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Version 1

ENGINEERING EVALUATION/COST ANALYSIS (EE/CA) OUTLINE

ENGINEERING EVALUATION/COST ANALYSIS NON-TIME CRITICAL REMOVAL ACTION FOR

[SITE NAME]
[ACTIVITY NAME]
[CITY, COUNTY, STATE]
[DATE]

SOUTHWEST DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
1220 PACIFIC HIGHWAY
SAN DIEGO, CALIFORNIA 92132-5190

EXECUTIVE SUMMARY

This Engineering Evaluation/Cost Analysis (EE/CA) was performed in accordance with current U.S. Environmental Protection Agency (EPA) and U.S. Navy guidance documents for a non-time critical removal action under the Comprehensive Environmental Response, compensation and Liability Act (CERCLA). This EE/CA summarizes the results of the EE/CA process, characterizes the site, identifies removal action objectives, describes removal action alternatives, contains analysis of these alternatives, and describes the recommended removal action alternative.

[Include a paragraph describing the nature and history of the problem.

EXAMPLE: "After the resolution of U.S. involvement in Vietnam, napalm shipments on their way to Vietnam were brought back to the Fallbrook Annex in Seal Beach, CA for storage. The Fallbrook Annex is owned by the Naval Weapons Station (NWS). Approximately 34,000 napalm canisters packaged in wooden crates, some of which were treated with pentachlorophenol (PCP), were brought to the Annex. Napalm, which consists of 46% polystyrene, 21% benzene, and 33% gasoline (leaded and unleaded), has leaked from about 400 canisters. In most cases, the leaked napalm has solidified on the casings and wooden crated, self-sealing the canisters."]

CERCLA and National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR Part 300) define removal actions as the cleanup or removal of released hazardous substances, actions to monitor the threat of release of hazardous substances, and actions to mitigate or prevent damage to public health or welfare or the environment. The NCP includes provisions for the "removal of drums, barrels, tanks, or other bulk containers that contain or may contain hazardous substances or pollutants or contaminants-where it will reduce the likelihood of spillage; leakage; exposure to humans, animals, or the food chain..."

The purpose of the EE/CA is to identify and analyze alternative removal actions to address the [state problem and site name]. [Quantity] alternatives were identified and considered: [list the alternatives considered].

Based on this analysis, the Navy recommends [name selected alternative]. This alternatives best meets the NCP criteria of overall protectiveness of human health, compliance with applicable relevant and appropriate requirements (ARARs), long-term effectiveness, reduction of toxicity through treatment, short-term effectiveness, implementability, cost, and state and community acceptance.

[Include Table of Contents.]

[Include list of Figures.]

1.0 INTRODUCTION

This Engineering Evaluation/Cost Analysis (EE/CA) identifies proposed removal action alternatives for the [type of action, media(s) being treated and activity where this is occurring].

CERCLA and NCP define removal actions to include "*the cleanup or removal of released hazardous substances from the environment, such actions as may necessarily be taken in the event of the threat of release of hazardous substance into the environment, such action as may be necessary to monitor, assess, and evaluate the release or threat of release of hazardous substances, the disposal of removal material, or the taking of such other actions as may be necessary to prevent, minimize or mitigate damage to the public health or welfare or to the environment, which may otherwise result from a release or threat of release.*" The USEPA has classified removal actions into three types based on the circumstance surrounding the release or threat of release: emergency, time critical, and non-time critical. The [name action being taken and where] has been determined to be a non-time critical removal, since onsite action will be taken more than 6 months after commencement of the planning period.

[Brief description of site.]

This EE/CA addresses the implementability, effectiveness, and cost of [type of action] and addresses applicable regulatory requirements. This EE/CA will be used as the basis for a future CERCLA removal action. The DON is the lead agency for the [name and type of action being taken]. As the lead agency, the DON has final approval authority of the recommended alternative selected and overall public participation activities. The DON is working in cooperation with [name agency(s)] in the implementation of this removal action.

This EE/CA is being issued in accordance with the public participation plan prepared by [activity name] to facilitate public involvement in the decision making process. The public is encouraged to review and comment on the proposed removal activities described in this EE/CA. To gain a more thorough understanding of the activities associated with this removal action, the public is encouraged to review the administrative record for this activity available at the following locations: [list administrative record location]

[*EXAMPLE:*

County of San Diego
Fallbrook Public Library
124 Mission Road (at Alvarado Road)
Fallbrook, CA 92028
(619) 728-2373]

2.0 SITE CHARACTERIZATION

The information for this site characterization was taken from various sources, including [list information sources].

2.1 Site Description and Background

[The site description section of the EE/CA should include the following types of information where available and as appropriate to the site-specific conditions and the scope of the removal action:]

- [Site location
  - Street address and crossroads
  - USGS topographic map quadrangle
    Latitude/longitude]

- [Type of facility and operational status
  - Materials manufactured, stored, or disposed on-site
  - Estimated quantities of contaminants and potential hazards
  - Years of operation
  - Present/prior site use
  - Regulatory history, including previous responses, investigations, and litigation by State, local, and Federal agencies]

- [Structures/topography
  - Facility size/dimensions
  - Boundary descriptions
  - Land cover/vegetation/stresses to topography
  - Utilities/transportation features
  - Buildings
  - Surface water bodies/conveyances
  - Drainage channels/pathways
  - Historical/archaeologically significant features
  - Sewer lines/manholes
  - Stormwater drainage pipes
  - Open ditches/canals
  - Power lines/pipelines]

- [Geology/soil information
  - Depth to aquifer
  - Soil types (surface and vadose zones)
  - Local geological formulations
  - Surface water hydrology and hydrogeology]

- [Surrounding land use and populations
  - Residential, industrial, or commercial land use
  - Possible pathways of exposure
  - Identification of sensitive populations
  - Estimate of population densities within potentially affected radius
  - Description of drinking water sources

- National Historic Preservation Act considerations]

- [Sensitive ecosystems
  - Wetlands, wildlife breeding areas
  - Wild and scenic rivers
  - Connection to the human food chain or food chains of other organisms
  - Sensitive and/or endangered species
  - Coastal zones]

- [Meteorology
  - Rainfall/snowfall
  - Temperature ranges
  - Wind conditions]

[Include Location Map.]

2.2 History of Previous Removal Actions, Investigations, and Activities

2.2.1 Previous Removal Actions

[This section should describe any previous removal actions at the site. If there were no previous removal actions taken at the site, then state "Not Applicable" for this section. Previous information, if relevant, may be organized as follows:]

- [The scope and objectives of the previous removal action]

- [The amount of time spent on the previous removal action]

- [The amount of money spent of the previous removal action]

- [The nature and extent of hazardous substances, pollutants, or contaminants treated or controlled during the previous removal action]

- [The technologies used and/or treatment levels used for the previous removal action]

2.2.2 Previous Investigations

[List all previous investigations and synopsize reports into one or two paragraphs identifying the purpose, what action was completed, the result, and any conclusions or recommendations (e.g., IAS, PA, SI, etc.).]

2.2.3 Previous Activities

[List all previous activities conducted and synopsize into one or two paragraphs identifying the purpose, what action was completed, the result, and any conclusions or recommendations (e.g., monitoring).]

2.3 Source, Nature and Extent of Contamination

[To the extent possible, site characterization data should be gathered during the removal site evaluation process to support the EE/CA, unless such data were gathered in prior investigations. Existing information may be useful in determining the location(s) of contamination at a particular site. The information may include:

- Discussion of the Contaminants of Concern
- Location(s) of the hazardous substance(s), pollutant(s), or contaminant(s) with maps of the contaminated area/media showing isoconcentration contours
- Quantity, volume, size, or magnitude of the contamination
- Physical and chemical attribute(s) of the hazardous substance(s), pollutant(s), or contaminant(s)
- Target(s) potentially affected by the site]

[The source of the contamination for a removal action is often well defined. However, if the source, nature, and extent of contamination cannot be readily identified, the OSC/RPM should survey the area. Contamination sources and locations can often be determined by:

- Using nonanalytical methods, including geophysical surveys, which may indicate the presence of buried objects, such as drums
- Examining aerial photographs (especially those taken over a period of time), which may indicate land areas or drainage patterns that have been disturbed
- Reviewing past operations and information from the Toxic Release Inventory and interviewing past or current employees, which may help determine the source of contamination

If contamination is found in a containment vessel (e.g., under- or aboveground storage tanks, drums, lagoons), the integrity of the vessels should be determined. The integrity may have an impact on the selection of the removal action.]

2.4 Analytical Data

2.4.1 Presentation of Analytical Data

[The analytical data section should present quantifiable data collected during the RSE. This section begins with existing data and expands if additional data are collected. When sufficient data are collected, significant findings should be presented in a narrative discussion. The actual data can be presented

in tables, either within the section or in an appendix, or incorporated by reference to the document containing the data. Additionally, data exceeding non-detect levels should be compared to the appropriate Federal and/or State regulatory standards.]

2.4.2 Data Quality

[Include discussion on relative quality of the data compared to the PARCC parameters. Note any data that is suspect.]

2.5 Streamlined Risk Evaluation

NOTE: The following is for informational purposes only, not to be included in an actual EE/CA.

[For the EE/CA, streamlined risk evaluation should focus on the specific problem that the removal action is intended to address. For example, if the non-time critical removal action is to install a ground water containment system, the risk evaluation, should address risk due to consumption and use of ground water. If the action is intended to address a particular source of contamination, the risk evaluation should address the risks related only to that source of contamination.

To assist in focusing the risk evaluation on specific site problems, OSCs/RPMs should rely on the conceptual site model and data developed during site characterization. A risk evaluation that identifies only contaminants of concern in the affected media, contaminant concentrations, and the toxicity associated with the chemical can be sufficient to justify taking an action. In some situations, exposure pathways can be identified as an obvious threat to human health or the environment by comparing contaminant concentrations to standards that are potential chemical-specific applicable or relevant and appropriate requirements (ARARs) for the action. These may include non-zero Maximum Contaminant Level Goals (MCLGs) and Maximum Contaminant Levels (MCLs) for ground water or leachate, or State air quality standards for contaminants that may volatilize or be entrained by the wind. *If ARARs are used to support the risk evaluation, be sure to reference Section 3.4 and Appendix A for further discussion of the applicability of the criteria.* When potential ARARs for chemicals of concern do not exist for a specific contaminant, risk-based chemical concentrations should be used.

Where standards for one or more contaminants in a given medium are clearly exceeded, a removal action is generally warranted, and further quantitative assessment that considers all chemicals, their potential additive effects, or additivity of multiple exposure pathways, are generally not necessary. In cases where standards are not clearly exceeded, or where the available information is deficient or of questionable quality, a more thorough risk assessment may be advisable before deciding whether to take a removal action.]

2.5.1 Previous Risk Assessments and Evaluations

[Discuss previous risk assessments and evaluations including any major findings (e.g., multi-pathways risk assessments, ATSDR health assessments, etc.)]

Conditions at the Site meet the following NCP requirements for a removal action (40 CFR 300.415(b)(2)): [List which of the 8 criteria are applicable.] Each of these documents is available for review in its entirety in the Administrative Record File for the Site which can be reviewed at [location of Administrative Record].

2.5.2 Health Effects Associated with Chemicals of Concern and Threat to Nearby Human Populations and Environment

[Discuss potential exposure to actual and potential releases of the chemicals of concern that are a threat to human health and the environment.]

[*EXAMPLE:* Potential exposure to actual and potential releases of [name chemicals of concern] which are known to be human carcinogens, and to [names of chemicals of concern which are toxins] which is/are known [type of health impact (e.g., respiratory irritant)] are provided by the pathways of inhalation, ingestion, and dermal contact. Both EPA and State studies have determined that releases of VOCs (particularly BTEX) and sulfur dioxide from both seeps and the subsurface waste bodies have occurred and will continue to occur unless action is taken. During the trial excavation in March 1992, a maximum sulfur dioxide reading of 75 ppm was recorded at the point excavation and puff type emissions 50 feet downwind reached a maximum of 13 ppmv. In 1989, emission isolation flux chamber sampling in and active seep in the Kathy/Allen trench area recorded BTEX values as high as 4000 ppbv for benzene, 330 ppbv for ethylbenzene, 8700 ppbv for toluene and 4590 ppbv for xylene.

Mild asthmatics at rest can experience a significant increase in airway resistance at exposures of 1 ppm of sulfur dioxide, and can experience airway resistance at exposures of 0.25-0.50 ppm while exercising during exposure. Normal healthy individuals who exercise during exposure, can experience increased airway resistance at concentrations as low as 1-3 ppm.]

[NIOSH Pocket Guide to Chemical Hazards, U.S. Department of Health and Human Services.

Dangerous Properties of Industrial Materials, Irving Sax, 1975.

Casarett & Doull's Toxicology The Basic Science of Poisons, John Doull, M.D., Ph.D., Curtes D. Kloossen, Ph.D., Mary O. Amdur, Ph.D., 1980.

Hazardous Chemicals Desk Reference, N. Irving Sax and Richard J. Lewis, Sr. 1987.

Material Safety Data Sheets: on CD-Rom in Southwest Division Safety Office.

NIOSH Criteria Documents.

ATSDR Health Assessments Documents.

IRIS, Heast, AQUIRE, TERRETOX, and PHYTOTOX Databases located in Code 1852.]

2.5.3 Documented Exposure Pathways

[Discuss documented exposure pathways for the chemicals of concern to reach potential or actual receptors.]

[*EXAMPLE:* Exposure by inhalation of sulfur dioxide and VOCs, particularly BTEX, can occur from emissions from seeps and waste material. These emissions occur in backyards which are used as play areas for children and families, and within a few feet of many eating areas, food preparation area, sleeping areas, and family rooms. Multiple releases into a swimming pool have been documented. Recently, a renter new to the area reported he became ill from "breathing the fumes", while digging up a seep and placing it in a cardboard box for disposal.]

2.5.4 Sensitive Populations

[Discuss each major chemical of concern and their impact on a sensitive population. Examples of sensitive populations are: children, elderly, hospital patients, endangered species, sensitive ecological habitats, etc.]

[*EXAMPLE:* Sulfur dioxide is a skin and respiratory irritant, and can be particularly debilitating to sensitive populations such as those with asthma or other respiratory problems, young children and the elderly. In a recent health survey of the tract, more than 40% of the households reported one or more family members with significant asthma, allergies or other respiratory problems such as emphysema. At least one resident is frequently hospitalized for treatment of a severe chronic respiratory condition.]

3.0 IDENTIFICATION OF REMOVAL ACTION OBJECTIVES

3.1 Statutory Framework

This removal action is taken pursuant to CERCLA and the NCP under the delegated authority of the Office of the President of the United States by Executive Order 12080 and 12580. These orders provide the U. S. Department of the Navy with authorization to conduct and finance removal actions. This removal action is non-time critical because a six month planning period was available from the time a removal action was determined to be necessary before the initiation of removal actions. The requirements for this EE/CA and its mandated public comment period provide opportunity for public input to the cleanup process. The entire process is also governed by [name any agreements (e.g., FFA, FFSRA, etc.) and by whom it was signed by (e.g., EPA, DTSC, RWQCB, etc.).]

The DON is the lead agency for the removal action. As such, DON has final approval authority over the recommended alternative and all public participation activities. The Southwest Division, Naval Facilities Engineering Command, is the regional manager of the DON's CERCLA program, and is therefore providing technical expertise to [name of activity] to conduct activities specific to the preparation of the EE/CA and the execution of the recommended alternative.

This EE/CA complies with the requirements of CERCLA, SARA, NCP at 40 CFR Part 300, DERP at 10 USC §2701, et seq., and EO 12580. This EE/CA is being pursued under 40 CFR Part 300.415 (b)(2) [list appropriate subsections].

3.2 Determination of Removal Scope

[Define the scope of the removal action. If the action is meant to be a final action for the media being addressed, state that. If not, state what the action is meant to accomplish and that the other problems at the site will be dealt with under subsequent removal or remedial actions, as necessary.]

3.3 Determination of Removal Schedule

[Discuss any factors that may affect the removal action schedule, such as the potential for exposure, weather, related construction schedules, or funding issues. This will provide a context for determining time-related removal action objectives.]

This EE/CA identifies and recommends alternatives. The EE/CA will be available for public review and comment for 30 days. [Name of activity] will review the comments and direct the incorporation of public comments in the final EE/CA. The removal action and site restoration activities are expected to be completed [number of months/years] after award of the removal contract.

3.4 Applicable or Relevant and Appropriate Requirements.

The NCP states, "Removal actions ... shall to the extent practicable considering the exigencies of the situation, attain applicable or relevant and appropriate requirements under federal environmental or state environmental or facility siting laws." [40 CFR 300.415(i)].

The evaluation of applicable or relevant and appropriate requirements for this EE/CA can be found in Appendix A. The following sections provide an overview of the ARARs process and a summary of those ARARs that potentially affect the development of removal action objectives.

3.4.1 ARARs Overview

Identification of applicable or relevant and appropriate requirements (ARARs) is a site-specific determination and involves a two-part analysis: first, a determination of whether a given requirement is applicable; then if it is not applicable, if it is relevant and appropriate. A requirement is deemed applicable if the specific terms of the law or regulation directly address the chemical of concern, remedial action, or place involved at the site. If the jurisdictional prerequisites of the law or regulation are not met, a legal requirement may nonetheless be relevant and appropriate if the site's circumstances are sufficiently similar to circumstances in which the law otherwise applies and it is well-suited to the conditions of the site.

A requirement must be substantive in order to constitute an ARAR for activities conducted onsite. Procedural or administrative requirements such as permits and reporting requirements are not ARARs.

In addition to ARARs, the NCP provides that where ARARs do not exist, agency advisories, criteria, or guidance are "to-be-considered" (TBC) useful "in helping to determine what is protective at a site or how to carry out certain actions or requirements" (55 Federal Register 8745). The NCP preamble states, however, that provisions in the TBC category "should not be required as cleanup standards because they are, by definition, generally neither promulgated nor enforceable, so they do not have the same status under CERCLA as do ARARs."

As the lead federal agency, the Navy has the primary responsibility for the identification of Federal ARARs at [insert site]. As the lead State agency, the California Department of Toxic Substances Control (DTSC) [insert name of other agencies if appropriate] has the responsibility for identifying State ARARs. [Add a sentence on the solicitation and receipt of State ARARs]. The ARARs identification process is discussed in more detail in Appendix A.

Requirements of ARARs and TBCs are generally divided into three categories: chemical-specific, location-specific, and action-specific requirements. Chemical-specific and location-specific

ARARs affecting the development of removal action objectives are discussed in the following section. Other chemical-specific, location-specific, and action-specific ARARs are presented in Section 4.0 for each of the alternatives considered. A detailed discussion of all of the ARARs considered for this EE/CA can be found in Appendix A.

3.4.2 ARARs Affecting Removal Action Objectives

[Provide a summary of the chemical-specific and any location-specific ARARs identified in Appendix A that impact the development of removal action objectives. These will primarily be regulatory criteria that set specific cleanup goals; however in special cases there may also be location-specific issues that may preclude certain actions at the site, such as destroying a habitat area, that should be considered when developing alternatives. *If ARARs were used as part of the streamlined risk evaluation in Section 2.5, be sure to reference back to that section as well.*]

3.5 Removal Action Objectives

[Provide a concise and coherent statement of the objective of the removal action based on the scope of the removal action, any schedule restrictions that have been identified, and the risk assessment and ARARs issues that have been identified.]

[*Example*: Based on CERCLA, the NCP, the risk assessment, and ARARs, the removal action objectives are as follows:

- Minimize further migration of groundwater containing VOCs that have emanated from Site 2.
- Reduce concentrations of VOCs in the groundwater in the area of concern to federal or state MCLs, whichever are more stringent.
- Prevent human exposure to groundwater containing levels of VOCs above the MCLs.]

4.0 IDENTIFICATION AND ANALYSIS OF REMOVAL ACTION ALTERNATIVES

Based on the objectives presented in the previous section, [number] alternatives have been developed for the removal action at [site]. These alternatives are described in the following sections and are evaluated based on effectiveness, implementability, and cost. For comparison, the No Action alternative is also evaluated as required under the NCP.

To evaluate effectiveness, consideration was given to the overall protection of human health and the environment, compliance with ARARs and other guidance, and both the long and short term effectiveness of the alternative. Evaluation of the implementability of each alternative included consideration of the technical feasibility, commercial availability has been examined, administrative feasibility and public acceptance.

The cost evaluation is based upon estimates for capital costs and annual operations and maintenance costs. Capital costs will include the costs for design, construction, equipment, mobilization, and decommissioning. Operations and maintenance costs include equipment rental, labor, analytical costs, transportation, and disposal fees (tippage). For this analysis, it has been assumed that all operations will be conducted by contractors at burdened labor costs of [state labor rate used] for operators/technicians and [state labor rate used] for engineers/supervisors. Because the alternatives have differing durations to completion, a present worth has been calculated for each based on the prime rate [state prime rate used] on [date used]. Interest was compounded monthly. The present worth analysis provides a single figure representing the amount of money that, if invested in the base year and dispersed as needed would cover all cost associated with the alternative. The present worth calculation normalizes alternatives that have differing operating life times facilitate comparisons. It must be noted that all "total project duration" numbers start at the time that the capital equipment is delivered to the site. It is assumed that procurement and design for all systems considered will be similar. Thus, this delay, usually 6 to 8 months, was not included in any of the project duration numbers.

4.1 [Name of alternative]

4.1.1 Description

[Provide a description of the alternative to the level of detail necessary to evaluate potential regulatory requirements and to perform a cost estimate.]

4.1.2 Effectiveness

[Provide a discussion of the effectiveness of the alternative. The following elements should be addressed:

- overall protection of public health and the environment

- compliance with ARARs and TBCs (include a summary of ARARs identified for that alternative from Appendix A and how well the alternative satisfies those requirements)
- Long-term effectiveness and permanence
- Reduction of toxicity, mobility, or volume through treatment
- Short-term effectiveness]

4.1.3 Implementability

[Provide a discussion of the implementability of the alternative. The following elements should be addressed:

- Technical feasibility
- Administrative feasibility
- Availability of services and materials
- State (or other support agency) acceptance
- Community acceptance]

4.1.4 Cost

[Provide a discussion of the cost of the alternative. Cost data should be provided in this format.]

Estimated Capital Cost ($):
Estimated Annual O&M Cost ($):
Estimated Duration of Removal (years):
Estimated Present Worth ($):

[This subsection should be repeated for every alternative considered. If necessary, supporting cost information can be provided in an appendix.]

5.0 COMPARATIVE ANALYSIS OF REMOVAL ACTION ALTERNATIVES

In this section, the alternatives analyzed in Section 4.0, are compared against each other in order to evaluate the relative performance of each alternative in relation to each of the criteria. The criteria used in this comparison are the same as in Section 4.0, namely effectiveness, implementability, and cost.

6.1.1 Effectiveness of Alternatives

[Discuss the relative effectiveness of each alternative in terms of accomplishing the removal action objectives. Rank alternatives for effectiveness.]

6.1.2 Implementability of Alternatives

[Discuss the relative implementability of each alternative in terms of accomplishing the removal action objectives. Rank alternatives for implementability.]

6.1.3 Cost of Alternatives

[Discuss the relative cost of each alternative. Rank alternatives for cost.]

6.0 RECOMMENDED REMOVAL ACTION ALTERNATIVE

The EE/CA was performed in accordance with current EPA and U.S. Navy guidance documents for a non-time critical removal action under CERCLA. The purpose of this EE/CA was to identify and analyze alternative removal actions to address [name of removal action and where located]. [Quantity] alternatives were identified, evaluated and ranked: [list alternatives evaluated].

Based on the comparative analyses of the removal action alternatives completed in Section 5.0, the recommended removal action is Alternative [list alternative selected]. [Provide brief 5-6 sentence description of alternative selected.]

This alternative is recommended because it [reason for selection (e.g., high in effectiveness, implementability, etc.)]. [Provide brief 5-6 discussion of backup for reasons.]

7.0 REFERENCES

[List provided below is not all inclusive. Add other references that were used in evaluating the alternatives or were as information sources. Other references to be included are investigative studies, regulations, technical papers, etc.]

40 CFR Part 300. 1990. National Oil and Hazardous Substances Pollution Contingency Plan. U. S. Code of Federal Regulations.

40 CFR Parts 300-375. 1993. Superfund, Emergency Planning, and Community Right-To-Know Programs. U. S. Code of Federal Regulations.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), Public Law 96-510

Naval Energy and Environmental Support Activity (NEESA). [Year IAS done.] Initial Assessment Study of [name of activity].

CERCLA Compliance with Other Laws Manual: Interim Final. 1988. EPA/540/G-89/006.

CERCLA Compliance with Other Laws Manual: Part II. Clean Air Act and Other Environmental Statutes and State Requirements. 1991. EPA/540/G-89/009.

Superfund Removal Procedures: Guidance on the Consideration of ARARs During Removal Actions. 1991. EPA/540/P-91/011.

Superfund Removal Procedures: Public Participation Guidance for On-Scene Coordinators - Community Relations and the Administrative Record. 1992. OERR Publication 9360.3-05.

Guidance on Conducting Non-Time Critical Removal Actions Under CERCLA. 1993. OSWER Publication 9360.0-32.

Community Relations in Superfund: A Handbook. 1992. OERR Directive 9230.0-03C.

Navy/Marine Corps Installation Restoration Manual. 1992.

Environmental and Natural Resources Program Manual, OPNAVINST 5090.1A or Environmental Compliance and Protection Manual, MCO P5090.2.

NOTE: LIKE ALL DOCUMENTS THAT SERVE AS THE BASIS FOR SUPERFUND DECISIONS, THIS DOCUMENT IS SUBJECT TO PUBLIC REVIEW AND MUST BE PART OF THE ADMINISTRATIVE RECORD. ALTHOUGH CONFIDENTIAL DOCUMENTS ARE TYPICALLY NOT RELIED UPON IN SELECTING RESPONSE ACTIONS, WHEN THEY ARE RELIED UPON THEY SHOULD BE CONTAINED IN A SEPARATE CONFIDENTIAL PORTION OF BOTH THE DOCUMENT ITSELF AND THE ADMINISTRATIVE RECORD. CONFIDENTIAL INFORMATION INCLUDES THE FOLLOWING:

- CLASSIFIED INFORMATION
- TRADE SECRETS, COMMERCIAL OR FINANCIAL INFORMATION
- STATE SECRETS
- CONFIDENTIAL INFORMANT FILES
- PRIVACY ACT PRIVILEGED INFORMATION, ATTORNEY-CLIENT PRIVILEGED INFORMATION, AND ATTORNEY WORK PRODUCT PRIVILEGED INFORMATION
- INFORMATION EXEMPTED BY OTHER STATUTES

APPENDIX A

Evaluation of Applicable or Relevant
and Appropriate Requirements

[Note: The ARARs appendix format with standardized text and tables can be found on the LAN in the J:\COMMON\LEGAL directory. The file names are as follows:

- *ARARTXT.WP5, text*
- *FEDCHEM.WP5, Federal chemical-specific ARAR table*
- *FEDLOC.WP5, Federal location-specific ARAR table*
- *FEDACT.WP5, Federal action-specific ARAR table*
- *CACHEM.WP5, California chemical-specific ARAR table*
- *CALOC.WP5, California location-specific ARAR table*
- *CAACT.WP5, California action-specific ARAR table]*