

**Marine  
Environmental  
Support  
Office**



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**REVISED CLEAN WATER ACT REAUTHORIZATION  
ANNOUNCED**

The Senate bill (S 1114) announced June 15 by Senators Max Baucus (D-MT) and John Chaffee (R-RI) of the Senate Environment and Public Works Committee to reauthorize the Clean Water Act would include new provisions to control toxic substance discharges and non-point source pollution. The bill would authorize \$2.5 billion for the waste water state revolving fund in FY 1994, and an initial \$300 million for non-point source pollution grants in FY 1995. No wetlands provisions are included in the bill (although a separate wetlands bill is expected to be submitted within several weeks).

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The bill as introduced would:

- ▶ Create new initiatives to control water pollution, including the termination of discharges of certain toxic substances;
- ▶ Establish a new watershed planning authority and expand existing authorities for controlling pollution from scattered sources;
- ▶ Improve programs for controlling releases from storm water and combined sewer overflows; and
- ▶ Strengthen enforcement provisions.

The bill would establish a State Revolving Fund (SRF) allotment fund based upon an EPA needs assessment formula. The funds would be available to states to help pay for water treatment costs for an expanded range of projects, including combined sewer and storm water overflows, non-point source pollution, animal waste management, and subsurface sewage disposal. The bill would also permit states to count assistance to small communities toward their 20 percent matching grant requirement.

Under the bill, the EPA would be required to develop a list of highly bioaccumulative or toxic pollutants. Discharges of these substances into water would be phased out over a period of five years, unless no safe alternatives are available. The EPA would be required to develop a list of 20 pollutants requiring extensive pollution prevention efforts. Dischargers of these substances would then be required to produce plans for reducing their use of these pollutants. Water pretreatment program modifications include limitations on domestic sewage exclusions and EPA control over indirect discharges to publicly-owned sewage treatment facilities. EPA water quality standards program improvements required by this legislation include:

- ▶ Development of a five-year plan for reviewing current water quality criteria and issuing new criteria;
- ▶ Limits on the use of "mixing zones";
- ▶ Improvement of pesticide registration and new chemical data compiled under the Toxic Substances Control Act;
- ▶ Requirements for dissolved oxygen, pathogens, pH, oil and grease water quality criteria; and
- ▶ Requirements for sediment criteria for at least eight contaminants.

States would be required to revise and upgrade non-point source pollution control plans, addressing new activities causing water pollution, prescribing best management practices for new sources, and requiring site-specific pollution control plans for agricultural operations in impaired watersheds. A portion of the resources provided by

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this bill would be made available for the identification of impaired watersheds and the development of watershed protection projects by states. Cost-share grants would provide for increased non-point source pollution control programs.

The committee incorporated the draft EPA policy for controlling combined storm and sanitary sewer overflows into the reauthorization bill. The policy establishes deadlines of up to 15 years for complying with water quality standards and would establish minimum standards for bacterial contamination. Storm water discharge permits would be required for large and mid-sized communities. Most small communities would not be required to obtain such permits. Enforcement enhancements provided by the bill would allow for citizens to take action against repeat violators and require states to adopt administrative penalty authorities or face reduced federal water funding. A provision for permit fees, similar to one established under the Clean Air Act, is also included.

The Senate Environment and Public Works Clean Water, Fisheries, and Wildlife Subcommittee expects to mark up a reauthorization bill in late September or early October, with full committee action following shortly thereafter. A Senate Environment Committee staff member expressed hope that the full Senate would act on a reauthorization bill before the end of the year.

--*Environment Reporter*, Vol. 24, No. 7, June 18, 1993, p. 308-309.

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## **NAVY OPENS BIOREMEDIATION CELL**

ADM Henry H. Mauz, Commander-in-Chief, U.S. Atlantic Fleet and RADM Robert M. Moore, Commander, Naval Supply Systems Command were guest speakers at the official opening of the Navy's premier bioremediation cell on Craney Island, Portsmouth, VA, May 21. Bioremediation is an inexpensive and environmentally friendly technology for cleaning contaminated soil or sediments. By controlling soil conditions, the process encourages existing bacteria to break down organic contaminants in the soil. The naturally occurring bacteria literally "eat" the hydrocarbons from the soil. In a few months, the contamination in the soil can be lowered to a level that can be considered environmentally safe.

"The opening of this facility provides clear evidence of the Navy's commitment to our nation and to this community to both protect and restore the environment," said CAPT William T. Brown, Commanding Officer, Fleet and Industrial Supply Center (FISC) Norfolk. Brown said the Navy is making environmental stewardship one of its highest priorities. "Facilities such as this are not only an important part of FISC

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Norfolk's progressive environmental protection program. They also reflect the respect the entire Navy has for the environmental resources which have been placed in our trust."

Contaminated soil at Craney Island needed to be removed before construction of four above-ground petroleum tanks could begin. Soil contamination is present at Craney Island from more than 50 years of fuel operations. The Navy estimates that the \$2,250,000 cell can remediate 40,000 cubic yards of soil per year. Treatment time for the soil reclamation will take three to four months, and the cell can operate for up to 10 years. Funding for the cell is provided by the Defense Environmental Restoration Account. After the current project is completed, the cell will be used to clean soil from other sites on the island and possibly from other military locations. Craney Island, the Navy's largest fuel depot in the continental United States, is operated by the Fleet and Industrial Supply Center, Norfolk.

--Fleet and Industrial Supply Center, Norfolk, Public Affairs

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## **HEALTH AND ENVIRONMENTAL ADVANTAGES FROM BIODEGRADATION**

During a recent research conference in North Carolina presented by the National Institute of Environmental Health Sciences (NIEHS), the positive effects of bioremediation were discussed. "This technology is likely to be very important in remediating the environment of toxic substances and reducing health risks for populations that live around hazardous waste sites," according to NIEHS director Ken Olden.

Biodegradation is the molecular alteration of an organic compound by living organisms. The final result of biodegradation of a hazardous substance is the reduction of toxicity and human exposure to environmental contaminants. Conference organizers said that biological treatment of hazardous wastes has the potential for effective, practical, and economical remediation of some superfund sites as well as other hazardous waste problems.

One problem with biodegradation is that, in some cases, it can increase toxicity and exposure. In addition, studies have indicated that carcinogenic, mutagenic, and teratogenic compounds may be incidentally created that are highly detrimental to plants and other microbes. According to the conference coordinator, many issues associated

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with biodegradation are not microbiological issues, rather ones of chemistry, engineering, and physical characteristics.

--*Environment Reporter*, Vol. 23, No. 53, April 30, 1993, p. 3231.

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### **DOD ENVIRONMENTAL TASK FORCE RECONVENED**

The Defense Environmental Task Force was re-established on June 4, 1993. The task force is to study and provide an annual report to Congress on findings and recommendations concerning environmental restoration at military installations that closed or realigned. It will monitor the progress of appropriate state and local agencies when making recommendations. Originally established in FY 1991 under the National Defense Authorization Act, the task force is being reauthorized under the Military Construction Appropriations Act. More information is available from H. Leonard Richeson of DOD at (703) 693-8715.

--*Environment Reporter*, Vol. 24, No. 7, June 18, 1993, p. 334.

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### **U.S. NAVY HELPS IN HOUSEHOLD HAZARDOUS WASTE REDUCTION**

The U.S. Navy agreed to conduct a household hazardous waste education program for 10,000 military and civilian employees at Port Hueneme as a result of hazardous waste violations found at the base, the California Department of Toxic Substances Control announced. According to DTSC, inspectors found 27 violations at the base in December 1990 and 10 violations during an inspection in January 1992. The household hazardous waste education program should be submitted to DTSC in the next two months. In addition, the Navy agreed to reimburse DTSC \$41,295 for staff costs, and to improve its hazardous waste handling practices. The Navy also hosted a household hazardous waste collection day in October. DTSC is supervising a cleanup of dump sites at Port Hueneme contaminated with paints, solvents, pesticides, fuels, waste oil, and other hazardous substances. The Department of Defense is paying for this supervision.

--*California Environment Reporter*, Vol. 3, No. 12, p. 317.

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## **GREAT LAKES RECEIVE POLLUTANT DISCHARGE LIMITS**

March 31st brought with it the first set of uniform water quality standards for limiting toxic chemical discharges into the Great Lakes. Under requirement from the Great Lakes Critical Programs Act of 1990, the EPA proposed that the eight border states and several coastal Native American tribes accept uniform discharge limits rather than enforce past standards. The EPA estimates that it will take approximately 2 years before the new standards become effective. In addition to the time transition, the EPA expects that complying with the new uniform standard will cost approximately 3,800 point-source dischargers between \$80 million and \$505 million.

Currently, there are three major sections to the proposed Great Lakes discharge limits. The first section is composed of basin-wide water quality criteria to protect human health, aquatic life, and wildlife. The second section contains anti-degradation standards to protect existing levels of water quality. The third section consists of procedures to translate water quality criteria into enforceable discharge limits. Additional information on the guidance is available from Kenneth A. Fenner, Water Quality Branch (WQS-16J), U.S. EPA Region V, 77 W. Jackson Blvd., Chicago, IL. 60604; telephone (312) 886-6777.

--*National Environment Watch*, Vol. 3, No. 49, April 5, 1993, p. 1.

--*Environment Reporter*, Vol. 23, No. 50, April 9, 1993, p. 3112.

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## **CHEMICAL RELEASES DECLINE, TOXIC RELEASE INVENTORY EXPANDED**

Carol Browner, Administrator for the EPA, announced that toxic industrial releases have been decreasing in the United States. In 1991, U.S. manufacturers released 3.38 billion pounds of toxic chemicals. This is five percent less than the recorded 3.57 billion pounds released in 1990. In addition, statistics have shown a 30 percent reduction in toxic releases since 1988.

This information is detailed in the 1991 Toxic Release Inventory (TRI) Public Data Base. The TRI is an EPA report summarizing chemical releases reported by industry that year. The data for TRI releases is collected from certain manufacturers who are required under The Emergency Planning and The Right-To-Know Act to report all toxic releases by July of each year. These toxicity

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reports are then compiled in a TRI, creating a publicly available data base containing information on the releases and transfers of over 320 chemicals.

By November 1993 approximately 200 chemicals will be added to the TRI. Any chemical on the TRI which is released into the environment by a manufacturer must be recorded and reported to the EPA in compliance with the Emergency Planning and Community Right-To-Know Act.

Currently, 27 of these chemicals have been already proposed; 22 of these were contained in a petition filed by New York Governor Mario Cuomo and the remaining 5 are hydrochlorofluorocarbons requested by the Natural Resources Defense Council, Friends of the Earth, and the Environmental Defense Fund. The remaining 170 chemicals are derived from the "right-to-know" legislation.

--*National Environment Watch*, Vol. 4, No. 5, May 31, 1993, p. 1.

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## **NRC ISSUES GUIDELINES TO DEVELOP EXPOSURE LIMITS FOR HAZARDOUS SUBSTANCES**

On May 14, the National Resource Council (NRC) aided government agencies and privately owned chemical companies by issuing guidelines to help the agencies develop exposure limits for hazardous substances. According to the NRC, several private and public agencies had already established exposure limits for situations, however, none of the exposure limits developed were adequate for emergency exposure situations. The NRC defines any emergency exposure situation as an involvement with a high toxic level for a short period of time. The guidelines contain both methods and criteria for developing these Community Emergency Exposure Limits (CEELs). Copies of the document, Guidelines for Developing Community Emergency Exposure Levels for Hazardous Substances, are available from the Board on Environmental Studies and Toxicology; (202) 334-3060.

--*National Environment Watch*, Vol. 4, No. 4, May 24, 1993, p. 2.

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## **EPA HAZARDOUS DEBRIS EXTENSION**

On May 14 the EPA extended the case-by-case capacity variance for hazardous debris. The variance demands proper treatment of included hazardous wastes before disposal. The EPA recognized there was not sufficient treatment capacity to meet the requirements developed in Resource Conservation and Recovery Act (RCRA). As a result of the shortage of treatment capacity, the effective date of land disposal restrictions for hazardous debris is currently May 8, 1994. These extensions can only be granted by the EPA under RCRA Section 3004(h)(2). General information is available on the variance for hazardous debris from the RCRA hotline, (800) 424-9346 or (703) 412-9810. Specific information is available from Nicholas Vizzone, EPA Office of Solid Waste, (703) 308-8477.

--*National Environment Watch*, Vol. 4, No. 4, May 24, 1993, p. 2.

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## **EPA ALLOWS DIOXIN OCEAN DUMPING DESPITE CRITICISMS**

On March 30, at a House subcommittee hearing, the EPA announced its approval for the ocean dumping of dioxin-laden sediments dredged from the Ports of Newark and Elizabeth, New Jersey. Although the EPA and the Army Corps of Engineers claimed that "capping" the dumped materials would contain the dioxin-laden material and protect the marine environment, many still remained adamantly critical. These criticisms were expressed at a Merchant Marine and Fisheries Subcommittee hearing. Testimony was presented by members of the EPA, the Army Corps of Engineers, New Jersey, and environmental groups. Representative Frank Pallone (D-NJ) presented a study which he believed demonstrated that the "capping" methodology would be ineffective and suggested storing the dredged material until more advanced waste treatments could be developed. Pallone said that the EPA's conditions for approval of the permit "amount to little more than window dressing to appease most of us who have serious environmental concerns."

--*National Environment Watch*, Vol. 3, No. 49, April 5, 1993, p. 2.

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## NAVY PROGRESS REPORT ON CLEANUP EFFORTS

Elsie L. Munsell, deputy assistant secretary of the Navy, said that since the Navy's cleanup program began in 1980, 290 Navy and Marine Corps installations have been investigated. More than 3,200 sites on these installations require further evaluation or action, she said. Of this number, more than 2,400 sites are being addressed under the Comprehensive Environmental Response, Compensation, and Liability Act and nearly 500 under the Resource Conservation and Recovery Act, Munsell said. An additional 300 or so sites are subject to corrective action under federal or state underground storage tank programs, she said. Response is considered complete at more than 775 of those sites, while approximately 2,500 sites remain active in terms of studies and remedial actions, Munsell said. The Department of Defense manages 25 million acres in the United States and overseas.

--*Environment Reporter*, Vol. 23, No. 52, April 23, 1993, p. 3191.

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## EL CENTRO NAS FINED FOR VIOLATIONS OF FEDERAL FACILITIES COMPLIANCE ACT

The EPA fined El Centro Naval Air Station for alleged hazardous waste law violations. This is the first account of a federal facility being charged under the new Federal Facilities Compliance Act of 1992. The penalties were \$257,600 for 17 violations which consisted of failure to authenticate hazardous waste and combined storage of incompatible wastes. The EPA discovered storage of batteries in metal containers, storage of caustic liquids in cabinets with other liquids, failure to determine if waste stored in containers was hazardous, and failure to operate in a manner that would minimize the possibility of fire or release. Investigators observed sludge deposits on the ground in waste accumulation areas and open containers of absorbent materials contaminated with jet fuel. In addition, inspectors also observed cigarette butts on the ground next to containers of ignitable waste.

In a written response to the charges, El Centro NAS stated the following: "All the counts addressed in the report are of an administrative nature and have in no way endangered any part of the land, air or water environment surrounding the aviation facility," and attributed the problems to "improper shipping documents, inadequate formal training and procedural errors" as examples of the alleged EPA discrepancies.

--*California Environment Reporter*, Vol. 3, No. 14, p. 384.

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## **NAVY EMPLOYEE CONVICTED OF ILLEGAL HW DISPOSAL TO BE RESENTENCED**

A civilian supervisor of hazardous waste handlers at the 32nd Street Naval Station in San Diego, California who pleaded guilty to one count of aiding and abetting the illegal disposal of hazardous waste must be resentenced by a federal district court. The sentence was vacated and remanded when the government appealed the sentence to the U.S. Court of Appeals for the Ninth Circuit, which determined that the sentencing court failed to properly apply the U.S. Sentencing Guidelines for environmental crimes and failed to provide an adequate rationale for the departure from the guidelines. The appeals court found that the sentencing court failed to make appropriate findings as to whether or not environmental contamination occurred, grounds for offense level enhancement for a "discharge into the environment." The appeals court also found that the abuse-of-trust issue was not adequately resolved.

--*California Environment Reporter*, Vol. 3, No. 16, June 18, 1993, p. 439-440.

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## **NAVY RESOLVES ITS LIABILITY FOR CLEANUP AT SUPERFUND SITE**

The U.S. Navy has agreed to pay over \$1 million to resolve its liability for cleanup at the Operating Industries Inc. superfund site in Monterey Park. If the proposed consent decree is accepted, it would resolve the Navy's liability for site control, monitoring, leachate treatment, gas migration control, and construction of a landfill cover at the 190-acre site. The site is contaminated by industrial wastes and has been on the superfund list since 1986.

--*California Environment Reporter*, Vol. 3, No. 9, p. 235.

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## NAVY TO PREPARE SECOND SUPPLEMENTAL EIS FOR DREDGING IN SAN FRANCISCO BAY

On April 23, The EPA recommended that the U.S. Navy prepare a second supplemental Environmental Impact Statement for dredging in San Francisco Bay. The second EIS should address more thoroughly disposal alternatives for any unsuitable material or future dredged material.

The EPA claimed that the Navy presented sufficient information on the disposal of the material in an ocean dumping site, however, did not adequately examine the alternatives for unsuitable material or additional material the Navy may need to manage.

--*Environment Reporter*, Vol. 23, No. 53, April 30, 1993, p. 3237.

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## STATE REGULATORY HIGHLIGHTS

**Texas:** The Texas Water Commission established on April 28 requirements for consultants and contractors who clean up leaking petroleum storage tanks. These minimum standards include 16 hours of continuing education, and at least one of three qualifications: (1) two years experience along with Texas registration as professional engineer, (2) four years experience along with passing the National Registry of Environmental Professionals exam (NREP), or (3) two years experience, a bachelor's degree in an environmentally related subject, and passing the NREP exam. The commission could decertify any contractors or consultants who do not meet these minimum standards.

--*Environment Reporter*, Vol. 24, No. 1, May 7, 1993, p. 21.

**Delaware:** Delaware has adopted new hazardous substance cleanup regulations. These regulations, effective January 12, 1993, establish the administrative process and standards to identify, investigate, and cleanup hazardous substances at facilities. The goal of these regulations is to implement the policy and intent declared in 7 Del. C., Chapter 91, the Delaware Hazardous Substance Cleanup Act. These regulations provide a workable process to accomplish effective and expeditious cleanups to protect public health or welfare, or the environment. The full text is available by contacting MESO at (619) 553-5330.

--*Environment Reporter - State Solid Waste Land Use*, Vol. 7 Ch. 91, § 1136:1201-1136:1220.



**Texas:** The final text of Texas oil spill prevention and response rules is now available from MESO at (619) 553-5330. The text includes basic rules to provide for orderly and efficient administration of the Oil Spill Prevention and Response Act of 1991.

--*Environment Reporter - State Water Laws*, Vol. 6, § 921:0821-921:0833.

**Maryland:** The Maryland Department of Environment has ruled on regulations concerning the control of toxic substance discharges to surface waters. The rule, which became effective on June 7, 1993, defines "minimum level," establishes mixing zone requirements, specifies when numerical criteria will be applied and includes the use of minimum levels in determining compliance. More information can be obtained by contacting Deanna Miles-Brown at the Department of Environment at (410) 631-3173.

--*National Environment Watch*, Vol. 4, No. 7, June 14, 1993, p. 6.

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## **NEW METHOD FOR ASSESSING OIL POLLUTION DAMAGE**

A panel at the National Oceanographic and Atmospheric Administration (NOAA) has been reviewing a new method for assessing the dollar value of oil pollution damage. The Contingency Valuation Methodology (CVM) involves sampling a representative portion of the population to determine the monetary values they put on damaged or destroyed natural resources even though they may not use them. The values obtained are then extrapolated to cover the entire population.

A six-member committee of experts set up by NOAA has spent close to a year analyzing the CVM program and has concluded that it is sufficiently reliable in estimating the value of natural resource damage after an oil spill. The committee's report, however, does not endorse the CVM as the only determining factor for assessment. The report claims that the studies should be used by judges and juries in combination with other evidence.

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Various lawyers, psychologists, and oil transport industries are highly critical of the CVM. The source of their criticism is caused by CVM sampling a representative population to determine the monetary values the general public would put on damaged or destroyed natural resources. The critics feel that CVM is prone to human bias which can lead to unfair damage settlements.

--Marine Pollution Bulletin, Vol. 26, No. 3, March 1993, p. 117.

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### **NEW NON-POINT SOURCE POLLUTION REMEDY TO BE TESTED**

A demonstration project to test a possible economical and efficient answer to the non-point source pollution problem in many U.S. waterways is scheduled to begin in July near Denver, CO, according to Russell Clayshulte of the Denver Regional Council of Governments. The test, headed by the council, will evaluate the use of duckweed, a small floating plant, to remove nutrients under various conditions. Duckweed is an extremely fast growing plant found throughout the U.S., and has been shown to be capable of removing large quantities of nutrients and reducing metals, biochemical oxygen demand, and suspended solids in industrial and wastewater treatment applications.

In the demonstration project, an on-shore control unit at the site will control circulation, and a mobile harvester unit will control distribution of the duckweed. The system being tested has several advantages over conventional best management practices, according to Clayshulte, including the use of marginal-quality land sites, low maintenance and energy requirements, odor reduction, and the use of locally available plants. The plants have also been used as livestock feed after being harvested.

--*National Environment Watch*, Vol. 4, No. 7, June 14, 1993, p. 5.

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### **NEW NON-TOXIC ANTIFOULING SYSTEM**

Mitsubishi Heavy Industries (MHI), in conjunction with Japan's Ship and Ocean Foundation, has developed a new antifouling system called Marine Growth Prevention by Electrolysis Technology (MAGPET). By passing a small electric current through a conductive coating adhered to a ship hull or other marine structure, a localized electrolytic effect occurs. The field produces hypochlorous acid ions in the surrounding seawater which prevent the settlement of marine organisms.

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MAGPET is an environmentally advantageous system when compared with toxic antifouling methods because hypochlorous acid ions are short-lived and decompose back into seawater harmlessly. In addition, developers claim that MAGPET's power consumption is small and that the conduction coating can be maintained for about five years.

--*Marine Pollution Bulletin*, Vol. 26, No. 5, May 1993.

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## **MORE ON ECOLOGICAL RISK ASSESSMENT**

MESO will be co-sponsoring another Ecological Risk Assessment meeting on October 8-9, 1993. This conference marks the First Annual Symposium of the Southern Chapter of the Society for Environmental Toxicology and Chemistry (SETAC). In addition to NRaD and SETAC, other co-sponsors of this meeting are San Diego State University Institute for Public Health and San Diego Toxicology Association (SANTA). This meeting will be different than the hands-on training symposia developed by MESO for Navy personnel (27-28 July in San Diego, 17-18 August in Philadelphia; see *Marine Environmental Update*, Vol. FY93, No.2 for details) in that its main objective will be to provide a forum for regulators, scientists and others to share approaches and insights in the field of ecological risk assessment.

Presentations will address topics of interest to researchers, regulators, consultants and students of toxicology, chemistry, environmental health, ecology, and general biology.

Papers are invited on the following topics:

- Exposure Assessment Methods
- Bioindicators
- Laboratory-based Toxicity Evaluation Methods
- Bioaccumulation
- Pollutant Fate and Transport
- Computer Modeling
- Case Studies
- Economic Issues
- Site Remediation and Habitat Restoration Methods

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### **ABOUT THE MARINE ENVIRONMENTAL UPDATE**

This newsletter is produced by the Marine Environmental Support Office (MESO) and is dedicated specifically to inform the Navy about marine environmental issues that may influence how the Navy conducts its operations. MESO is located at the Naval Command, Control and Ocean Surveillance Center's Research, Development, Test and Evaluation Division (NRaD) in San Diego, California. The mission of MESO is to provide Navy-wide technical and scientific support on marine environmental science, protection and compliance issues. This support covers a broad spectrum of activities, including routine requests for data and information, technical review and consultation, laboratory and field studies, comprehensive environmental assessments, and technology transfer. Significant developments in marine law, policy, and scientific advancements will be included in the newsletter, along with references and points of contact for further information. The Marine Environmental Support Office may be reached at:

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