cover. Also included is the computer disk for the model which can be used to evaluate specific sites. Such review is only needed when projects involve a large number of piling to be placed in an environment where there are extremely low flows and/or the sediments are oxygen deficient. Dr. Brooks is widely recognized for his expertise in this area and is the co-lead scientist on a major creosote environmental impact study being conducted by Environment Canada which is close to completion. If you have questions regarding the science, I would urge you to give him a phone call.

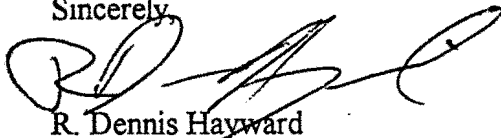
- The industry goal is to minimize any movement of chemical from our products to the environment. In response to this, WWPI and the Canadian Institute of Treated Wood spent several years developing the *Best Management Practices for the Use of Treated Wood in Aquatic Environments*, a copy of which is also being sent to you. The Institute encourages the use of the BMPs in specifying treated wood whenever it is used in or over any aquatic body. There are specific BMPs for each preservative system. The use of the BMPs is now specified by the U.S. Forest Service, Corps of Engineers (Pacific Northwest), Federal Highway Administration, U.S. Navy, and the states of Washington and Idaho. They are also endorsed by various local agencies across north America.
- The concept of plastic wrapped creosote piling is an interesting one. While wraps have shown to help control physical abrasion in some applications, their benefit from an environmental viewpoint is far from clear. In environments where creosote is appropriate, the amount of creosote and PAHs, (the components of concern) moving from the material will come in balance with the microorganisms which consume and bio-degrade the discharge. Environmental concerns only exist where there are major amounts of PAH which exceed the capacity of the system to process it. In theory, plastic wrapping will confine the creosote which moves to the surface over time. However, when at some future date that wrap is physically breached, a relatively large amount of creosote could move to the local environment in a short time with the potential of an adverse affect.
- On a policy point, we question the role of the Commission in evaluating and making judgements regarding the use of treated wood as opposed to alternatives. Steel, plastic and concrete are significantly more expensive and may or may not offer any structural advantages. The leaching of chemicals and reactions of these materials, or their required chemical coatings has not been subjected to the environmental scrutiny equal to treated wood. We believe the appropriate decision for any product should be based upon the best, most complete science and no product should be restricted or banned based on perception or politics. Beyond that, the project proponent should make his/her own determination as to the best product for the project.

In short, creosote is one of several EPA approved preservatives that can be used to pressure treat material for use in marine and freshwater applications. It has been used for over a century and to our knowledge there are no documented cases where proper use of the product has caused a significant adverse environmental impact. There are specific guidelines as to how to treat the materials for various uses and there are BMPs to promote environmentally sound use of the products. Where a question may exist, the tools are available to determine if creosote (or other preservative systems) are appropriate.

If the Coastal Commission decides to undergo a review of treated wood products, we would welcome, and believe we deserve, the opportunity to participate. We would be happy to meet with the Commission or the staff and would sponsor Dr. Brooks to also participate. Certainly adequate lead time would be needed.

Please keep me posted on this issue. If you have any questions, please feel free to call.

Sincerely,



R. Dennis Hayward
Executive Director
Attachment 1

CC: (attach w/o materials)
Dr. Kenn Brooks
Mr. John Geoghegan
Mr. Jay Elder
Mr. Steve Scheiblaue
Director Schafer
Aquatic Working Group