

DEPARTMENT OF HEALTH SERVICES

2151 BERKELEY WAY  
BERKELEY, CA 94704

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January 5, 1988

*Dana recommend  
you get list of  
contractors from  
FR Activity EIC  
MARE IS (*

2) FILE: GEN/ARARS

Captain P.W. Drennon, Commander  
Western Division  
Naval Facilities Engineering Command  
P.O. Box 727  
San Bruno, CA 94066-0720

Dear Captain Drennon:

\* PLS PROVIDE CYS TO OUR CONSULTANTS

**STATE ARARS**

In recent months, we have received several letters from the Navy requesting site-specific State requirements, standards, criteria, or limitations (more commonly referred to as "ARARS") which are legally applicable or relevant and appropriate for remedial actions conducted pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 as amended in 1986. ARARS have been specifically requested for the following Navy Facilities:

- o Hunters Point Annex
- o Mare Island Naval Shipyard
- o Naval Air Station, Moffet Field
- o Naval Weapons Station, Concord

This letter is in response to these requests.

Background

Pursuant to Section 121(d) of the Superfund Amendments and Reauthorization Act (SARA), the Department contacted over 20 different state agencies and requested that they each identify any potential ARARS. This effort resulted in the development of a list known as "California Standards, Requirements, Criteria, and Limitations for Hazardous Waste Cleanups Pursuant to Section 121(d)(2) of the Superfund Amendment and Reauthorization Act, June 1987." The purpose of this effort was to identify the universe of potential state ARARS which may apply to the remediation of sites in California. A copy of this list is enclosed.

Development of Site-Specific ARARS for Navy Facilities

All four of the Navy Facilities for which ARARS have been requested are in the remedial investigation phase of the CERCLA



January 5, 1988

process. This phase essentially involves identifying the kinds of hazardous substances that have been released into the environment and the vertical and lateral extent of contamination. This information will then be used to perform a public health evaluation and to evaluate and select appropriate remedial actions.

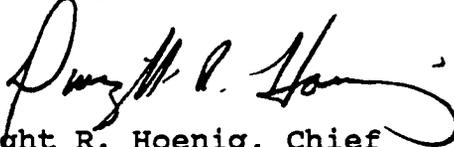
Until such site-specific information is developed, the attached list of potential State ARARs should be considered by the Navy. Consistent with the ARARs guidance provided to us by the U.S. Environmental Protection Agency, an iterative process will be followed to narrow this list as more site-specific information is developed and provided to us by the Navy.

#### Future Coordination

We urge the Navy to coordinate closely with the project officers assigned by the Department to each Navy facility. Such coordination will enhance and expedite the process of narrowing the list and identifying site-specific State ARARs.

If you have any questions or comments, please contact me or our respective project officers.

Sincerely,



Dwight R. Hoenig, Chief  
North Coast California Section  
Toxic Substances Control Division

Enclosure

cc: Keith Takata, U.S. EPA, Region IX  
Roger James, SF RWQCB  
J. Martin Robertson, Department of the Navy  
Richard Cornelius, Department of the Navy  
Joseph Smith, Jr., Department of the Navy  
Captain C.T. Moyer III, Naval Air Station

DRH:rn:na

State of California  
Department of Health Services

Drinking Water Action Levels Recommended  
by the Department of Health Services

October 1987

| Chemical                                | Action Level<br>parts per billion (ppb) |
|---|---|
| <b>Pesticides</b>                       |   |
| <b>Chlorinated Hydrocarbon</b>          |   |
| Aldrin                                  | Limit of Quantification (0.05)          |
| a-Benzene Hexachloride<br>(a-BHC)       | 0.70                                    |
| b-Benzene Hexachloride<br>(b-BHC)       | 0.30                                    |
| Chlordane                               | 0.055                                   |
| Dieldrin                                | Limit of Quantification (0.05)          |
| Heptachlor                              | 0.02                                    |
| Heptachlor Epoxide                      | 0.10                                    |
| Pentachlorophenol                       | 30.00                                   |
| <b>Organophosphate</b>                  |   |
| Dimethoate                              | 140.00                                  |
| Diazinon                                | 14.00                                   |
| Ethion                                  | 35.00                                   |
| Malathion                               | 160.00                                  |
| Methyl Parathion                        | 30.00                                   |
| Parathion                               | 30.00                                   |
| Trithion                                | 7.00                                    |
| <b>Carbamate</b>                        |   |
| Aldicarb                                | 10.00                                   |
| Baygon                                  | 90.00                                   |
| Carbaryl                                | 60.00                                   |
| <b>Phthalamide</b>                      |   |
| Captan                                  | 350.00                                  |
| <b>Amides</b>                           |   |
| Diphenamide                             | 40.00                                   |
| <b>Fumigants</b>                        |   |
| Dibromochloropropane                    | 1.00                                    |
| 1,2-Dichloropropane                     | 10.00                                   |
| Ethylene Dibromide                      | Limit of Quantification (0.02)          |
| Chloropicrin                            | 50.00 (37.0)*                           |
| <b>Miscellaneous</b>                    |   |
| Terrachlor<br>(Pentachloronitrobenzene) | 0.90                                    |

\*Taste & Odor Threshold

Phenols

2,4-dimethylphenol  
Phenol

(400.00)\*  
(1.00)\* (For Chlorinated  
Systems)

Aldehydes

Formaldehyde

30.00

Radioactivity

Uranium

30 (equivalent to 20  
picocuries per liter)

\*Taste & Odor Threshold

CA DEPT. OF HEALTH SERVICES, TSCD, APPLIED ACTION LEVELS  
Applied Action Levels are developed for and must be used in  
conjunction with the process outlined in the DHS document,  
California Site Mitigation Decision Tree, May 1986

| SUBSTANCE           | BIOLOGICAL RECEPTOR | AALwater (ug/l) | AALair (ug/m3) | AALsoil | OTHER MEDIA | TEST 1 COMMENT   |
|---------------------|---------------------|-----------------|----------------|---------|-------------|--|
| ACENAPHTHENE        | HUMAN               | 0.019           | 0.0019         |         |             |  |
| ACENAPHTHYLENE      | HUMAN               | 0.019           | 0.0019         |         |             |  |
| ANTHRACENE          | HUMAN               | 0.019           | 0.0019         |         |             |  |
| ARSENIC             | AQUATIC             | 0.074           |                |         |             | FRESHWATER SPECIES   |
| ARSENIC             | AQUATIC             | 0.0224          |                |         |             | SALTWATER SPECIES  |
| BENZENE             | HUMAN               | 0.0007          | 0.0032         |         |             | AALwater is the SEB Action Level<br>AALair is the Limit of Detection |
| BENZO(A)PYRENE      | HUMAN               | 2.3 B-5         | 8.7 B-6        |         |             | AALwater is the Limit of Detection                                   |
| CADMIUM             | AQUATIC             | 0.00017         |                |         |             | FRESHWATER SPECIES   |
| CADMIUM             | AQUATIC             | 0.0051          |                |         |             | SALTWATER SPECIES  |
| CHLOROFORM          | HUMAN               | 0.0043          | 0.00043        |         |             |  |
| CHROMIUM            | AQUATIC             | 0.051           |                |         |             | FRESHWATER SPECIES   |
| CHROMIUM            | AQUATIC             | 0.00153         |                |         |             | SALTWATER SPECIES  |
| COPPER              | AQUATIC             | 0.0043          |                |         |             | FRESHWATER SPECIES   |
| COPPER              | AQUATIC             | 0.0060          |                |         |             | SALTWATER SPECIES  |
| ETHYLBENZENE        | HUMAN               | 0.68            | 0.14           |         |             | AALwater is the SEB ACTION LEVEL                                     |
| FLUORANTHENE        | HUMAN               | 0.019           | 0.0019         |         |             |  |
| FLUORENE            | HUMAN               | 0.019           | 0.0019         |         |             |  |
| HEXANE, n-          | HUMAN               | 0.13            | 0.22           |         |             |  |
| LEAD                | AQUATIC             | 0.012           |                |         |             | FRESHWATER SPECIES   |
| LEAD                | AQUATIC             | 0.0044          |                |         |             | SALTWATER SPECIES  |
| METHYL ETHYL KETONE | HUMAN               | 1.77            | 0.25           |         |             |  |
| NAPHTHALENE         | HUMAN               | 0.018           | 0.0018         |         |             |  |

CA DEPT. OF HEALTH SERVICES, TSCD, APPLIED ACTION LEVELS  
Applied Action Levels are developed for and must be used in  
conjunction with the process outlined in the DHS document,  
California Site Mitigation Decision Tree, May 1986

| SUBSTANCE      | TEST 2<br>MEDIA FOR SUMMATION<br>OF EXPOSURE | TEST 2<br>COMMENTS             | TEST 3<br>TOXIC MANIFESTATION | TEST 3<br>COMMENTS  |
|----------------|--|--------------------------------|-------------------------------|---|
| ACENAPHTHENE   | ALL MEDIA                                    |                                |                               | A NON-CARCINOGENIC PAH.<br>CUMULATE ALL<br>NON-CARCINOGENIC PAHs. |
| ACENAPHTHYLENE | ALL MEDIA                                    |                                |                               | A NON-CARCINOGENIC PAH.<br>CUMULATE ALL<br>NON-CARCINOGENIC PAHs. |
| ANTHRACENE     | ALL MEDIA                                    |                                |                               | A NON-CARCINOGENIC PAH.<br>CUMULATE ALL<br>NON-CARCINOGENIC PAHs. |
| ARSENIC        |  |                                |                               |   |
| ARSENIC        |  |                                |                               |   |
| BENZENE        | ALL MEDIA                                    | FOR WATER USE,<br>AALwater/3.5 | CANCER                        | FOR WATER USE, AALwater/3.5                                       |
| BENZO(A)PYRENE | ALL MEDIA                                    |                                | CANCER                        |   |
| CADMIUM        |  |                                |                               |   |
| CADMIUM        |  |                                |                               |   |
| CHLOROFORM     | ALL MEDIA                                    |                                | CANCER                        |   |
| CHROMIUM       |  |                                |                               |   |
| CHROMIUM       |  |                                |                               |   |
| COPPER         |  |                                |                               |   |
| COPPER         |  |                                |                               |   |
| ETHYLBENZENE   | ALL MEDIA                                    | FOR WATER, USE<br>AALwater/0.3 | DEVELOPMENTAL<br>TOXICITY     | FOR WATER, USE AALwater/0.3                                       |
| FLUORANTHENE   | ALL MEDIA                                    |                                |                               | A NON-CARCINOGENIC PAH.<br>CUMULATE ALL<br>NON-CARCINOGENIC PAHs. |
| FLUORENE       | ALL MEDIA                                    |                                |                               | A NON-CARCINOGENIC PAH.<br>CUMULATE ALL<br>NON-CARCINOGENIC PAHs. |

CALIFORNIA STANDARDS, REQUIREMENTS, CRITERIA AND LIMITATIONS FOR HAZARDOUS WASTE CLEANUPS PURSUANT TO SECTION 121 (d) (2) OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT. SEPTEMBER, 1987

I. STATUTES AND REGULATIONS

| STATUTES  | REGULATION  | APPLICABILITY  | REGULATORY AGENCY                                      |
|---|---|--|--|
| Air Resources Act<br>Health and Safety Code, Division<br>26, Section 39000 et seq.                      | 17 CAC, Part III, Chapter 1<br>Section 60000 et seq,  | Air Quality<br>(Refer also to air<br>district requirements in<br>Section II)   | Air Resources Board                                    |
| California Coastal Act of 1976<br>Public Resources Code, Division 20<br>Section 30,000 et seq.          |   | Activities in Coastal Zone<br>Coastal Management Program   | California Coastal<br>Commission                       |
| California Environmental<br>Quality Act, Public<br>Resources Code Division 13,<br>Section 21000 et seq. | 14 CAC, Division 6, Chapter 3<br>Section 15000 et seq.  | CEQA Law and Guidelines.<br>EIR process and alter-<br>natives.   | Resources Agency<br>Office of Planning<br>and Research |
| California Health and Safety Code<br>Div. 20  | California Administrative Code,<br>Title 22, Division 4<br>Chapter 30, Minimum Standards<br>for Management of Hazardous<br>and Extremely Hazardous<br>Wastes. |  | Department of Health<br>Services                       |
| Chapter 6.5 Hazardous Waste<br>Wastes.  |   | Management and Control of<br>TSD facilities, Transpor-<br>tation, Hauling, Labora-<br>tories, Fees, Waste Classi-<br>fication. | Department of Health<br>Services                       |
| Chapter 6.6 Safe Drinking Water<br>and Toxics Enforcement Act<br>(Proposition 65)                       |   | Reproductive Toxin Levels<br>Reporting of hazardous<br>materials releases to<br>local government                               | Department of Health<br>Services                       |

| STATUTES   | REGULATION  | APPLICABILITY  | REGULATORY AGENCY  |
|--|---|--|--|
| Chapter 6.7 Underground Storage of Hazardous Substances  |   | Underground tank construction and containment  | Department of Health Services<br>State Water Resources Control Board<br>Regional Water Quality Control Board |
| Chapter 6.8 Hazardous Substance Account  |   | Principle requirement governing State Superfund and Board program abandoned sites, emergency response, victim's compensation                         | Department of Health Services  |
| Chapter 6.91 Hazardous Materials Duty  |   | Notification to local government officials of the use of the use of and dangers imposed by hazardous materials.<br><br>Community information program | Office of Emergency Services   |
| Chapter 6.95 Hazardous Materials Release Response Plans and Inventory  | 19 CAC, Chapter 3, Subchapter 3   | Emergency plans in the event of hazardous materials release or threatned release   | Office of Emergency Services   |
| Chapter 6.98 Environmental Quality Assessment  |   | Registration of Environmental Assessors  | Department of Health Services<br>State Water Resources Control Board<br>Air Resources Board                  |
| California Safe Drinking Water Act, Health and Safety Code, Division 7, Part 1, Chapter 7 Section 4010 et seq. | California Administrative Code, Title 22, Division 4, Chapter 15, Domestic Water Quality and Monitoring | Public Water Systems Drinking Water Standards Maximum Contaminant Levels (MCLs), Lab Certification   | Department of Health Services, Sanitary Engineering  |

| STATUTES  | REGULATION  | APPLICABILITY   | REGULATORY AGENCY  |
|---|---|---|--|
| Hazardous Substances Act, Health and Safety Code Division 22, Chapter 13, Section 28740 et seq. |   | "Hazardous Substance" and "Toxic" broadly defined                                   | Department of Health Services  |
| Occupational Health and Safety Act, Labor Code Section 6300 et seq.                             |   | Worker safety, responsibilities and duties of employer.                             | Department of Industrial Relations, Division of Industrial Safety  |
| Porter Cologne Water Quality Control Act, Water Code, Division 7 Section 13000 et seq.          | California Administrative Code, Title 23, Chapter 3   | Identification of general duties and authorities of State and Regional Water Boards | State Water Resources Control Board<br>Regional Water Quality Control Board<br>Department of Health Services |
|   | Subchapter 9, Waste Discharge Reports and Requirements  |   |  |
|   | Subchapter 9.1, Enforcement Procedures and Septic Tank Prohibition Review by the (Water) Board. |   |  |
|   | Subchapter 10, Licensing and Regulation of Use of Oil Spill Cleanup Agents.                     |   |  |
|   | Subchapter 13, Registration and Regulation of Liquid Waste Haulers.                             |   |  |
|   | Subchapter 15, Discharges of Waste to Land.   |   |  |

| STATUTES  | REGULATION   | APPLICABILITY  | REGULATORY AGENCY                |
|---|--|--|----------------------------------|
|   | (23 CAC, Chapter 3 Cont.)<br>Subchapter 16, Underground<br>Tank Regulation   | Underground Tanks  |                                  |
|   | Subchapter 20, Standards<br>for Removal of Sewage<br>from Vessels  |  |                                  |
| Fish and Game Code, Division 6,<br>Part 1, Chapter 2, Sections<br>5650 and 5651 |  | Fish and Wildlife, Water<br>Pollution Prohibition,<br>Correction of Chronic<br>Water Pollution | Department of Fish<br>and Game   |
|   | California Administrative<br>Code, Title 8, Chapter 4  | Health and Safety Re-<br>quirements  |                                  |
|   | Subchapter 4, Construction<br>Safety Orders  |  |                                  |
|   | Subchapter 5, Electrical<br>Safety Orders  |  |                                  |
|   | Subchapter 7, General<br>Industry Safety Orders  |  |                                  |
|   | California Administrative Code,<br>Title 14, Division 7, Chapter 3.<br>Standards for Solid Waste Hand-<br>ling and Disposal. |  | Solid Waste Management<br>Board  |
|   | California Administrative<br>Code, Title 17, Chapter 5,<br>Subchapter 4, Group 3<br>Article 6, Section 30298.                | Cleanup of radioactive<br>bearing hazardous waste<br>in buildings.                             | Department of Health<br>Services |

## STATUTES

## REGULATION

## APPLICABILITY

## REGULATORY AGENCY

California Administrative Code,  
Title 19, Chapter 2, Sub-  
Chapter 3, Hazardous Materials  
Release Response

Emergency Response  
(Office of Emergency  
Services)

Office of Emergency  
Services (OES)

California Administrative Code,  
Title 23, Chapter 4, Subchapter  
15. Regulations for Implemen-  
tation of the California En-  
vironmental Quality Act of  
1970 (Water Board Requirements)

Water Board CEQA  
Regulations

State Water Resources  
Control Board, Regional  
Water Quality Control  
Board

California Administrative Code,  
Title 26, Toxics

Directory of Toxic  
Related Regulations.

Office of Administrative  
Law

## APPLICABILITY

## REGULATORY AGENCY

II. OTHER STANDARDS, REQUIREMENTS, CRITERIA AND LIMITATIONS

All policies and procedures for hazardous waste and hazardous materials management and cleanup adopted by the Toxic Substances Control Division.  
Control Division.

Department of Health Services

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Department of Health Services Decision Tree.

Development of site-specific  
cleanup levels evaluation of  
remedial action alternatives.

Department of Health Services

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Department of Health Services Exposure Criteria.

Department of Health Services

- o RMCLs, MCLs, and action levels\*  
for unregulated chemicals in  
drinking water.
- o Applied action levels\* developed  
by the Toxic Substances Control  
Division.
- o Other cleanup levels developed  
by the Toxic Substances Control  
Division on a site specific basis.

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Toxic air quality criteria policies or standards generated  
Department of Health Services,  
by the Department of Health Services or the Air Resources  
Board.

Department of Health Services,

Air Resources Boards

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Air Pollution Control District regulations.

Local Air Pollution Control  
District

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South Coast Air Quality Management District Rule 1150,  
Excavation of Landfill Sites.

Permit requirements for exca-  
vation at landfill sites.South Coast Air Quality  
Management District

|  | APPLICABILITY  | REGULATORY AGENCY   |
|--|--|---|
| South Coast Air Quality Management District Rule 1150.1, Control of Gaseous Emissions from Active Landfills. Storage Tanks                                   | Gas collection at active landfills.                              | South Coast Air Quality Management District Underground                           |
| Bay Area Air Quality Management District Regulation 8 Rule 40, Aeration of Contaminated Soil and Removal of Underground Storage Tanks.                       | Control of organic compounds during removal of underground tanks | Bay Area Air Quality Management District  |
| Water Quality Control plans of the State Water Resources Control Board and the Regional Water Quality Control Board  | Water Quality and Basin Plans                                    | State Water Resources Control Board<br>Regional Water Quality Control Board       |
| Other requirements of the State Water Resources Control Board and Regional Water Quality Control Boards.   |  | State Water Resources Control Board<br>Regional Water Quality Control Board       |
| All policies and procedures for water quality control adopted by the State Water Resources Control Board and the nine Regional Water Quality Control Boards. | Includes "Non Degradation" Policy                                | State Water Resources Control Board<br>Regional Water Quality Control Board       |
| Regional Water Quality Control Board cleanup levels.   |  | Regional Water Quality Control Board  |
| Regional Water Quality Control Board site remediation guidance and criteria.   |  | Regional Water Quality Control Board  |
| All county hazardous waste management plans.   |  | Department of Health Services   |
| Hazardous Waste Move Committee Memorandum of Understanding.  | Transportation of Hazardous waste during cleanup.                | Department of Health Services,<br>Department of Transportation,<br>Highway Patrol |

APPLICABILITY

REGULATORY AGENCY

General Orders of the Public Utilities Commission.

Public Utilities Commission

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Notes:

1. Pursuant to the Superfund Amendments and Reauthorization Act, Section 121 (e), and associated state policies and requirements, permits may not be mandatory at Superfund sites.
2. The "Applicability" column is intended only to highlight some major elements of the statute or regulation. It is not designed to denote which sections of the code or statute apply.
3. The Department of Health Services reserves the right to amend this list pursuant to the intent of the Superfund Amendments and Reauthorization Act.