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FEDERAL FACILITY AGREEMENT FOR NAVAL STATION TREASURE ISLAND-HUNTERS POINT ANNEX

SEPTEMBER, 1990

Naval Station Treasure Island - Hunters Point Annex
Federal Facility Agreement

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 9
AND THE
STATE OF CALIFORNIA
AND THE
UNITED STATES NAVY

IN THE MATTER OF: The U.S. Department of the Navy Naval Station Treasure Island - Hunters Point Annex	)	Federal Facility Agreement Under CERCLA Section 120 Administrative Docket Number: 90-39

Based on the information available to the Parties on the effective date of this federal facility agreement (Agreement), and without trial or adjudication of any issues of fact or law, the Parties agree as follows:

1. PURPOSE

1.1 The general purposes of this Agreement are to:

(a) Ensure that the environmental impacts associated with past and present activities at the Site are thoroughly investigated and appropriate remedial action taken as necessary to protect the public health, welfare and the environment;

(b) Establish a procedural framework and schedule for developing, implementing and monitoring appropriate response actions at the Site in accordance with Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the National Contingency Plan (NCP), Superfund guidance and policy, the Resource Conservation and Recovery Act (RCRA), RCRA guidance and policy, and applicable State law; and

(c) Facilitate cooperation, exchange of information and participation of the Parties in such action; and,

(d) Ensure the adequate assessment of potential injury to natural resources, and the prompt notification, cooperation and coordination with the Federal and State Natural Resources Trustees necessary to guarantee the implementation of response actions achieving appropriate cleanup levels.

1.2 Specifically, the purposes of this Agreement are to:

(a) Identify operable unit (OU) alternatives which are appropriate at the Site prior to the implementation of final remedial action(s) for the Site. OU alternatives shall be identified and proposed to the Parties as early as possible prior to final proposal of OUs to EPA and the State pursuant to CERCLA and applicable State law. This process is designed to promote cooperation among the parties in identifying OU alternatives prior to the final selection of OUs. Operable units identified at Hunters Point Annex (HPA) shall be defined in Appendix A of this Agreement.

(b) Establish requirements for the performance of a Remedial Investigation (RI) to determine fully the nature and extent of the threat to the public health or welfare or the environment caused by the release and threatened release of hazardous substances, pollutants, or contaminants at the Site and to establish requirements for the performance of a Feasibility Study (FS) for the Site to identify, evaluate, and select alternatives for the appropriate remedial action(s) to prevent, mitigate, or abate the release or threatened release of hazardous substances, pollutants, or contaminants at the Site in accordance with CERCLA and applicable State law;

(c) Identify the nature, objective, and schedule of response actions to be taken at the Site. Response actions at the Site shall attain that degree of cleanup of hazardous substances, pollutants or contaminants mandated by CERCLA and applicable State law;

(d) Implement the selected remedial actions(s) in accordance with CERCLA and applicable State law;

(e) Assure compliance, through this Agreement, with RCRA and other federal and State hazardous waste laws and regulations for matters covered herein;

(f) Coordinate response actions at the Site with the mission and support activities at Hunters Point Annex;

(g) Expedite the cleanup process to the extent consistent with protection of human health and the environment;

(h) Provide for State involvement in the initiation, development, selection and enforcement of remedial actions to be undertaken at Hunters Point Annex, including the review of all

applicable data as it becomes available and the development of studies, reports, and action plans; and to identify and integrate State ARARs into the remedial action process.

(i) Provide for operation and maintenance of any remedial action selected and implemented pursuant to this Agreement.

2. PARTIES

2.1 The Parties to this Agreement are EPA, the Navy, and the State of California. The terms of the Agreement shall apply to and be binding upon EPA, the State of California, and the Navy.

2.2 This Agreement shall be enforceable against all of the Parties to this Agreement. This Section shall not be construed as an agreement to indemnify any person. The Navy shall notify its agents, members, employees, response action contractors for the Site, and all subsequent owners, operators, and lessees of the Site of the existence of this Agreement.

2.3 Each Party shall be responsible for ensuring that its contractors comply with the terms and conditions of this Agreement. Failure of a Party to provide proper direction to its contractors and any resultant noncompliance with this Agreement by a contractor shall not be considered a Force Majeure event or other good cause for extensions under Section 9 (Extensions), unless the Parties so agree or unless established by the dispute resolution process contained in Section 12. The Navy will notify EPA and the State of the identity and assigned tasks of each of its contractors performing work under this Agreement upon their selection.

2.4 The Department of Health Services (DHS) is the designated State agency, in accordance with the California Health and Safety Code section 25159.7, responsible for coordinating the federal programs to be carried out under this Agreement.

3. JURISDICTION

3.1 Each Party is entering into this Agreement pursuant to the following authorities:

(a) The U.S. Environmental Protection Agency (EPA), enters into those portions of this Agreement that relate to the Remedial Investigation/Feasibility Study (RI/FS) pursuant to section 120(e)(1) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. Section 9620(e)(1), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), Public Law 99-499 (hereinafter jointly referred to as CERCLA), and the Resource Conservation and Recovery Act (RCRA) Sections 6001, 3004(u) and

(v), 3008(h) and 7003, 42 U.S.C. Section 6961, 6924(u) and (v), 6928(h), and 6793, as amended by the Hazardous and Solid Waste Amendments of 1984 (HSWA) (hereinafter jointly referred to as RCRA), the Clean Water Act, 33 U.S.C. Section 1251 et. seq., and Executive Order 12580;

(b) EPA enters into those portions of this Agreement that relate to remedial actions pursuant to CERCLA Section 120(e)(2), 42 U.S.C. Section 9620(e)(2), RCRA Sections 6001, 3008(h), 3004(u) and (v), and 7003, 42 U.S.C. Sections 6961, 6928(h), 6924(u) & (v), the Clean Water Act, 33 U.S.C. Section 1251 et. seq., and Executive Order 12580;

(c) The Navy enters into those portions of this Agreement that relate to the RI/FS pursuant to CERCLA section 120(e)(1), 42 U.S.C. 9620(e)(1), RCRA sections 6001, 3008(h) and 3004(u) & (v), 42 U.S.C. 6961, 6928(h), 6924(u) & (v), the Clean Water Act, 33 U.S.C. Section 1251 et. seq., Executive Order 12580, the National Environmental Policy Act, 42 U.S.C. 4321, and the Defense Environmental Restoration program (DERP), 10 U.S.C. 2701 et. seq.;

(d) The Navy enters into those portions of this Agreement that relate to remedial actions pursuant to CERCLA section 120(e)(2), 42 U.S.C. 9620(e)(2), RCRA sections 6001, 3004(u) & (v), and 3008(h), 42 U.S.C. S 6961, 6928(h), 6924(u) & (v), the Clean Water Act, 33 U.S.C. Section 1251 et. seq., Executive Order 12580 and the Defense Environmental Restoration Program (DERP), the National Environmental Policy Act, 42 U.S.C. Section 4321; and

(e) The California Department of Health Services enters into this Agreement pursuant to CERCLA sections 120(f) and 121, 42 U.S.C. 9620(f) and 9621, and California Health and Safety Code sections 102 and 25355.5(a)(1)(C).

4. DEFINITIONS

4.1 Except as noted below or otherwise explicitly stated, the definitions provided in CERCLA, CERCLA case law, and the NCP shall control the meaning of terms used in this Agreement.

(a). "Agreement" shall refer to this document and shall include all Appendices to this document to the extent they are consistent with the original Agreement as executed or modified. All such Appendices shall be attached to and made an integral and enforceable part of this document. Copies of Appendices shall be available as part of the Administrative Record, as provided in Subsection 26.3.

(b). "Navy" shall mean U.S. Navy, its employees, members, agents, and authorized representatives as well as Department of Defense (DOD), to the extent necessary to effectuate the terms of this Agreement, including, but not limited to, appropriations and Congressional reporting requirements.

(c). "ARARs" shall mean federal and State applicable or relevant and appropriate requirements, standards, criteria, or limitations, identified pursuant to section 121 of CERCLA. ARARs shall apply in the same manner and to the same extent that such are applied to any non-governmental entity, facility, unit, or site, as defined in CERCLA and the NCP. See CERCLA section 120(a)(1), 42 U.S.C. 9620(a)(1).

(d). "CERCLA" shall mean the Comprehensive Environmental Response, Compensation and Liability Act, Public Law 96-510, 42 U.S.C. 9601 et. seq., as amended by the Superfund Amendments and Reauthorization Act of 1986, Public Law 99-499, and any subsequent amendments.

(e). "Days" shall mean calendar days, unless business days are specified. Any submittal that under the terms of this Agreement would be due on Saturday, Sunday, or a Federal or State holiday shall be due on the following business day.

(f). "DHS" shall mean the California Department of Health Services, its successors and assigns, and its duly authorized representatives.

(g). "EPA" shall mean the United States Environmental Protection Agency, its employees and authorized representatives.

(h). "Facility" shall have the same definition as in CERCLA section 101(9), 42 U.S.C. 9601(9).

(i). "Federal Facility" shall include Naval Station Treasure Island - Hunters Point Annex and any real property subject to the jurisdiction of Hunters Point Annex.

(j). "Feasibility Study" or "FS" means a study conducted pursuant to CERCLA and the NCP which fully develops, screens and evaluates in detail remedial action alternatives to prevent, mitigate, or abate the migration or the release of hazardous substances, pollutants, or contaminants at and from the Site. The Navy shall conduct and prepare the FS in a manner to support the intent and objectives of Section 17 (Statutory Compliance/RCRA-CERCLA Integration).

(k). "Meeting," in regard to Remedial Project Managers, shall mean an in-person discussion at a single location or a conference telephone call of all Remedial Project Managers. With the concurrence of the Remedial Project Managers, a conference call will suffice for an in-person meeting.

(l). "Natural Resources Trustee(s)" or "Federal or State Natural Resources Trustees" shall have the same meaning and authority as provided in CERCLA and the NCP.

(m). "Natural Resource Trustee(s) Notification and Coordination" shall have the same meaning as provided in CERCLA and the NCP.

(n). "National Contingency Plan" or "NCP" shall refer to the regulations contained in 40 CFR 300.1 et seq, and any subsequent amendments thereof.

(o). "Operable Unit" or "OU" shall have the same meaning as provided in the NCP.

(p). "Operation and maintenance" shall mean activities required to maintain the effectiveness of response actions.

(q). "OSC" or "On-Scene Coordinator" shall have the same meaning and authority as provided in the NCP.

(r). "RCRA" or "RCRA/HSWA" shall mean the Resource Conservation and Recovery Act of 1976, Public Law 94-580, 42 U.S.C. Sec. 6901 et. seq., as amended by the Hazardous and Solid Waste Amendments of 1984, Public Law 98-616, and any subsequent amendments.

(s). "Remedial Design" or "RD" shall have the same meaning as provided in the NCP.

(t). "Remedial Investigation" or "RI" means that investigation conducted pursuant to CERCLA and the NCP, as supplemented by the substantive provisions of the EPA RCRA Facilities Assessment guidance. The RI serves as a mechanism for collecting data for site and waste characterization and conducting treatability studies as necessary to evaluate performance and cost of the treatment technologies. The data gathered during the RI will also be used to conduct a baseline risk assessment, perform a feasibility study, and support design of a selected remedy. The Navy shall conduct and prepare the RI in a manner to support the intent and objectives of Section 17 (Statutory Compliance/RCRA-CERCLA Integration).

(u). "Remedial Project Manager" or "RPM" shall have the same meaning and authority as provided in the National Contingency Plan, 40 CFR 300.

(v). "Remedy" or "Remedial Action" or "RA" shall have the same meaning as provided in section 101(24) of CERCLA, 42 U.S.C. 9601(23), and the NCP, and may consist of Operable Units.

(w). "Remove" or "Removal" shall have the same meaning as provided in section 101(23) of CERCLA, 42 U.S.C. 9601(23), and the NCP.

(x). "Site" shall include the "federal facility" of Hunters Point Annex as defined above; the "facility" as defined above, and any area necessary for performance of remedial actions. For the purposes of obtaining permits, the terms "on-site" and "off-site" shall have the same meaning as provided in the NCP.

(y). "State" shall mean the State of California and its employees and authorized representatives, represented by the Department of Health Services (DHS).

5. DETERMINATIONS

5.1 This Agreement is based upon the placement of Hunters Point Annex(HPA), San Francisco County, California, on the National Priorities List by the Environmental Protection Agency on November 21, 1989, 54 Federal Register 48184.

5.2 Hunters Point Annex is a facility under the jurisdiction, custody, or control of the Department of Defense within the meaning of Executive Order 12580, 52 Federal Register 2923, 29 January 1987. The Department of the Navy is authorized to act on behalf of the Secretary of Defense for all functions delegated by the President through E.O. 12580 which are relevant to this Agreement.

5.3 Hunters Point Annex is a federal facility under the jurisdiction of the Secretary of Defense within the meaning of CERCLA section 120, 42 U.S.C. 9620, and Superfund Amendments and Reauthorization Act of 1986 (SARA) Sec. 211, 10 U.S.C. 2701 et seq., and subject to the Defense Environmental Restoration Program (DERP).

5.4 The Navy is the authorized delegate of the President under E.O. 12580 for receipt of notification by the State of its ARARs as required by CERCLA section 121(d)(2)(A)(ii), 42 U.S.C. Section 9621(d)(2)(A)(ii).

5.5 The authority of the Navy to exercise the delegated removal authority of the President pursuant to CERCLA Section 104, 42 U.S.C. Section 9604 is not altered by this Agreement.

5.6 The actions to be taken pursuant to this Agreement are reasonable and necessary to protect the public health, welfare, or the environment.

5.7 There are areas within the boundaries of the federal facility where hazardous substances have been deposited, stored, placed, or otherwise come to be located in accordance with 42 U.S.C. Sections 9601(9) and (14).

5.8 There have been releases of hazardous substances, pollutants or contaminants at or from the federal facility into the environment within the meaning of 42 U.S.C. Sections 9601(22), 9604, 9606, and 9607.

5.9 With respect to these releases, the Navy is an owner, operator, and/or generator subject to the provisions of 42 U.S.C. Section 9607 and within the meaning of California Health and Safety Code section 25323.5(a).

5.10 Included as an Attachment to this Agreement is a map showing source(s) of known or suspected contamination, based on information available at the time of the signing of this Agreement.

5.11 Appendix B to this Agreement shows those documents, secondary or primary, which have been accepted as final before or on the effective date of this Agreement.

5.12 The State issued a Remedial Action Order to the Navy which was effective on January 8, 1988 (Docket No. HSA 87/88-034RA). Remedial Action Order Docket No. HSA 87/88-034RA is superseded by this Agreement.

6. WORK TO BE PERFORMED

6.1 The Parties agree to perform the tasks, obligations and responsibilities described in this Section in accordance with CERCLA and CERCLA guidance and policy; the NCP; pertinent provisions of RCRA and RCRA guidance and policy; Executive Order 12580; applicable State laws and regulations; and all terms and conditions of this Agreement including documents prepared and incorporated in accordance with Section 7 (Consultation).

6.2 The Navy agrees to undertake, seek adequate funding for, fully implement and report on the following tasks, with participation of the Parties as set forth in this Agreement:

(a) Remedial Investigations of the Site;

(b) Feasibility Studies for the Site;

(c) All response actions, including Operable Units, for the Site;

(d) Operation and maintenance of response actions at the Site;

(e) Federal and State Natural Resources Trustee notification and coordination for the Site.

6.3 The Parties agree to:

(a) Make their best efforts to expedite the initiation of response actions for the Site, particularly for Operable Units;

(b) Carry out all activities under this Agreement so as to protect the public health, welfare and the environment.

6.4 Upon request, EPA and the State agree to provide any Party with guidance or reasonable assistance in obtaining guidance relevant to the implementation of this Agreement.

6.5 The work performed pursuant to this Agreement shall be under the direction and supervision of a qualified Professional Engineer, a Certified Engineering Geologist, or a Registered Geologist with expertise in hazardous waste site cleanup, and licensed in the State of California. The name and address of the project engineer, engineering geologist, or geologist chosen by the Navy shall be submitted to the other Parties within fifteen (15) calendar days of the effective date of this Agreement. All final draft primary documents must be signed by a registered Professional Engineer, a Certified Engineering Geologist, or a Registered Geologist, as appropriate to the nature of the document.

6.6 Beginning with the month following the effective date of this Agreement, and monthly thereafter, the Navy shall submit monthly progress reports on activities conducted pursuant to this Agreement. The reports shall be submitted within fifteen (15) calendar days of the end of the month, and shall describe: (1) specific actions taken by or on behalf of the Navy during the previous calendar month; (2) actions expected to be undertaken during the current calendar month; (3) any requirements under this Agreement that were not completed and any problems or anticipated problems in complying with this Agreement.

7. CONSULTATION: Review and Comment Process for Draft and Final Documents

7.1 Applicability: The provisions of this Section establish the procedures that shall be used by the Parties to provide each other with appropriate technical support, notice, review, comment, and response to comments regarding RI/FS and RD/RA documents, specified herein as either primary or secondary documents. In accordance with CERCLA section 120, 42 U.S.C. Sections 9620, and 10 U.S.C. Section 2705, the Navy will normally be responsible for issuing primary and secondary documents to EPA and the State. As of the effective date of this Agreement, all draft, draft final and final documents for any deliverable document identified

herein shall be prepared, distributed and subject to dispute in accordance with subsections 7.2 through 7.10 below. The designation of a document as "draft" or "final" is solely for purposes of consultation with EPA and the State in accordance with this Section. Such designation does not affect the obligation of the Parties to issue documents, which may be referred to herein as "final", to the public for review and comment as appropriate and as required by law.

7.2 General Process for RI/FS and RD/RA documents:

(a) Primary documents include those documents that are major, discrete portions of RI/FS and/or RD/RA activities. Primary documents are initially issued by the Navy in draft subject to review and comment by the EPA and the State. Following receipt of comments on a particular draft primary document, the Navy will respond to the comments received and issue a draft final primary document subject to dispute resolution. The draft final primary document will become the final primary document either thirty (30) days after the issuance of a draft final document if dispute resolution is not invoked or as modified by decision of the dispute resolution process.

(b) Secondary documents include those documents that are discrete portions of the primary documents and are typically input or feeder documents. Secondary documents are issued by the Navy in draft subject to review and comment by the EPA and the State . Although the Navy will respond to comments received, the draft secondary documents may be finalized in the context of the corresponding primary documents. A secondary document may be disputed at the time the corresponding draft final primary document is issued.

7.3 Primary Documents:

(a) The Navy shall complete and transmit drafts of the following primary documents for each remedial action to the EPA and the State for review and comment in accordance with the provisions of this Section:

(1) RI/FS Workplans (including Sampling and Analysis Plans, Quality Assurance Project Plan, Public Health and Environmental Evaluation Plan, Feasibility Study Plan, and Community Relations Plan), revised in accordance with this Agreement;

(2) Operable Unit Workplans and Reports not covered in other documents listed here

(3) RI Reports

(4) Public Health and Environmental Evaluation (Risk Assessment) Reports

(5) FS Reports

(6) Proposed Plans

(7) Records of Decision (RODs)

(8) Remedial Designs (RDs)

(9) Remedial Action Work Plans (to include schedules for RA, and operation and maintenance plans);

(10) Federal and State Natural Resources Trustee Notifications.

(b) Only draft final primary documents shall be subject to dispute resolution. The Navy shall complete and transmit draft primary documents in accordance with the timetable and deadlines established in Section 8 (Deadlines) of this Agreement.

(c) Primary documents may include target dates for subtasks as provided for in subsection 7.4(b) and 18.3. The purpose of target dates is to assist the Navy in meeting deadlines, but target dates do not become enforceable by their inclusion in the primary documents and are not subject to Section 8 (Deadlines), Section 9 (Extensions), or Section 13 (Enforceability).

7.4 Secondary Documents:

(a) The Navy shall complete and transmit drafts of the following secondary documents for each remedial action to the EPA and the State for review and comment.

(1) Site Characterization Summaries (part of RI)

(2) Sampling and Data Results (including summary reports)

(3) Treatability Studies (only if generated)

(4) Initial Screenings of Alternatives

(5) Well closure methods and procedures

(6) Detailed Analyses of Alternatives

(7) Work Plans for Subsequent Phases of Sampling Investigations

(b) Although EPA and the State will comment, in accordance with Section 7.7(b) on the drafts of the secondary documents listed above, such documents shall not be subject to dispute resolution except as provided by Subsection 7.2 hereof. Target dates for the completion and transmission of draft secon-

dary documents may be established by the Remedial Project Managers. The Remedial Project Managers also may agree upon additional secondary documents that are within the scope of the listed primary documents.

7.5. Meetings of the Remedial Project Managers. (See also Subsection 18.3.) The Remedial Project Managers shall meet in person approximately every sixty (60) days, except as otherwise agreed by the Parties, to review and discuss the progress of work being performed at the Site, including progress on the primary and secondary documents. However, progress meetings shall be held more frequently, but not less than thirty (30) days apart, upon request by any Remedial Project Manager. Prior to preparing any draft document specified in subsections 7.3 and 7.4 above, the Remedial Project Managers shall meet in an effort to reach a common understanding with respect to the contents of the draft document.

7.6 Identification and Determination of Potential ARARs.

(a) For those primary or secondary documents for which ARAR determinations are appropriate, prior to the issuance of a draft document, the Remedial Project Managers shall meet to identify and propose all potential ARARs pertinent to the document being addressed, including any permitting requirements which may be a source of ARARs. At that time, DHS shall identify potential State ARARs as required by CERCLA section 121(d)(2)(A)(ii), 42 U.S.C. Section 9621(d)(2)(A)(ii), which are pertinent to those activities for which they are responsible and to the document being addressed. Draft ARAR determinations shall be prepared by the Navy in accordance with CERCLA section 121(d)(2), 42 U.S.C. 9621(d)(2), the NCP and pertinent guidance issued by EPA.

(b) DHS, as the State coordinating agency, will contact those State and local governmental agencies which are a potential source of ARARs. The proposed ARARs obtained from the identified agencies will be submitted to the Navy, along with a list of those agencies who failed to respond to DHS's solicitation of proposed ARARs. The Navy will contact those agencies who failed to respond and again solicit these inputs.

(c) In identifying potential ARARs, the Parties recognize that actual ARARs can be identified only on a site-specific basis and that ARARs depend on the specific hazardous substances, pollutants and contaminants at a site, the particular actions associated with a proposed remedy and the characteristics of a site. The Parties recognize that ARAR identification is necessarily an iterative process and that potential ARARs must be identified and discussed among the Parties as early as possible, and must be re-examined throughout the RI/FS process until a ROD is issued.

7.7 Review and Comment on Draft Documents.

(a) The Navy shall complete and transmit each draft primary document to EPA and the State on or before the corresponding deadline established for the issuance of the document. The Navy shall complete and transmit the draft secondary documents in accordance with the target dates established for the issuance of such documents.

(b) Unless the Parties mutually agree to another time period, all draft documents shall be subject to a forty-five (45) day period for review and comment. Review of any document by the EPA and the State may concern all aspects of the document (including completeness) and should include, but is not limited to, technical evaluation of any aspect to the document, and consistency with CERCLA, the NCP, applicable California law, and any pertinent guidance or policy issued by the EPA or the State. At the request of any Remedial Project Manager, and to expedite the review process, the Navy shall make an oral presentation on the document to the Parties within fourteen (14) days following the request. Comments by the EPA and the State shall be provided with adequate specificity so that the Navy may respond to the comment and, if appropriate, make changes to the draft document. Comments shall refer to any pertinent sources of authority or references upon which the comments are based and, upon request of the Navy, the EPA or the State shall provide a copy of the cited authority or reference. EPA or the State may extend the forty-five (45) day comment period for an additional thirty (30) days by written notice to the Navy prior to the end of the forty-five (45) day period. On or before the close of the comment period, EPA and the State shall transmit their written comments to the Navy. In appropriate circumstances, this time period may be further extended in accordance with Section 9 (Extensions).

(c) Representatives of the Navy shall make themselves readily available to EPA and the State during the comment period for purposes of informally responding to questions and comments on draft documents. Oral comments made during such discussions need not be the subject of a written response by the Navy on the close of the comment period.

(d) In commenting on a draft document which contains a proposed ARAR determination, the EPA or the State shall include a reasoned statement of whether it objects to any portion of the proposed ARAR determination. To the extent that EPA or the State does object, it shall explain the basis for its objection in detail and shall identify any ARARs which it believes were not properly addressed in the proposed ARAR determination.

(e) Following the close of the comment period for a draft document, the Navy shall give full consideration to all written comments. Upon the request of any Party, the Parties shall hold a meeting to discuss all comments received within fifteen (15) days of the request. On a draft secondary document the

Navy shall, within forty-five (45) days of the close of the comment period, transmit to the EPA and the State its written response to the comments received. On a draft primary document the Navy shall, within forty-five (45) days of the close of the comment period, transmit to EPA and the State a draft final primary document, which shall include the Navy's response to all written comments received within the comment period. While the resulting draft final document shall be the responsibility of the Navy, it shall be the product of consensus to the maximum extent possible.

(f) The Navy may extend the forty-five (45) day period for either responding to comments on a draft document or for issuing the draft final primary document for an additional thirty (30) days by providing written notice to the EPA and the State. In appropriate circumstances, this time period may be further extended in accordance with Section 9 (Extensions).

7.8 Availability of Dispute Resolution for Draft Final Primary Documents.

(a) Dispute resolution shall be available to the Parties for draft final primary documents as set forth in Section 12 (Dispute Resolution).

(b) When dispute resolution is invoked on a draft final primary document, work may be stopped in accordance with the procedures set forth in Subsection 12.9 regarding dispute resolution.

7.9 Finalization of Documents. The draft final primary document shall serve as the final primary document if no party invokes dispute resolution regarding the document or, if invoked, at completion of the dispute resolution process should the Navy's position be sustained. If the Navy's determination is not sustained in the dispute resolution process, the Navy shall prepare, within not more than sixty (60) days, a revision of the draft final document which conforms to the results of dispute resolution. In appropriate circumstances, the time period for this revision period may be extended in accordance with Section 9 (Extensions).

7.10 Subsequent Modification of Final Documents. Following finalization of any primary document (other than the Community Relations Plan) pursuant to Subsection 7.9 above, any Party may seek to modify the document including seeking additional field work, pilot studies, computer modeling or other supporting technical work, only as provided in subparagraphs (a) and (b) below.

(a) Any Party may seek to modify a document after finalization if it determines, based on new information (i.e., information that becomes available, or conditions that become known, after the document was finalized) that the requested modification is necessary. Any party may seek such a modifica-

tion by submitting a concise written request to the Remedial Project Managers of the other Parties. The request shall specify the nature of the requested modification and how the request is based on new information.

(b) In the event that a consensus is not reached by the Remedial Project Managers on the need for a modification, any Party may invoke dispute resolution to determine if such modification shall be conducted. Modification of a document shall be required only upon a showing that:

(1) The requested modification is based on significant new information; and

(2) The requested modification could be of significant assistance in evaluating impacts on the public health or the environment, in evaluating the selection of remedial alternatives, or in protecting human health and the environment.

(c) Nothing in this Section shall alter EPA's or the State's ability to request the performance of additional work which was not contemplated by this Agreement. The Navy's obligation to perform such work must be established by either a modification of a document or by amendments to this Agreement.

8. DEADLINES

8.1. All deadlines agreed upon before the effective date of this Agreement shall be incorporated into Appendix A of this Agreement. To the extent that deadlines have already been mutually agreed upon by the Parties prior to the execution of this Agreement, they will satisfy the requirements of this Section and remain in effect, shall be published in accordance with Subsection 8.2, and shall be incorporated into the appropriate work plans.

8.2 Within twenty-one (21) days of issuance of the Record of Decision for any operable unit or for the final remedy, the Navy shall propose deadlines for completion of the following draft primary documents:

(a) Remedial Designs

(b) Remedial Action Work Plans (to include schedules for RA, and operation and maintenance plans).

Within fifteen (15) days of receipt, EPA and the State shall review and provide comments to the Navy regarding the proposed deadlines. Within fifteen (15) days following receipt of the comments the Navy shall, as appropriate, make revisions and reissue the proposal. The Parties shall meet as necessary to discuss and finalize the proposed deadlines. All agreed-upon deadlines shall be incorporated into the appropriate work plans.

If the Parties fail to agree within thirty (30) days on the proposed deadlines, the matter shall immediately be submitted for dispute resolution pursuant to Section 12 (Dispute Resolution). The final deadlines established pursuant to this Subsection shall be published by EPA, in conjunction with the State, and shall be included as Appendix A of this Agreement.

8.3 For any operable units not identified as of the effective date of this Agreement, the Navy shall propose deadlines for all documents listed in Subsection 7.3 (a)(1) through (7) (with the exception of the Community Relations Plan) within twenty-one (21) days of agreement on the proposed operable unit by all Parties. These deadlines shall be proposed, finalized and published using the same procedures set forth in Subsection 8.2, above.

8.4 The deadlines set forth in this Section, or to be established as set forth in this Section, may be extended pursuant to Section 9 (Extensions). The Parties recognize that one possible basis for extension of the deadlines for completion of the Remedial Investigation and Feasibility Study Reports is the identification of significant new Site conditions during the performance of the remedial investigation.

9. EXTENSIONS

9.1 Timetables, deadlines and schedules shall be extended upon receipt of a timely request for extension and when good cause exists for the requested extension. Any request for extension by a Party shall be submitted to the other Parties in writing and shall specify:

(a) The timetable, deadline or schedule that is sought to be extended;

(b) The length of the extension sought;

(c) The good cause(s) for the extension; and

(d) The extent to which any related timetable and deadline or schedule would be affected if the extension were granted.

9.2 Good cause exists for an extension when sought in regard to:

(a) An event of Force Majeure;

(b) A delay caused by another Party's failure to meet any requirement of this Agreement;

(c) A delay caused by the good faith invocation of dispute resolution or the initiation of judicial action;

(d) A delay caused, or which is likely to be caused, by the grant of an extension in regard to another timetable and deadline or schedule;

(e) A delay caused by public comment periods or hearings required under State law in connection with the State's performance of this Agreement;

(f) Any work stoppage within the scope of Section 11 (Emergencies and Removals); or

(g) Any other event or series of events mutually agreed to by the Parties as constituting good cause.

9.3 Absent agreement of the Parties with respect to the existence of good cause, a Party may seek and obtain a determination through the dispute resolution process that good cause exists.

9.4 Within seven days of receipt of a request for an extension of a timetable, deadline or schedule, each receiving Party shall advise the requesting Party in writing of the receiving Party's position on the request. Any failure by a receiving Party to respond within the 7-day period shall be deemed to constitute concurrence with the request for extension. If a receiving Party does not concur in the requested extension, it shall include in its statement of non-concurrence an explanation of the basis for its position.

9.5 If there is consensus among the Parties that the requested extension is warranted, the Navy shall extend the affected timetable and deadline or schedule accordingly. If there is no consensus among the Parties as to whether all or part of the requested extension is warranted, the timetable and deadline or schedule shall not be extended except in accordance with a determination resulting from the dispute resolution process.

9.6 The requesting Party may invoke dispute resolution only within seven days of receipt of a statement of non-concurrence with the requested extension.

9.7 A timely and good faith request by the Navy for an extension shall toll any assessment of stipulated penalties or application for judicial enforcement of the affected timetable and deadline or schedule until a decision is reached on whether the requested extension will be approved. If dispute resolution is invoked and the requested extension is denied, stipulated penalties may be assessed and may accrue from the date of the original timetable, deadline or schedule. Following the grant of an extension, an assessment of stipulated penalties or an application for judicial enforcement may be sought only to compel compliance with the timetable and deadline or schedule as most recently extended.

10. FORCE MAJEURE

10.1 A Force Majeure shall mean any event arising from causes beyond the control of a Party that causes a delay in or prevents the performance of any obligation under this Agreement, including, but not limited to, acts of God; fire; war; insurrection; civil disturbance; explosion; unanticipated breakage or accident to machinery, equipment or lines of pipe despite reasonably diligent maintenance; adverse weather conditions that could not be reasonably anticipated; unusual delay in transportation; restraint by court order or order of public authority; inability to obtain, at reasonable cost and after exercise of reasonable diligence, any necessary authorizations, approvals, permits, or licenses due to action or inaction of any governmental agency or authority other than the Navy; delays caused by compliance with applicable statutes or regulations governing contracting, procurement or acquisition procedures, despite the exercise of reasonable diligence; and insufficient availability of appropriated funds which have been diligently sought. In order for Force Majeure based on insufficient funding to apply to the Navy, the Navy shall have made timely request for such funds as part of the budgetary process as set forth in Section 15 (Funding). A Force Majeure shall also include any strike or other labor dispute, whether or not within the control of the Parties affected thereby. Force Majeure shall not include increased costs or expenses of Response Actions, whether or not anticipated at the time such Response Actions were initiated.

11. EMERGENCIES AND REMOVALS

11.1 Discovery and Notification. If any Party discovers or becomes aware of an emergency or other situation that may present an endangerment to public health, welfare or the environment at or near the Site, which is related to or may affect the work performed under this Agreement, that Party shall immediately orally notify all other Parties. If the emergency arises from activities conducted pursuant to this Agreement, the Navy shall then take immediate action to notify the appropriate State and and local agencies and affected members of the public.

11.2 Work Stoppage

In the event any Party determines that activities conducted pursuant to this Agreement will cause or otherwise be threatened by a situation described in Subsection 11.1, the Party may propose the termination of such activities. If the Parties mutually agree, the activities shall be stopped for such period of time as required to abate the danger. In the absence of mutual agreement, the activities shall be stopped in accordance with the proposal, and the matter shall be immediately referred to the EPA Hazardous Waste Management Division Director for a work stoppage determination in accordance with Section 12.9.

11.3 Removal Actions

(a) The provisions of this Section shall apply to all removal actions as defined in CERCLA section 101(23), 42 U.S.C. Section 9601(23) and Health and Safety Code section 25323, including all modifications to, or extensions of, the ongoing removal actions, and all new removal actions proposed or commenced following the effective date of this Agreement.

(b) Any removal actions conducted at the Site shall be conducted in a manner consistent with this Agreement, CERCLA, the NCP and Executive Order 12580.

(c) Nothing in this Agreement shall alter the Navy's authority with respect to removal actions conducted pursuant to section 104 of CERCLA, 42 U.S.C. 9604.

(d) Nothing in this Agreement shall alter any authority the State or EPA may have with respect to removal actions conducted at the Site.

(e) All reviews conducted by EPA and the State pursuant to 10 U.S.C. 2705(b)(2) will be expedited so as not to unduly jeopardize fiscal resources of the Navy for funding the removal actions.

(f) If a Party determines that there may be an endangerment to the public health or welfare or the environment because of an actual or threatened release of a hazardous substance, pollutant or contaminant at or from the Site, the Party may request that the Navy take such response actions as may be necessary to abate such danger or threat and to protect the public health or welfare or the environment. Such actions might include response actions listed in CERCLA section 101(23) or (24), or such other relief as the public interest may require.

11.4 Notice and Opportunity to Comment.

(a) The Navy shall provide the other Parties with timely notice and opportunity to review and comment upon any proposed removal action for the Site, in accordance with 10 U.S.C. 2705(a) and (b). The Navy agrees to provide the information described below pursuant to such obligation.

(b) For emergency response actions, the Navy shall provide the EPA and the State with notice in accordance with Subsection 11.1. Except in the case of extreme emergencies, such oral notification shall include adequate information concerning the site background, threat to the public health and welfare or the environment (including the need for response), proposed actions and costs (including a comparison of possible alternatives, means of transportation of any hazardous substances off-site, and proposed manner of disposal), expected change in the situation should no action be taken or should action be delayed (including

associated environmental impacts), any important policy issues, and the Navy On-Scene Coordinator recommendations. Within forty-five (45) days of completion of the emergency action, the Navy will furnish EPA and the State with an Action Memorandum addressing the information provided in the oral notification, and any other information required pursuant to CERCLA and the NCP, and in accordance with pertinent EPA guidance, for such actions.

(c) For other removal actions, the Navy will provide EPA and the State with any information required by CERCLA, the NCP, and in accordance with pertinent EPA guidance, such as the Action Memorandum, the Engineering Evaluation/Cost Analysis (in the case of non-time-critical removals) and, to the extent it is not otherwise included, all information required to be provided in accordance with paragraph (b) of this Subsection. Such information shall be furnished at least forty-five (45) days before the response action is to begin.

(d) All activities related to ongoing removal actions shall be reported by the Navy in the progress reports as described in Section 18 (Remedial Project Managers).

11.5 Any dispute among the Parties as to whether a proposed response action is properly considered a removal action, as defined by 42 U.S.C. 9601(23), or as to the consistency of a removal action with the NCP or the final remedial action, shall be resolved pursuant to Section 12 (Dispute Resolution). Such dispute may be brought directly to the DRC or the SEC at any Party's request.

11.6 The Parties shall seek to resolve any dispute as to whether the Navy will take a removal action requested by any Party under Subsection 11.3(f), including any additional response action requested as part of a planned removal action, through the ddispute resolution process contained in Section 12 (Dispute Resolution), excluding subsections 12.6 and 12.7 and including subsections 12.12(a) and (b). Subsections 12.12(a) and (b) shall apply only to disputes arising under this subsection (11.6). EPA and the State reserve any and all rights each may have with regard to whether the Navy will take a removal action requested by any Party pursuant to subsection 11.3(f) once the dispute resolution process specified in this subsection is exhausted, and notwithstanding Section 31 (Covenant Not To Sue and Reservation of Rights).

12. DISPUTE RESOLUTION

12.1 Except as specifically set forth elsewhere in this Agreement, if a dispute arises under this Agreement, the procedures of this Section shall apply. Any party may invoke this dispute resolution procedure. All Parties to this Agreement shall make reasonable efforts to informally resolve disputes at

the Remedial Project Manager or immediate supervisor level. If resolution cannot be achieved informally, the procedures of this Section shall be implemented to resolve a dispute.

12.2 Within thirty (30) days after: (a) the issuance of a draft final primary document pursuant to Section 7 (Consultation), or (b) any action which leads to or generates a dispute, the disputing Party shall submit to the Dispute Resolution Committee (DRC) a written statement of dispute setting forth the nature of the dispute, the work affected by the dispute, the disputing Party's position with respect to the dispute and the technical, legal or factual information the disputing Party is relying upon to support its position.

12.3 Prior to any Party's issuance of a written statement of a dispute, the disputing Party shall engage the other Party in informal dispute resolution among the Remedial Project Managers and/or their immediate supervisors. During this informal dispute resolution period the Parties shall meet as many times as are necessary to discuss and attempt resolution of the dispute.

12.4 The DRC will serve as a forum for resolution of dispute for which agreement has not been reached through informal dispute resolution. The Parties shall each designate one individual and an alternate to serve on the DRC. The individuals designated to serve on the DRC shall be employed at the policy level Senior Executive Service (SES) or equivalent or be delegated the authority to participate on the DRC for the purposes of dispute resolution under this Agreement. The EPA representative on DRC is the Deputy Director for Superfund of EPA's Region 9. The Navy's designated member is the Director, Office of Environmental Management. The DHS representative is the Chief of the Site Mitigation Branch, Region 2. Written notice of any delegation of authority from a Party's designated representative on the DRC shall be provided to all other Parties pursuant to the procedures of Section 21 (Notification).

12.5 Following elevation of a dispute to the DRC, the DRC shall have twenty-one (21) days to unanimously resolve the dispute and issue a written decision. If the DRC is unable to unanimously resolve the dispute within this twenty-one (21) day period, the written statement of dispute shall be forwarded to the Senior Executive Committee (SEC) for resolution within seven (7) days after the close of the twenty-one (21) day resolution period.

12.6 The SEC will serve as the forum for resolution of disputes for which agreement has not been reached by the DRC. The EPA representative on the SEC is the Regional Administrator of EPA Region 9. The Navy's representative on the SEC is the Commanding Officer, Western Division, Naval Facilities Engineering Command. The DHS representative on the SEC is the Regional Administrator for DHS Region 2. The SEC members shall, as appropriate, confer, meet and exert their best efforts to resolve

the dispute and issue a written decision. If unanimous resolution of the dispute is not reached within twenty-one (21) days, EPA's Regional Administrator shall issue a written position on the dispute. The Navy or the State may, within fourteen (14) days of the Regional Administrators' issuance of EPA's position, issue a written notice elevating the dispute to the Administrator of EPA for resolution in accordance with all applicable laws and procedures. In the event the Navy or the State elects not to elevate the dispute to the Administrator within the designated fourteen (14) day escalation period, the Navy and the State shall be deemed to have agreed with the Regional Administrator's written position with respect to the dispute.

12.7 Upon escalation of a dispute to the Administrator of EPA pursuant to Subsection 12.6 above, the Administrator will review and resolve the dispute within twenty-one (21) days. Upon request, and prior to resolving the dispute, the EPA Administrator shall meet and confer with the Assistant Secretary of the Navy (Installations and Environment) and DHS Chief Deputy Director to discuss the issue(s) under dispute. Upon resolution, the Administrator shall provide the Navy and the State with a written final decision setting forth resolution of the dispute. The duties of the Administrator set forth in this Section shall not be delegated.

12.8 The pendency of any dispute under this Section shall not affect any Party's responsibility for timely performance of the work required by this Agreement, except that the time period for completion of work affected by such dispute shall be extended for a period of time usually not to exceed the actual time taken to resolve any good faith dispute in accordance with the procedures specified herein. All elements of the work required by this Agreement which are not affected by the dispute shall continue and be completed in accordance with the applicable timetable and deadline or schedule.

12.9 When dispute resolution is in progress, work affected by the dispute will immediately be discontinued if the Hazardous Waste Management Division Director for EPA Region 9 requests, in writing, that work related to the dispute be stopped because, in EPA's opinion, such work is inadequate or defective, and such inadequacy or defect is likely to yield an adverse effect on human health or the environment, or is likely to have a substantial adverse effect on the remedy selection or implementation process. The State may request the EPA Hazardous Waste Management Division Director to order work stopped for the reasons set out above. To the extent possible, the Party seeking a work stoppage shall consult with the other Parties prior to initiating a work stoppage request. After work stoppage, if a Party believes that the work stoppage is inappropriate or may have potential significant adverse impacts, the Party may meet with the other Parties to discuss the work stoppage. Following this meeting, and further considerations of this issue the EPA Hazardous Waste Management Division Director will issue, in writing, a final decision with

respect to the work stoppage. The final written decision of the EPA Hazardous Waste Management Division Director may immediately be subject to formal dispute resolution. Such dispute may be brought directly to either the DRC or the SEC, at the discretion of the Party requesting dispute resolution.

12.10 Within twenty-one (21) days of resolution of a dispute pursuant to the procedures specified in this Section, the Navy shall incorporate the resolution and final determination into the appropriate plan, schedule or procedures and proceed to implement this Agreement according to the amended plan, schedule or procedures.

12.11 Resolution of a dispute pursuant to this Section of the Agreement constitutes a final resolution of any dispute arising under this Agreement. All Parties shall abide by all terms and conditions of any final resolution of dispute obtained pursuant to this Section of this Agreement.

12.12 The following special dispute resolution procedures shall apply only to disputes arising pursuant to Section 11.6 of this Agreement. Disputes arising pursuant to Section 11.6 shall be submitted to the Dispute Resolution Committee, which shall have ten (10) days to unanimously resolve the dispute. The DRC shall forward an unresolved dispute to the SEC within four (4) days of the end of the ten-day period.

(a) The SEC will serve as the forum for resolution of disputes for which agreement has not been reached by the DRC. The EPA representative on the SEC is the Regional Administrator of EPA Region 9. The Navy's representative on the SEC is the Commanding Officer, Western Division, Naval Facilities Engineering Command. The DHS representative on the SEC is the Regional Administrator for DHS Region 2. The SEC members shall, as appropriate, confer, meet and exert their best efforts to resolve the dispute and issue a written decision. If unanimous resolution of the dispute is not reached within seven (7) days, Commanding Officer, Western Division, Naval Facilities Engineering Command shall issue a written position on the dispute. EPA or the State may, within four (4) days of issuance of the Navy's position by the Commanding Officer, Western Division, Naval Facilities Engineering Command, issue a written notice elevating the dispute to the Assistant Secretary of the Navy (Installations and Environment) for resolution in accordance with all applicable laws and procedures. In the event EPA or the State elects not to elevate the dispute to the Assistant Secretary of the Navy (Installations and Environment) within the designated four (4) day escalation period, EPA and the State shall be deemed to have agreed with the written position of the Commanding Officer, Western Division, Naval Facilities Engineering Command with respect to the dispute.

(b) Upon escalation of a dispute to the Assistant Secretary of the Navy (Installations and Environment) pursuant to Subsection 12.12(a), the Assistant Secretary of the Navy (Installations and Environment) will review and seek to resolve the dispute in a manner acceptable to all Parties to the dispute within seven (7) days. Upon request, and prior to issuing its recommended resolution, the Assistant Secretary of the Navy (Installations and Environment) shall meet and confer with the EPA Administrator's Representative and the DHS Chief Deputy Director to discuss the issue(s) under dispute. The Assistant Secretary of the Navy (Installations and Environment) shall provide EPA and the State with its proposed resolution of the dispute(s). In the event EPA or the State do not concur with the resolution to the dispute(s) proposed by the Assistant Secretary of the Navy (Installations and Environment), EPA and the State retain any right each possessed with regard to the issues raised in the dispute. Such nonconcurrence must be transmitted in writing to the Assistant Secretary of the Navy (Installations and Environment) within seven (7) days of receipt of his/her issuance of the proposed resolution. Failure to transmit such nonconcurrence will be presumed to signify concurrence.

13. ENFORCEABILITY

13.1 The Parties agree that:

(a) Upon the effective date of this Agreement, any standard, regulation, condition, requirement or order which has become effective under CERCLA and is incorporated into this Agreement is enforceable by any person pursuant to CERCLA Section 310, and any violation of such standard, regulation, condition, requirement or order will be subject to civil penalties under CERCLA sections 310(c) and 109;

(b) All timetables or deadlines associated with the RI/FS shall be enforceable by any person pursuant to CERCLA section 310, and any violation of such timetables or deadlines will be subject to civil penalties under CERCLA sections 310(c) and 109;

(c) All terms and conditions of this Agreement which relate to remedial actions, including corresponding timetables, deadlines or schedules, and all work associated with remedial actions, shall be enforceable by any person pursuant to CERCLA section 310(c), and any violation of such terms or conditions will be subject to civil penalties under CERCLA sections 310(c) and 109; and

(d) Any final resolution of a dispute pursuant to Section 12 (Dispute Resolution) of this Agreement which establishes a term, condition, timetable, deadline or schedule shall be enforceable by any person pursuant to CERCLA section 310(c), and

any violation of such terms, condition, timetable, deadline or schedule will be subject to civil penalties under CERCLA sections 310(c) and 109.

13.2 Nothing in this Agreement shall be construed as authorizing any person to seek judicial review of any action or work where review is barred by any provision of CERCLA including CERCLA section 113(h).

13.3 Nothing in this Agreement shall be construed as a restriction or waiver of any rights the EPA or the State may have under CERCLA, including but not limited to any rights under sections 113 and 310, 42 U.S.C. Sections 9613 and 9659. The Navy does not waive any rights it may have under CERCLA section 120, SARA section 211 and Executive Order 12580.

13.4 The Parties agree to exhaust their rights under Section 12 (Dispute Resolution) prior to exercising any rights to judicial review that they may have.

13.5 The Parties agree that all Parties shall have the right to enforce the terms of this Agreement.

14. STIPULATED PENALTIES

14.1 In the event that the Navy fails to submit a primary document listed in Section 7 (Consultation) to EPA and the State pursuant to the appropriate timetable or deadline in accordance with the requirements of this Agreement, or fails to comply with a term or condition of this Agreement which relates to an operable unit or final remedial action, EPA may assess a stipulated penalty against the Navy. The State may also recommend to EPA that a stipulated penalty be assessed. A stipulated penalty may be assessed in an amount not to exceed $5,000 for the first week (or part thereof), and $10,000 for each additional week (or part thereof) for which a failure set forth in this Subsection occurs.

14.2 Upon determining that the Navy has failed in a manner set forth in Subsection 14.1, EPA shall so notify the Navy in writing. If the failure in question is not already subject to dispute resolution at the time such notice is received, the Navy shall have fifteen (15) days after receipt of the notice to invoke dispute resolution on the question of whether the failure did in fact occur. The Navy shall not be liable for the stipulated penalty assessed by EPA if the failure is determined, through the dispute resolution process, not to have occurred. No assessment of a stipulated penalty shall be final until the conclusion of dispute resolution procedures related to the assessment of the stipulated penalty.

14.3 The annual reports required by CERCLA section 120(e)(5), 42 U.S.C. 9620(e)(5), shall include, with respect to each final assessment of a stipulated penalty against the Navy under this Agreement, each of the following:

(a) The federal facility responsible for the failure;

(b) A statement of the facts and circumstances giving rise to the failure;

(c) A statement of any administrative or other corrective action taken at the relevant federal facility, or a statement of why such measures were determined to be inappropriate;

(d) A statement of any additional action taken by or at the federal facility to prevent recurrence of the same type of failure; and

(e) The total dollar amount of the stipulated penalty assessed for the particular failure.

14.4 Stipulated penalties assessed pursuant to this Section shall be payable to the Hazardous Substances Response Trust Fund only in the manner and to the extent expressly provided for in acts authorizing funds for, and appropriations to, the DOD. EPA and the State agree, to the extent allowed by law, to divide equally any stipulated penalties paid on behalf of Hunters Point Annex, with 50% allocated to EPA and 50% allocated to the State.

14.5 In no event shall this Section give rise to a stipulated penalty in excess of the amount set forth in CERCLA section 109, 42 U.S.C. 9609.

14.6 This Section shall not affect the Navy's ability to obtain an extension of a timetable, deadline or schedule pursuant to Section 9 (Extensions).

14.7 Nothing in this Agreement shall be construed to render any officer or employee of the Navy personally liable for payment of any stipulated penalty assessed pursuant to this Section.

15. FUNDING

15.1 It is the expectation of the Parties to this agreement that all obligations of the Navy arising under this Agreement will be fully funded. The Navy agrees to seek sufficient funding through the DOD budgetary process to fulfill its obligations under this Agreement.

15.2 In accordance with CERCLA section 120 (e)(5)(B), 42 U.S.C. Section 9620 (e)(5)(B), the Navy shall include, in its submission to the Department of Defense annual report to Congress, the specific cost estimates and budgetary proposals associated with the implementation of this Agreement.

15.3 Any requirement for the payment or obligation of funds, including stipulated penalties, by the Navy established by the terms of this Agreement shall be subject to the availability of appropriated funds, and no provision herein shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 U.S.C. 1341. In cases where payment or obligation of funds would constitute a violation of the Anti-Deficiency Act, the dates established requiring the payment or obligation of such funds shall be appropriately adjusted.

15.4 If appropriated funds are not available to fulfill the Navy's obligations under this Agreement, the EPA and the State reserve the right to initiate an action against any other person, or to take any response action, which would be appropriate absent this Agreement.

15.5 Funds authorized and appropriated annually by Congress under the "Environmental Restoration, Defense" appropriation in the Department of Defense Appropriation Act and allocated by the Deputy Assistant Secretary of Defense for Environment to the Navy will be the source of funds for activities required by this Agreement consistent with section 211 of CERCLA, 10 U.S.C. Chapter 160. However, should the Environmental Restoration, Defense appropriation be inadequate in any year to meet the total Navy CERCLA implementation requirements, the DOD shall employ and the Navy shall follow a standardized DOD prioritization process which allocates that year's appropriations in a manner which maximizes the protection of human health and the environment. A standardized DOD prioritization model shall be developed and utilized with the assistance of the EPA and the State.

16. EXEMPTIONS

16.1 The obligation of the Navy to comply with the provisions of this Agreement may be relieved by:

(a) A Presidential order of exemption issued pursuant to the provisions of CERCLA section 120(j)(1), 42 U.S.C. 9620(j)(1), or RCRA section 6001, 42 U.S.C. 6961; or

(b) The order of an appropriate court.

16.2 The State reserves any statutory right they may have to challenge any Presidential Order relieving the Navy of its obligations to comply with this Agreement.

17. STATUTORY COMPLIANCE/RCRA-CERCLA INTEGRATION

17.1 The Parties intend to integrate the Navy's CERCLA response obligations and RCRA corrective action obligations which relate to the release(s) of hazardous substances, hazardous wastes, pollutants or contaminants covered by this Agreement into this comprehensive Agreement. Therefore, the Parties intend that activities covered by this Agreement will achieve compliance with CERCLA, 42 U.S.C. Section 9061 et. seq.; to satisfy the corrective action requirements of RCRA section 3004(u) & (v), 42 U.S.C. Section 6924(u) & (v), for a RCRA permit, and RCRA section 3008(h), 42 U.S.C. Section 6928 (h), for interim status facilities; and to meet or exceed all applicable or relevant and appropriate federal and State laws and regulations, to the extent required by CERCLA section 121, 42 U.S.C. Section 9621.

17.2 Based upon the foregoing, the Parties intend that any remedial action selected, implemented and completed under this Agreement will be protective of human health and the environment such that remediation of releases covered by this Agreement shall obviate the need for further corrective action under RCRA (i.e., no further corrective action shall be required). The Parties agree that with respect to releases of hazardous waste covered by this Agreement, RCRA shall be considered an applicable or relevant and appropriate requirement pursuant to CERCLA section 121, 421 U.S.C. 9621.

17.3 The Parties recognize that the requirement to obtain permits for response actions undertaken pursuant to this Agreement shall be as provided for in CERCLA and the NCP. The parties recognize that activities at Hunters Point Annex may require the issuance of permits under federal and State laws. This Agreement does not affect the requirements, if any, to obtain such permits. However, if a permit is issued to the Navy for hazardous waste management activities at the Site, the issuing party shall reference and incorporate in a permit condition any appropriate provision, including appropriate schedules (and the provision for extension of such schedules), of this Agreement into such permit. The Parties intend that any judicial review of any permit condition which references this Agreement shall, to the extent authorized by law, only be reviewed under the provisions of CERCLA.

18. REMEDIAL PROJECT MANAGERS

18.1 On or before the effective date of this Agreement, EPA, the Navy and the State shall each designate a Remedial Project Manager and an alternate (each hereinafter referred to as Remedial Project Manager or RPM), for the purpose of overseeing the implementation of this agreement. The RPMs shall be responsible on a daily basis for assuring proper implementation of the RI/FS and the RD/RA in accordance with the terms of the Agreement. In addition to the formal notice provisions set forth in

Section 21 (Notification), to the maximum extent possible, communications among the Navy, EPA and the State on all documents, including reports, comments, and other correspondence concerning the activities performed pursuant to this Agreement, shall be directed through the RPMs.

18.2 The Navy, EPA, and the State may change their respective RPMs. The other Parties shall be notified in writing within five days of the change.

18.3 The RPMs shall meet to discuss progress as described in Subsection 7.5. Although the Navy has ultimate responsibility for meeting its respective deadlines or schedule, the RPMs shall assist in this effort by consolidating the review of primary and secondary documents whenever possible, and by scheduling progress meetings to review documents, evaluate the performance of environmental monitoring at the Site, review RI/FS or RD/RA progress, discuss target dates for elements of the RI/FS to be conducted in the following one hundred and eighty (180) days, resolve disputes, and adjust deadlines or schedules. At least one week prior to each scheduled progress meeting, the Navy will provide to the other Parties a draft agenda and summary of the status of the work subject to this Agreement. The Navy shall take minutes and provide them to the other Parties. Unless the RPMs agree otherwise, the minutes of each progress meeting, with the meeting agenda and all documents discussed during the meeting (which were not previously provided) as attachments, shall constitute draft meeting minutes, which will be sent to all RPMs within twenty-one calendar days after the meeting ends. The other Parties shall have five (5) working days to submit comments on the draft minutes to the Navy. If no comments are received within the five days, the draft minutes shall become final. Other meetings shall be held more frequently upon request by any RPM.

18.4 The authority of the RPMs shall include, but is not limited to:

(a) Taking samples and ensuring that sampling and other field work is performed in accordance with the terms of any final work plan and QAPP;

(b) Observing, and taking photographs and making such other reports on the progress of the work as the RPMs deem appropriate, subject to the limitations set forth in Section 25 (Access to Federal Facility) hereof;

(c) Reviewing records, files and documents relevant to the work performed;

(d) Determining the form and specific content of the RPM meetings and of progress reports based on such meetings; and

(e) Recommending and requesting minor field modifications to the work to be performed pursuant to a final work plan, or in techniques, procedures, or design utilized in carrying out such work plan.

18.5 Any minor field modification proposed by any Party pursuant to this Section must be approved orally by all Parties' RPMs to be effective. The Navy Remedial Project Manager will make a contemporaneous record of such modification and approval in a written log, and a copy of the log entry will be provided as part of the next progress report. Even after approval of the proposed modification, no RPM will require implementation by a government contractor without approval of the appropriate Government Contracting Officer.

18.6 The Remedial Project Manager for the Navy shall be responsible for day-to-day field activities at the Site. The Navy RPM or other designated employee of Hunters Point Annex Environmental Program shall be present at the Site or reasonably available to supervise work during all hours of work performed at the Site pursuant to this Agreement. For all times that such work is being performed, the Navy RPM shall inform the command post at Hunters Point Annex of the name and telephone number of the designated employee responsible for supervising the work.

18.7 The RPMs shall be reasonably available to consult on work performed pursuant to this Agreement and shall make themselves available to each other for the pendency of this Agreement. The absence of EPA, the State, or Navy RPM from the facility shall not be cause for work stoppage of activities taken under this Agreement.

19. PERMITS

19.1. The Parties recognize that under sections 121(d) and 121(e)(1) of CERCLA/SARA, 42 U.S.C. Sections 9621(d) and 9621(e)(1), and the NCP, portions of the response actions called for by this Agreement and conducted entirely on-site are exempted from the procedural requirement to obtain a federal, State, or local permit but must satisfy all the applicable or relevant and appropriate federal and State standards, requirements, criteria, or limitations which would have been included in any such permit.

19.2 This Section is not intended to relieve the Navy from any and all regulatory requirements, including obtaining a permit, whenever it proposes a response action involving either the movement of hazardous substances, pollutants, or contaminants off-site, or the conduct of a response action off-site.

19.3 The Navy shall notify EPA and the State in writing of any permit required for off-site activities as soon as it becomes aware of the requirement. The Navy agrees to obtain any permits necessary for the performance of any work under this Agreement.

Upon request, the Navy shall provide EPA and the State copies of all such permit applications and other documents related to the permit process. Copies of permits obtained in implementing this Agreement shall be appended to the appropriate submittal or progress report. Upon request by the Navy RPM, the Remedial Project Managers of EPA and the State will assist Hunters Point Annex to the extent feasible in obtaining any required permit.

20. QUALITY ASSURANCE

20.1 In order to provide quality assurance and maintain quality control regarding all field work and sample collection pursuant to this Agreement, the Navy agrees to designate a Quality Assurance Officer (QAO) who will ensure and document that all work is performed in accordance with approved work plans, sampling plans and QAPPs. The QAO shall maintain for inspection a log of quality assurance field activities and provide a copy to the Parties upon request.

The Navy agrees to use, at a minimum, laboratory methods and procedures which are functionally equivalent to the methods and procedures used in the EPA Contract Laboratory Program and the DHS Certified Laboratory Program. In determining whether a material meets the regulatory definition of a "hazardous waste," the Navy shall comply with both the EPA requirements of 40 CFR Part 261 and the State of California requirements of Title 22 of the California Code of Regulations, unless and until the State of California is authorized pursuant to RCRA Section 3006, in which case only the California requirements shall apply except as otherwise provided in Federal law or regulation.

20.2 To ensure compliance with the QAPP, the Navy shall authorize access, upon request by EPA or the State, to all laboratories performing analysis on behalf of the Navy pursuant to this Agreement. The Party requesting access to a laboratory shall notify the Navy at least 24 hours prior to the time access is required, unless the requesting Party has reason for conducting an unannounced inspection. Within twenty-four (24) hours after conducting an unannounced inspection, the inspecting Party shall provide the Navy with written notice of the fact that an unannounced inspection was conducted. Such notice will set out the reasons justifying the fact that the inspection was unannounced.

21. NOTIFICATION

21.1 All Parties shall transmit primary and secondary documents, and comments thereon, and all notices required herein by next day mail (or first class mail, return receipt requested, if mailed within the 9-County Bay Area), hand delivery, or facsimile. Time limitations shall commence upon receipt.

21.2 Notice to the individual Parties pursuant to this Agreement shall be sent to the addresses specified by the Parties. Initially these shall be as follows:

Remedial Project Manager, Hunters Point Annex (H-7-5)
U.S. Environmental Protection Agency, Region 9
Hazardous Waste Management Division
1235 Mission Street
San Francisco, CA 94102;

Howard Hatayama, Regional Administrator
ATTN: Mark Malinowski
California Department of Health Services
Toxic Substances Control Program
Site Mitigation Branch
700 Heinz Avenue, Bldg. F
Berkeley, CA 94710.

and,

Commanding Officer
Naval Facilities Engineering Command, Western Division
ATTN: Hunters Point RPM (Code 181)
900 Commodore Drive
San Bruno, CA 94066

21.3 All routine correspondence may be sent via first class mail to the above addressees.

22. DATA AND DOCUMENT AVAILABILITY

22.1 Each Party shall make all sampling results, test results or other data or documents generated through the implementation of this Agreement available to the other Parties upon request. All requested quality assured data shall be available within Forty-five (45) days of its collection. If the quality assurance procedure is not completed within forty-five (45) days, raw data or results, if requested, shall be submitted within the forty-five (45) day period and quality assured data or results shall be submitted as soon as they become available.

22.2 The sampling Party's Remedial Project Manager shall notify the other Parties' Remedial Project Managers not less than 10 days in advance of any sample collection. If it is not possible to provide 10 days prior notification, the sampling Party's Remedial Project Manager shall notify the other Remedial Project Managers as soon as possible after becoming aware that samples will be collected. Each Party shall allow, to the extent practicable, split or duplicate samples to be taken by the other Parties or their authorized representatives.

23. RELEASE OF RECORDS

23.1 The Parties may request of one another access to or a copy of any record or document relating to this Agreement or the IRP. If the Party that is the subject of the request (the originating Party) has the record or document, that Party shall provide access to or a copy of the record or document; provided, however, that no access to or copies of records or documents need be provided if they are subject to claims of attorney-client privilege, attorney work product, deliberative process, enforcement confidentiality or properly classified for national security under law or executive order.

23.2 Records or documents identified by the originating Party as confidential pursuant to non-disclosure provisions of the Freedom of Information Act, 5 U.S.C. Section 552, or the California Public Records Act, section 6250, et.seq. of the California Government Code, other than those specified in Section 23.1, shall be released to the requesting Party, provided the requesting Party states in writing that it will not release the record or document to the public without prior approval of the originating Party after opportunity to consult and, if necessary, contest any preliminary decision to release a document in accordance with applicable statutes and regulations. Records or documents which are provided to the requesting Party and which are not identified as confidential may be made available to the public without further notice to the originating Party.

23.3 The Parties will not assert one of the above exemptions, including any available under the Freedom of Information Act or California Public Records Act, even if available, if no governmental interest would be jeopardized by access or release as determined solely by that Party.

23.4 Subject to section 120(j)(2) of CERCLA, 42 U.S.C. Section 9620(j)(2), any documents required to be provided by Section 7 (Consultation), and analytical data showing test results will always be releasable and no exemption shall be asserted by any Party.

23.5 This Section does not change any requirement regarding press releases in Section 26 (Public Participation and Community Relations).

23.6 A determination not to release a document for one of the reasons specified above shall not be subject to Section 12 (Dispute Resolution). Any Party objecting to another Party's determination may pursue the objection through the determining Party's appeal procedures.

24. PRESERVATION OF RECORDS

24.1 Despite any document retention policy to the contrary, the Parties shall preserve, during the pendency of this Agreement and for a minimum of ten years after its termination, all records and documents contained in the Administrative Record and any additional records and documents retained in the ordinary course of business which relate to the actions carried out pursuant to this Agreement. After this ten year period, each Party shall notify the other Parties at least 45 days prior to destruction of any such documents. Upon request by any Party, the requested Party shall make available such records or copies of any such records, unless withholding is authorized and determined appropriate by law.

25. ACCESS TO FEDERAL FACILITY

25.1 Without limitations on any authority conferred on EPA or the State by statute or regulation, EPA, the State, or their authorized representatives, shall be allowed to enter Hunters Point Annex at reasonable times for purposes consistent with the Provisions of the Agreement, subject to any statutory and regulatory requirements necessary to protect national security or mission essential activities. Such access shall include, but not be limited to, reviewing the progress of the Navy in carrying out the terms of this Agreement; ascertaining that the work performed pursuant to this Agreement is in accordance with approved work plans, sampling plans and QAPPs; and conducting such tests as EPA, the State, or the Remedial Project Managers deem necessary.

25.2 The Navy shall honor all reasonable requests for access by the EPA or the State, conditioned upon presentation of proper credentials. The Navy Remedial Project Manager will provide briefing information, coordinate access and escort to restricted or controlled-access areas, arrange for base passes and coordinate any other access requests which arise.

25.3 EPA and the State shall provide reasonable notice to the Navy Remedial Project Manager to request any necessary escorts. EPA and the State shall not use any camera, sound recording or other recording device at Hunters Point Annex without the permission of the Navy Remedial Project Manager. The Navy shall not unreasonably withhold such permission.

25.4 The access by EPA and the State granted in Subsection 25.1 of this Section, shall be subject to those regulations necessary to protect national security or mission essential activities. Such regulation shall not be applied so as to unreasonably hinder EPA or the State from carrying out their responsibilities and authority pursuant to this Agreement. In the event that access requested by EPA or the State is denied by the Navy, the Navy shall provide an explanation within 48 hours of the reason for the denial, including reference to the ap-

plicable regulations, and, upon request, a copy of such regulations. The Navy shall expeditiously make alternative arrangements for accommodating the requested access. The Parties agree that this Agreement is subject to CERCLA section 120(j), 42 U.S.C. Section 9620(j), regarding the issuance of Site Specific Presidential Orders as may be necessary to protect national security.

25.5 If EPA or the State request access in order to observe a sampling event or other work being conducted pursuant to this Agreement, and access is denied or limited, the Navy agrees to reschedule or postpone such sampling or work if EPA or the State so requests, until such mutually agreeable time when the requested access is allowed. The Navy shall not restrict the access rights of the EPA or the State to any greater extent than the Navy restricts the access rights of its contractors performing work pursuant to this Agreement.

25.6 All Parties with access to Hunters Point Annex pursuant to this Section shall comply with all applicable health and safety plans, and all other base regulations to the extent such regulations do not unreasonably hinder execution of this Agreement.

25.7. To the extent the activities pursuant to this Agreement must be carried out on other than Navy property, the Navy shall use its best efforts, including its authority under CERCLA section 104, to obtain access agreements from the owners which shall provide reasonable access for the Navy, the EPA, the State, and their representatives. The Navy may request the assistance of the State in obtaining such access, and upon such request, the State will use its best efforts to obtain the required access. In the event that the Navy is unable to obtain such access agreements, the Navy shall promptly notify EPA and the State.

25.8 With respect to non-Navy property on which monitoring wells, pumping wells, or other response actions are to be located, the Navy shall use its best efforts to ensure that any access agreements shall provide for the continued right of entry for all Parties for the performance of such remedial activities. In addition, any access agreement shall provide that no conveyance of title, easement, or other interest in the property shall be consummated without the continued right of entry.

25.9 Nothing in this Section shall be construed to limit EPA's or the State's full right of access as provided in 42 U.S.C. Section 9604(e) and California Health and Safety Code section 25185, except as that right may be limited by 42 U.S.C. Section 9620(j)(2), Executive Order 12580, or other applicable national security regulations or federal law.

26. PUBLIC PARTICIPATION AND COMMUNITY RELATIONS

26.1 The Parties agree that any proposed remedial action alternative(s) and plan(s) for remedial action at the Site arising out of this Agreement shall comply with the administrative record and public participation requirements of CERCLA sections 113(k) and 117, 42 U.S.C. 9313(k) and 9617, relevant community relations provisions in the NCP, EPA guidances, and, to the extent they may apply, State statutes and regulations. The State agrees to inform the Navy of all State requirements which it believes pertain to public participation. The provisions of this Section shall be carried out in a manner consistent with, and shall fulfill the intent of, Section 17 (Statutory Compliance - RCRA/CERCLA Integration).

26.2 The Navy shall implement the community relations plan (CRP) addressing the environmental activities and elements of work undertaken by the Navy.

26.3 The Navy shall establish and maintain an administrative record at a place, at or near the federal facility, which is freely accessible to the public, which record shall provide the documentation supporting the selection of each response action. The administrative record shall be established and maintained in accordance with relevant provisions in CERCLA, the NCP, and EPA guidances. A copy of each document placed in the administrative record, not already provided, will be provided by the Navy to the other Parties. The administrative record developed by the Navy shall be updated and new documents supplied to the other Parties on at least a quarterly basis. An index of documents in the administrative record will accompany each update of the administrative record.

26.4 Except in case of an emergency, any Party issuing a press release with reference to any of the work required by this Agreement shall advise the other Parties of such press release and the contents thereof, at least 48 hours prior to issuance.

27. FIVE YEAR REVIEW

27.1 Consistent with 42 U.S.C. 9621(c) and in accordance with this Agreement, if the selected remedial action results in any hazardous substances, pollutants or contaminants remaining at the Site, the Parties shall review the remedial action program at least every five (5) years after the initiation of the final remedial action to assure that human health and the environment are being protected by the remedial action being implemented.

27.2 If, upon such review, any of the Parties proposes additional work or modification of work, such proposal shall be handled under Subsection 7.10 of this Agreement.

27.3 To synchronize the five-year reviews for all operable units and final remedial actions, the following procedure will be used: Review of operable units will be conducted every five years counting from the initiation of the first operable unit, until initiation of the final remedial action for the Site. At that time a separate review for all operable units shall be conducted. Review of the final remedial action (including all operable units) shall be conducted every five years, thereafter.

28. TRANSFER OF REAL PROPERTY

28.1 The Navy shall remain a liable party under CERCLA, notwithstanding any change in ownership of the real property comprising the Federal Facility. The Navy shall not transfer any real property comprising the federal facility except in compliance with section 120(h) of CERCLA, 42 U.S.C. 9620(h). Prior to any sale of any portion of the land comprising the federal facility which includes an area within which any release of hazardous substance has come to be located, or of property which is necessary for performance of the remedial action, the Navy shall give written notice of that condition to the buyer of the land. At least thirty (30) days prior to any conveyance subject to section 120(h) of CERCLA, the Navy shall notify all Parties of the transfer of any real property subject to this Agreement and the provisions made for any additional remedial actions, if required.

28.2 Until six months following the effective date of the final regulations implementing CERCLA section 120(h)(2), 42 U.S.C. 9620(h)(2), the Navy agrees to comply with the most recent version of the regulations as proposed and all other substantive and procedural provisions of CERCLA section 120(h) and Subsection 28.1 of this Section.

29. AMENDMENT OR MODIFICATION OF AGREEMENT

29.1 This Agreement can be amended or modified solely upon written consent of all Parties. Such amendments or modifications may be proposed by any Party and shall be effective the third business day following the day the last Party to sign the amendment or modification sends its notification of signing to the other Parties. The Parties may agree to a different effective date.

30. TERMINATION OF THE AGREEMENT

30.1 The provisions of this Agreement shall be deemed satisfied and terminated upon receipt by the Navy of written notice from EPA, with concurrence of the State, that the Navy has demonstrated that all the terms of this Agreement have been completed. If EPA denies or otherwise fails to grant a termination

notice within 90 days of receiving a written Navy request for such notice, EPA shall provide a written statement of the basis for its denial and describe the Navy actions which, in the view of EPA, would be a satisfactory basis for granting a notice of completion. Such denial shall be subject to dispute resolution.

30.2 This provision shall not affect the requirements for periodic review at maximum five year intervals of the efficacy of the remedial actions.

31. COVENANT NOT TO SUE AND RESERVATION OF RIGHTS

31.1 In consideration for the Navy's compliance with this Agreement, and based on the information known to the Parties or reasonably available on the effective date of this Agreement, EPA, the Navy, and the State agree that compliance with this agreement shall stand in lieu of any administrative, legal, and equitable remedies against the Navy available to them regarding the releases or threatened releases of hazardous substances including hazardous wastes, pollutants or contaminants at the Site which are the subject of any RI/FS conducted pursuant to this Agreement and which have been or will be adequately addressed by the remedial actions provided for under this Agreement; except that nothing in this Agreement shall preclude EPA or the State from exercising any administrative, legal, or equitable remedies available to them to require additional response actions by the Navy in the event that: (1)(a) conditions previously unknown or undetected by EPA or the State arise or are discovered at the Site, or (b) EPA or the State receive additional information not previously available concerning the premises which they employed in reaching this Agreement; and (2) the implementation of the requirements of this Agreement are no longer protective of public health and the environment. To the extent deemed appropriate by EPA or the State after consultation with the Navy, such additional response actions shall be implemented through the amendment process described in Section 29 of this Agreement, or in accordance with Section 7 of this Agreement addressing modification of final documents.

31.2 Notwithstanding this Section, or any other Section of this Agreement, the State shall retain any statutory right it may have to obtain judicial review of any final decision of the EPA on selection of remedial action pursuant to any authority the State may have under CERCLA, including Sections 121(e)(2), 121(f), 310, and 113.

32. OTHER CLAIMS

32.1 Nothing in this Agreement shall constitute or be construed as a bar or release from any claim, cause of action or demand in law or equity by or against any person, firm, partnership or corporation not a signatory to this Agreement for any

liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous substances, hazardous waste, pollutants, or contaminants found at, taken to, or taken from the federal facility. Unless specifically agreed to in writing by the Parties, EPA and the State shall not be held as a party to any contract entered into by the Navy to implement the requirements of this Agreement.

32.2 This Agreement shall not restrict EPA or the State from taking any legal or response action for any matters not part of the subject matter of this Agreement.

33. RECOVERY OF EPA EXPENSES

33.1 The Parties agree to amend this Agreement at a later date in accordance with any subsequent national resolution of the issue of cost reimbursement. Pending such resolution, EPA reserves any rights it may have with respect to cost reimbursement.

34. REIMBURSEMENT OF STATE EXPENSES

34.1 Compensation for state support services rendered in connection with this Agreement is governed by the provisions of the Defense/State Memorandum of Agreement (DSMOA) which was executed on May 31, 1990, between DHS on behalf of the State of California and the Department of Defense, unless the Parties agree otherwise.

34.2 In the event that the DSMOA is terminated or no longer is effect for any reason, and until a new DSMOA takes effect, the Parties agree to the provisions in this subsection and the remainder of Section 34. The Navy agrees to request funding and reimburse the State, subject to the conditions and limitations set forth in this Section, and subject to Section 15 (Funding), for all reasonable costs it incurs in providing services in direct support of the Navy's environmental restoration activities pursuant to this Agreement at the site.

34.3 Reimbursable costs shall consist only of actual expenditures required to be made and actually made by the State in providing the following assistance to Hunters Point Annex:

(a) Timely technical review and substantive comment on reports or studies which the Navy prepares in support of its response actions and submits to the State.

(b) Identification and explanation of unique State requirements applicable to military installations in performing response actions, especially State applicable or relevant and appropriate requirements (ARARs).

(c) Field visits to ensure investigations and cleanup activities are implemented in accordance with appropriate State requirements, or in accordance with agreed-upon conditions between the State and the Navy that are established in the framework of this Agreement.

(d) Support and assistance to the Navy in the conduct of public participation activities in accordance with Federal and State requirements for public involvement.

(e) Participation in the review and comment functions of the Navy Technical Review Committees.

(f) Other services specified in this Agreement.

34.4 Within one hundred twenty (120) days after the end of each quarter of the Federal fiscal year, the State shall submit to the Navy an accounting of all State costs actually incurred during that quarter in providing direct support services under this Section. Such accounting shall be accompanied by cost summaries and be supported by documentaiton which meets Federal auditing requirements. The summaries will set forth employee-hours and other expenses by major type of support service. All costs submitted must be for work directly related to implementation of this Agreement and not inconsistent with either the National Contingency Plan (NCP) or the requirements as described in OMB Circulars A-87 (Cost Principles for State and Local Governments) and A-128 (Audits for State and Local Cooperative Agreements with State and Local Governments) and Standard Forms 424 and 270. The Navy has the right to audit cost reports used by the State to develop the cost summaries. Before the beginning of each fiscal year, the State shall supply a budget estimate of what it plans to do in the next year in the same level of detail as the billing documents.

34.5 Except as allowed pursuant to Subsections 34.6 or 34.7 below, within ninety (90) days of receipt of the accounting provided pursuant to Subsection 34.3 above, the Navy shall reimburse the State in the amount set forth in the accounting.

34.6 In the event the Navy contends that any of the costs set forth in the accounting provided pursuant to Subsection 34.4 above are not properly payable, the matter shall be resolved through a bilateral dispute resolution process set forth at Subsection 34.10 below.

34.7 The Navy shall not be responsible for reimbursing the State for any costs actually incurred in the implementation of this Agreement in excess of one percent (1%) of the Navy total lifetime project costs incurred through construction of the remedial action(s). This total reimbursement limit is currently estimated to be a sum of $940,000 over the life of the Agreement. Circumstances could arise whereby fluctuations in the Navy es-

timates or actual final costs through the construction of the final remedial action creates a situation where the State receives reimbursement in excess of one percent of these costs. Under these circumstances, the State remains entitled to payment for services rendered prior to the completion of a new estimate if the services are within the ceiling applicable under the previous estimate.

(a) Funding of support services must be constrained so as to avoid unnecessary diversion of the limited Defense Environmental Restoration Account funds available for the overall cleanup, and

(b) Support services should not be disproportionate to overall project costs and budget.

34.8 Either the Navy or the State may request, on the basis of significant upward or downward revisions in the Navy's estimate of its total lifetime costs through construction used in Subsection 34.7 above, a renegotiation of the cap. Failing an agreement, either the Navy or the State may initiate dispute resolution in accordance with Subsection 34.10 below.

34.9 The State agrees to seek reimbursement for its expenses under this Agreement solely through the mechanism established in this Section, and reimbursement provided under this Section shall be in settlement of any claims for State response costs relative to the Navy's environmental restoration activities at the Site.

34.10 Notwithstanding Section 12 of this Agreement, any dispute between the Navy and the State regarding the application of this Section or any matter controlled by this Section including, but not limited to, allowable expenses and limits on reimbursement, shall be resolved under this Subsection.

(a) The Navy and DHS Remedial Project Managers shall be the primary points of contact to coordinate resolution of disputes under Subsection 34.10.

(b) If the Navy and DHS Remedial Project Managers are unable to resolve a dispute within fifteen (15) business days, the matter shall be referred to the Director, Office of Environmental Management, Western Division, Naval Facilities Engineering Command (WESTNAVFACENGCOM) for the Navy, and the Chief of the Site Mitigation Branch for DHS, Region 2, as soon as practicable, but in any event within forty (40) days of receipt of the invoice.

(c) Should the representative designated in Subsection 34.10(b) be unable to resolve the dispute within ten (10) days, the matter shall be elevated to the Commander WESTNAVFACENGCOM

for the Navy and the Regional Administrator for DHS, Region 2, who will render a written report on the results of their efforts to resolve the dispute in ten (10) working days.

(d) It is the intention of the Navy and the State that all disputes shall be resolved strictly in accordance with Subsection 34.10; however, the use of informal dispute resolution, including use of mediation and arbitration techniques, is encouraged. In the event the representatives designated in Subsection 34.10(c) are unable to resolve the dispute, the State retains all of its legal and equitable remedies to recover its costs.

34.11 Nothing in this Agreement shall be construed to constitute a waiver of any claims by the State for any expenses incurred prior to the effective date of this Agreement.

35. STATE PARTICIPATION CONTINGENCY

35.1 If the State fails to sign this Agreement within thirty (30) days of notification of the signature by both EPA and the Navy, this Agreement will be interpreted as if the State were not a Party and any reference to the State in this Agreement will have no effect. In addition, all other provisions of this Agreement notwithstanding, if the State does not sign this Agreement within the said thirty (30) days, Hunters Point Annex shall only have to comply with any State and local requirements, conditions, or standards, including those specifically listed in this Agreement, which HPA would otherwise have to comply with absent this Agreement.

35.2 In the event that the State does not sign this Agreement,

(a) the Navy agrees to transmit all primary and secondary documents to appropriate State and local agencies at the same time such documents are transmitted to EPA; and

(b) EPA intends to consult with the appropriate State and local agencies with respect to the above documents and during implementation of this Agreement.

36. EFFECTIVE DATE AND PUBLIC COMMENT

36.1 The provisions of this Section shall be carried out in a manner consistent with, and shall fulfill the intent of Section 17 (Statutory Compliance - RCRA/CERCLA Integration).

36.2 Within fifteen (15) days of the date of the execution of this Agreement, the Navy shall announce the availability of this Agreement to the public for a forty-five (45) day period of review and comment, including publication in at least two major

local newspapers of general circulation. Comments received shall be transmitted to the other Parties within seven (7) days of the end of the comment period. The Parties shall have fourteen (14) days after receipt to review such comments and shall meet within seven (7) days after the 14-day review period to either:

(a) Determine that this Agreement should be made effective in its present form, in which case EPA shall promptly notify all Parties in writing, and this Agreement shall become effective on the date that Hunters Point Annex receives such notification; or

(b) If the determination in Subsection 36.2(a) is not made, the Parties shall meet to discuss and agree upon any proposed changes. Within twenty-eight (28) days of the close of the public comment period, or within such other time period mutually agreed upon among the Parties, the Parties shall agree upon any proposed changes. Upon resolution of any proposed changes, the Agreement, as modified, shall be re-executed by the Parties, with EPA signing last, and shall become effective on the date that it is signed by EPA.

(c) In the event the Parties cannot agree to modify this Agreement to reflect public comments pursuant to 36.2(b), the Parties shall submit their written notices of position, concerning those provisions still in dispute, directly to the Dispute Resolution Committee. Upon resolution of any proposed changes, the Agreement, as modified, shall be re-executed by the Parties, with EPA signing last, and shall become effective on the date that it is signed by EPA. If the Dispute Resolution Committee is unable to resolve the dispute within twenty-one (21) days, the dispute shall be elevated to the Senior Executive Committee for resolution, who shall have twenty-one (21) days to resolve the dispute.

(d) In the event the Parties cannot agree to modify this Agreement to reflect public comments pursuant to either 36.2(b) or 36.2(c) and the contemplated modification will impose substantial additional obligations on a Party, the Party so obligated may withdraw from this Agreement. Withdrawal by the Navy shall not alter the obligation of the Navy to comply with CERCLA Section 120, 42 U.S.C. Section 9620, or limit the enforcement powers available to EPA or the State.

36.3 Any response action under way upon the effective date of this Agreement shall be subject to oversight by the Parties.

37. BASE CLOSURE

37.1 Except as otherwise provided by law, closure of the Federal Facility will not affect the Navy's obligation to comply with the terms of this Agreement and to specifically ensure the following:

(a) Continuing rights of access for EPA and the State, in accordance with the terms and conditions of Section 25 (Access to Federal Facility);

(b) Availability of a Remedial Project Manager to fulfill the terms and conditions of the Agreement;

(c) Designation of alternate DRC members as appropriate for the purposes of implementing Section 12 (Dispute Resolution); and

(d) Adequate resolution of any other problems identified by the Remedial Project Managers regarding the effect of base closure on the implementation of this Agreement.

37.2 Base closure will not constitute a Force Majeure under Section 10 (Force Majeure), nor will it constitute good cause for extensions under Section 9 (Extensions), unless mutually agreed by the Parties.

38. APPENDICES AND ATTACHMENTS

38.1 Appendices shall be an integral and enforceable part of this Agreement. They shall include the most current versions of:

(a) Timetables and Deadlines for each operable unit;

(b) All final primary documents and completed secondary documents which have been created in accordance with Section 7 (Consultation) or have been accepted by the EPA as final on the effective date of this Agreement;

38.2 Attachments shall be for information only and shall not be enforceable parts of this Agreement. The information in these attachments is provided to support the initial review and comment upon this Agreement, and they are only intended to reflect the conditions known at the signing of this Agreement. None of the facts related therein shall be considered admissions by, nor are they legally binding upon, any Party with respect to any claims unrelated to, or persons not a Party to, this Agreement. They shall include:

(a) Map of federal facility (see also Subsection 5.11)

(b) Chemicals of concern

(c) Statement of Facts

(d) "Initial Assessment Study of Hunters Point Naval Shipyard (Disestablished)," NEESA 13-059, 10/01/84 (incorporated by reference)

Each undersigned representative of a Party certifies that he or she is fully authorized to enter into the terms and conditions of this Agreement and to legally bind such Party to this Agreement:

IT IS SO AGREED:

27 September 1990
Date

Jacqueline E. Schafer
Jacqueline E. Schafer
Assistant Secretary of the Navy (Installations and Environment)

Each undersigned representative of a Party certifies that he or she is fully authorized to enter into the terms and conditions of this Agreement and to legally bind such Party to this Agreement.

IT IS SO AGREED:

9.28.90
Date

John Wise
for Daniel W. McGovern
Regional Administrator
United States Environmental
Protection Agency, Region 9

Each undersigned representative of a Party certifies that he or she is fully authorized to enter into the terms and conditions of this Agreement and to legally bind such Party to this Agreement.

IT IS SO AGREED:

9/19/90
Date

John J. Kearns
Deputy Director
Toxics Substances Control Program
California Department of Health Services

APPENDIX A

TIMETABLES AND DEADLINES

I. Schedule for Submission of Revised RI/FS Workplan

II. Deadlines for Implementation of the RI/FS

III. Dates to be Determined in the ROD

APPENDIX A

Timetables and Deadlines

I. Schedule for Submission of Revised RI/FS Workplan

The Parties recognize that the Navy has previously undertaken a Remedial Investigation of HPA under the Navy's Installation Restoration Program and under Remedial Action Order HSA87/88-034RA issued by the California Department of Health Services. Pursuant to the DHS Order, the Navy has prepared, and DHS has approved, the RI/FS Workplan documents listed below.

EPA has reviewed these documents to determine whether they would meet the requirements of this Agreement. EPA has identified certain aspects of the documents which require amendment, and has specified these in Attachment G of this Agreement, "EPA Comments on RI/FS Workplan Prepared by Harding-Lawson and Associates for the U. S. Navy."

The Parties agree that:

1) the RI/FS Workplan prepared pursuant to the DHS Order shall be amended to address the comments in Attachment G;

2) these amendments shall be considered "Draft Primary Documents" and reviewed in accordance with Section 7.7 of this Agreement;

3) amendment of the existing workplan may be in the form of supplements or addenda to the existing workplan, provided that if there are any conflicts between the existing workplan and the amendments, the amendments shall govern;

4) these amendments shall be submitted to EPA in accordance with the schedule shown below; and,

5) the Remedial Investigation and Feasibility Study activities undertaken pursuant to the DHS Order and the DHS-approved workplan shall continue under the terms of the Order and workplan, until the amendments to the workplan are approved in final in accordance with Section 7.7 of this Agreement. At that time, the workplan as amended shall govern implementation of the Remedial Investigation/Feasibility Study.

The Parties also agree that further revisions or additions to the existing or amended workplan may be required as new information is obtained (e.g., new areas of contamination are identified). Unless otherwise agreed by the Parties, such revisions or additions shall considered new primary documents under Section 7 of this Agreement. A schedule for preparing such amendments shall be incorporated into the schedule for Operable Unit 5 (see below) at the time the need for the revision or addition is identified. (See also Section II, Conditions and Assumptions, # 2, in this Appendix.)

Schedule for Submittal of Draft Amendments to the RI/FS Workplan

Draft Amendments to the RI/FS Workplan addressing each EPA comment presented in Attachment G shall be submitted in accordance with the following schedule:

	Date Amendment Due
Amendments addressing Comment #1 (Plan for evaluating tidal influence on subsurface saturated zone)	**November 30, 1990**
Amendments addressing Comment #2 (Plan to evaluate integrity of, and releases from, storm sewer lines and outfalls)	**August 30, 1990**
Amendments addressing Comment #3 (Revisions to Community Relations Plan)	**August 15, 1990**
Amendments addressing Comment #4 (Revisions to the PHEE Plan)	**December 15, 1990**
Amendments addressing Comment #5 (Ecological Assessment Plan)	**October 15, 1990**

II. Deadlines for Implementation of the RI/FS

The Navy agrees to conduct the RI/FS pursuant to Sections 6.2(a) (Remedial Investigation), 6.2(b) (Feasibility Study), and 6.2(c) and (d) (Response Actions and Operation and Maintenance) and meet the deadlines for submittal of RI/FS documents set forth for each Operable Unit and the Overall RI/FS set forth on the following pages. The Conditions and Assumptions listed below apply.

<u>Conditions and Assumptions</u>

1). Review time periods, response time periods, and consultation procedures shall be as established in Section 8 (Consutlation) of this Agreement, except as otherwise noted in the following schedules. For purposes of establishing estimated dates, the standard review period of 45 days has been included for EPA and DOHS review of each primary document, the standard response time of 45 days has been included for the Navy's response, except as otherwise noted. If any document or activity is completed a month or more before the deadline established in the schedule, the Parties may agree to shorten the schedule by the amount of time saved by the early completion, using the procedures set forth in Section 9 (Extensions). In the event a schedule is extended in accordance with Section 9 (Extensions), the schedule in this Appendix will be modified to reflect only the amount of additional time granted in the approved extension.

2). Operable Units (OUs) 1 through 5 are defined in the schedule for that OU in this Appendix. The Parties recognize that revisions to the definitions of these Operable Units may be needed from time to time to reflect new information or field conditions. Such revisions shall be considered a modification of the schedule and made in accordance with Section 9 (Extensions).

3). Field work for the Remedial Investigation shall proceed in accordance with the RI/FS Workplan as amended pursuant to this Agreement, and in accordance with the schedules established in this Appendix. The Parties recognize that minor deviations from the approved sampling plan may be needed to adjust to actual field conditions. Such deviations shall be properly recorded as required by the RI/FS Workplan.

4. Within approximately 30 days of receipt of laboratory analysis of field samples, the Navy shall prepare a Summary of Findings Memorandum (SFM) summarizing the analytical field data, the Navy's evaluation of the data, and any recommendations for revisions to the Sampling Plan (including the need to conduct contingent sampling and/or extend the schedule). The SFM shall be a secondary document, per Section 7.4 of this Agreement. Unless the RPMs agree otherwise, within 15 days of receipt of an SFM by EPA and the State, the RPMs shall meet to discuss the findings and recommendations presented in the SFM.

SFMs shall be placed in the Administrative Record and may be made available for public review as part of the Navy's Community Relations Program.

SCHEDULE: OPERABLE UNIT 1

Operable Unit 1 consists of the following IR Sites, as defined in the RI/FS Workplan: IR-1 (Industrial Landfill); IR-2 (Bay Fill Area);IR-3 (Oil Reclamation Ponds).

Document	Deadline	Estimated Dates
Final Summary of Findings Memorandum	5/21/92	
Draft RI Report	12/7/92	
Draft Public Health and Environmental Evaluation (PHEE) Report	2/9/93	
Draft Initial Screening of Alternatives	Submitted with the Draft PHEE	2/9/93
Draft FS Report	4/8/93	
Draft Proposed Plan (for Agency review)	45 days after submittal of draft FS Report	5/23/93
Draft Final RI Report*	Per Consultation Section	3/7/93
Draft Final PHEE Report*	Per Consultation Section	5/10/93
Draft Final FS Report*	Per Consultation Section	7/8/93
Draft Final Proposed Plan* (to Agencies)	60 days after submittal of draft Proposed Plan**	7/22/93
Final Proposed Plan Published	30 days after Draft Final Proposed Plan submitted to Agencies+	8/21/93
Start of Public Comment Period on Proposed Plan	5 business days after publication of Proposed Plan	8/28/93
Draft Record of Decision (ROD)++	60 days after end of public comment period	12/26/93
Final ROD* (from USN with no signature)	60 days after submittal of draft ROD	2/24/94
Final ROD Approval	30 days after submittal of Final ROD	3/23/94

* Primary Document (subject to Dispute Resolution Procedures)

** Allows 15 days for Agency review; 45 days for US Navy response and revisions.

\+ Allows 15 days for Agency review of draft Final Proposed Plan and 15 days to publish.

++ Includes responsiveness summary and schedules for draft remedial design, completion of construction, draft remedial action, public operations plan, and commencement of the remedial action.

SCHEDULE: OPERABLE UNIT 2

Operable Unit 2 consists of the following IR Sites, as defined in the RI/FS Workplan: IR-6 (Tank Farm); IR-8 (Building 503 PCB Spill); IR-9 (Pickling and Plating Yard); IR-10 (Battery and Electroplating Shop).

Document	Deadline	Estimated Dates
Final Summary of Findings Memorandum	4/22/91	
Draft RI Report	11/12/91	
Draft Public Health and Environmental Evaluation (PHEE) Report	1/13/92	
Draft Initial Screening of Alternatives	Submitted with Draft PHEE Report	1/13/92
Draft FS Report	3/16/92	
Draft Proposed Plan (for Agency review)	45 days after submittal of draft FS Report	4/30/92
Draft Final RI Report*	Per Consultation Section	3/13/92
Draft Final PHEE Report*	Per Consultation Section	5/14/92
Draft Final FS Report*	Per Consultation Section	7/15/92
Draft Final Proposed Plan* (to Agencies)	60 days after submittal of draft Proposed Plan**	6/29/92
Final Proposed Plan Published	30 days after Draft Final Proposed Plan submitted to Agencies+	7/29/92
Start of Public Comment Period on Proposed Plan	5 business days after publication of Proposed Plan	8/5/92
Draft Record of Decision (ROD)++	60 days after end of public comment period	12/2/92
Final ROD* (from USN with no signature)	60 days after submittal of draft ROD	1/31/93
Final ROD Approval	30 days after submittal of Final ROD	3/3/93

* Primary Document (subject to Dispute Resolution Procedures)

** Allows 15 days for Agency review; 45 days for US Navy response and revisions.

\+ Allows 15 days for Agency review of draft Final Proposed Plan and 15 days to publish.

++ Includes responsiveness summary and schedules for draft remedial design, completion of construction, draft remedial action, public operations plan, and commencement of the remedial action.

SCHEDULE: OPERABLE UNIT 3

Operable Unit 3 consists of the following IR Sites, as defined in the RI/FS Workplan: IR-4 (Scrap Yard); IR-5 (Old Transformer Storage Yard).

Document	Deadline	Estimated Dates
Final Summary of Findings Memorandum	11/15/91	
Draft RI Report	5/15/92	
Draft Public Health and Environmental Evaluation (PHEE) Report	7/31/92	
Draft Initial Screening of Alternatives	Submitted with Draft PHEE Report	7/31/92
Draft FS Report	10/1/92	
Draft Proposed Plan (for Agency review)	45 days after submittal of draft FS Report	11/15/92
Draft Final RI Report*	Per Consultation Section	7/14/92
Draft Final PHEE Report*	Per Consultation Section	10/29/92
Draft Final FS Report*	Per Consultation Section	12/29/92
Draft Final Proposed Plan* (to Agencies)	60 days after submittal of draft Proposed Plan**	1/13/93
Final Proposed Plan Published	30 days after Draft Final Proposed Plan submitted to Agencies+	2/12/93
Start of Public Comment Period on Proposed Plan	5 business days after publication of Proposed Plan	2/19/93
Draft Record of Decision (ROD)++	60 days after end of public comment period	6/19/93
Final ROD* (from USN with no signature)	60 days after submittal of draft ROD	8/18/93
Final ROD Approval	30 days after submittal of Final ROD	9/17/93

* Primary Document (subject to Dispute Resolution Procedures)

** Allows 15 days for Agency review; 45 days for US Navy response and revisions.

\+ Allows 15 days for Agency review of draft Final Proposed Plan and 15 days to publish.

++ Includes responsiveness summary and schedules for draft remedial design, completion of construction, draft remedial action, public operations plan, and commencement of the remedial action.

SCHEDULE: OPERABLE UNIT 4

Operable Unit 4 consists of the following IR Sites, as defined in the RI/FS Workplan: IR-7 (Sub Base Area).

Document	Deadline	Estimated Dates
Final Summary of Findings Memorandum	11/22/91	
Draft RI Report	6/8/92	
Draft Public Health and Environmental Evaluation (PHEE) Report	8/9/92	
Draft Initial Screening of Alternatives	Submitted with Draft PHEE Report	8/9/92
Draft FS Report	10/10/92	
Draft Proposed Plan (for Agency review)	45 days after submittal of draft FS Report	11/24/92
Draft Final RI Report*	Per Consultation Section	9/6/92
Draft Final PHEE Report*	Per Consultation Section	11/7/92
Draft Final FS Report*	Per Consultation Section	1/7/93
Draft Final Proposed Plan* (to Agencies)	60 days after submittal of draft Proposed Plan**	1/22/93
Final Proposed Plan Published	30 days after Draft Final Proposed Plan submitted to Agencies+	2/21/93
Start of Public Comment Period on Proposed Plan	5 business days after publication of Proposed Plan	2/28/93
Draft Record of Decision (ROD)++	60 days after end of public comment period	6/28/93
Final ROD* (from USN with no signature)	60 days after submittal of draft ROD	8/27/93
Final ROD Approval	30 days after submittal of Final ROD	9/26/93

* Primary Document (subject to Dispute Resolution Procedures)

** Allows 15 days for Agency review; 45 days for US Navy response and revisions.

\+ Allows 15 days for Agency review of draft Final Proposed Plan and 15 days to publish.

++ Includes responsiveness summary and schedules for draft remedial design, completion of construction, draft remedial action, public operations plan, and commencement of the remedial action.

SCHEDULE: OPERABLE UNIT 5 (OVERALL RI/FS)

Operable Unit 5 shall consist of any remaining areas of contamination within the HPA site (including properties not currently owned by the Navy which are properly considered part of the Site as "site" is defined in the NCP), other than those areas included in OUs 1 through 4. This includes, but is not limited to, IR-11 (Building 521 Power Plant), IR-12, IR-13, IR-14, IR-15, IR-17, and other areas which are determined in accordance with this Agreement to require remedial investigation and remedial action. Areas which are currently under preliminary investigation and may be determined to require remedial investigation and remedial action include PA-16, PA-18, areas contaminated by leaking underground storage tanks (including petroleum tanks), and areas covered in the "Preliminary Assessment for Other Areas and Utilities."

In addition, any areas of OUs 1 through 4 may, under the terms of this Agreement, be removed from that OU and addressed as part of OU 5, if the Parties determine that such a change would facilitate efficient, effective, and timely completion of remedial action.

The schedule set forth herein is based on two key assumptions: (1) field work for the remedial investigation of IRs 11, 12, 13, 14, 15 and 17 can be completed within three months of completion of the field work for OU 1; and (2) the preliminary assessments currently under way, and any additional PAs which mayb e conducted under the terms of this Agreement, conclude that a sampling investigation and/or a remedial investigation are not needed. The Parties recognize that it is difficult to project a realistic schedule given the uncertainties associated with the areas covered under this OU. Consequently, the Parties agree that this schedule shall be reviewed periodically (at least annually during the second quarter of the Federal fiscal year, and uponcompletin of any PA or SI report) to determine if it needs to be revised in accordance with Section 9 (Extensions) of the Agreement. Draft SI reports shall include a draft Remedial Investgigation Sampling Plan, with a proposed schedule, for the area addressed in the SI Report (unless a "No Further Action" determination is proposed and accepted by the Parties).

As the last of the OU RI/FSs to be completed, the following documents shall also address the overall site. To address the overall site, these documents shall summarize the findings of each OU RI/FS, PHEE, and ROD, evaluate the need for additional remedial action considering both remaining contamination at each OU and the overall risks remaining at the site, and shall include any additional information needed to assess the nature and extent of contamination, health and environmental risks, and potential remedial actions not fully addressed in the OU documents.

Document	Deadline	Estimated Dates
Draft Preliminary Assessment Report for Utilities and Other Areas, including proposed schedule for submitting an SI or RI Workplan, as appropriate	9/20/90	
Draft Sampling Plan for IRs 12, 13, 14, 15, and 17	9/20/90	
Draft Sampling Investigation Report for PA 16 and PA-18	6/30/91	
Final Summary of Findings Memorandum	7/31/92	
Draft RI Report	1/30/93	

Draft Public Health and Environmental Evaluation (PHEE) Report	3/31/93	
Draft Initial Screening of Alternatives	Submitted with Draft PHEE Report	3/31/93
Draft FS Report	5/30/93	
Draft Proposed Plan (for Agency review)	45 days after submittal of draft FS Report	7/14/93
Draft Final RI Report*	Per Consultation Section	4/30/93
Draft Final PHEE Report*	Per Consultation Section	6/29/93
Draft Final FS Report*	Per Consultation Section	8/30/93
Draft Final Proposed Plan* (to Agencies)	60 days after submittal of draft Proposed Plan**	9/12/93
Final Proposed Plan Published	30 days after Draft Final Proposed Plan submitted to Agencies+	10/11/93
Start of Public Comment Period on Proposed Plan	5 business days after publication of Proposed Plan	10/18/93
Draft Record of Decision (ROD)++	60 days after end of public comment period	2/14/94
Final ROD* (from USN with no signature)	60 days after submittal of draft ROD	4/15/94
Final ROD Approval	30 days after submittal of Final ROD	5/15/94

* Primary Document (subject to Dispute Resolution Procedures)

** Allows 15 days for Agency review; 45 days for US Navy response and revisions.

\+ Allows 15 days for Agency review of draft Final Proposed Plan and 15 days to publish.

++ Includes responsiveness summary and schedules for draft remedial design, completion of construction, draft remedial action, public operations plan, and commencement of the remedial action.

III. Dates to be Determined in the ROD

The Parties agree that deadlines for the following activities and/or documents shall be established in the Record of Decision (ROD). Disagreement among the Parties concerning deadlines included in the ROD shall be subject to Section 12 (Dispute Resolution).

Draft Remedial Design
(includes Construction Plan)
Completion of Construction
Draft Remedial Action Operations Plan
(includes monitoring and maintenance)
Commencement of Remedial Action
(Start-up/Operation Starts)

APPENDIX B

APPENDIX B

Final Primary Documents Previously Approved and Secondary and Removal Action Documents Previously Reviewed

I. The following primary documents have been reviewed and approved by EPA and the State prior to the effective date of this Agreement.

None

II. The following secondary documents have been reviewed by EPA and the State prior to the effective date of this Agreement.

Preliminary Assessment, Sites PA-12 through PA-18 (November 16, 1989)

First Round Ground Water Sampling, Primary Remedial Investigation, Power Plant (IR-11) (January 2, 1990)

First Round Ground Water Sampling, Primary Remedial Investigation, Battery and Electroplating Shop (IR-10) (January 2, 1990)

Interim Report, Phase 1, Primary Remedial Investigation, Pickling and Plate Yard (IR-9) (March 20, 1990)

Site Inspection Workplan, Sites PA-16 and PA-18 (March 14, 1990)

Interim Report, Phase I, Primary Remedial Investigation, Building 503, PCB Spill Area (IR-8) (April 3, 1990)

Phase 1, Primary Remedial Investigation Interim Report for the Tank Farm (IR 6) (April 5, 1990)

Closure and Removal Plan for 23 Underground Storage Tanks (June, 1990)

III. The following Removal Action documents have been reviewed by EPA and the State prior to the effective date of this Agreement.

Engineering Evaluation/Cost Analysis (EE/CA) for the Treat ment and Removal of Metal-contaminated Sandblasting Grit at Naval Station Treasure Island, Hunters Point Annex (July 5, 1989)

Workplan for the Field Treatment Demonstration and Removal of Metal-contaminated Sandblasting Grit at Naval Station Treasure Island, Hunters Point Annex (October 13, 1989)

Draft Volume 1, Workplan, for the Removal Action at the Pickling and Plate Yard (February, 1990)

Draft Air Modeling and Risk Assessment of Airborne Contaminants during Proposed Removal Actions at the Tank Farm and Pickling and Plate Yard (February, 1990)

Removal Action for Tank S-505, Volume 1 -- Workplan (Final Draft) (March 29, 1990)

Draft Removal Action Plan for Tank Farm, Volume 1 -- Workplan (April 16, 1990)

Draft Workplan for Sampling and Analysis of Untreated and Treated Sandblasting Grit (June 28, 1990)

ATTACHMENTS

A. MAP

B. CHEMICALS OF CONCERN

C. STATEMENT OF FACTS

D. "INITIAL ASSESSMENT STUDY OF HUNTERS POINT NAVAL SHIPYARD (DISESTABLISHED)" (INCORPORATED BY REFERENCE)

E. "VERIFICATION OF HAZARDOUS WASTE CONTAMINATION AT SPECIFIC SITES" (INCORPORATED BY REFERENCE)

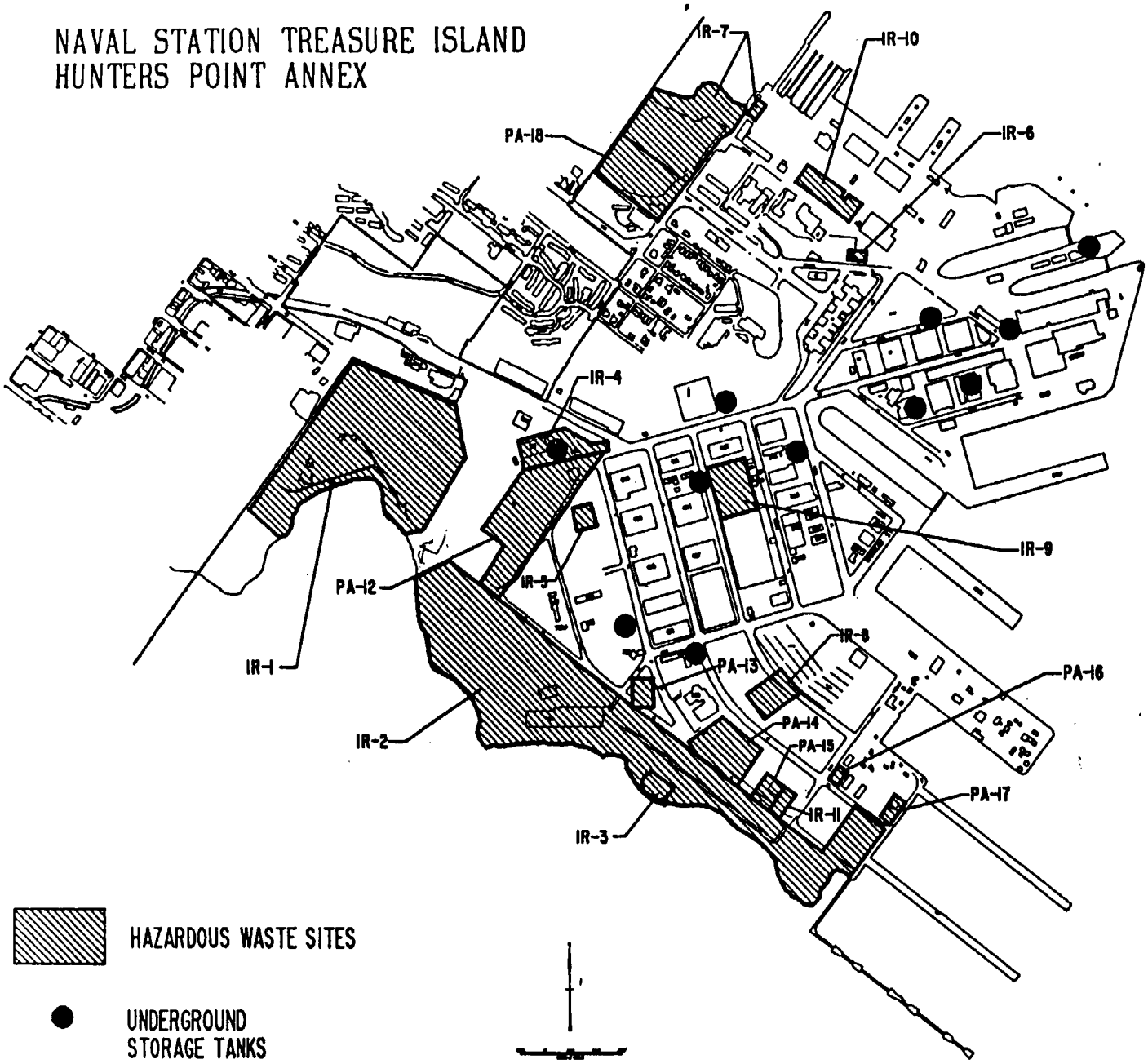
F. "AREA STUDY FOR ASBESTOS-CONTAINING MATERIAL AND ORGANIC AND INORGANIC SOIL CONTAMINATION' (INCORPORATED BY REFERENCE)

G. EPA COMMENTS ON RI/FS WORKPLAN PREPARED BY HARDING-LAWSON AND ASSOCIATES FOR U. S. NAVY

ATTACHMENT A

MAP

NAVAL STATION TREASURE ISLAND
HUNTERS POINT ANNEX



HAZARDOUS WASTE SITES

UNDERGROUND STORAGE TANKS

DESIGNATION OF OPERABLE UNITS IN FFA APPENDIX A

OU 1: IR-1, IR-2, IR-3

OU 2: IR-6, IR-8, IR-9, IR-10

OU 3: IR-4, IR-5

OU 4: IR-7

OU 5: IR-12, IR-13, IR-14, IR-15
IR-17*
Underground Storage Tanks**
Overall Site

* Identified on Map as PA-12, PA-13, PA-14, PA-15, and PA-17 respectively.

** I.e., tanks which are identified as requiring remedial investigation after closure.

ATTACHMENT B

Chemicals of Concern

ATTACHMENT B

Chemicals of Concern

1. **1, 1-Dichloroethane (1,1-DCA).** 1,1-Dichloroethane (1,1-DCA) is a central nervous system depressant in humans when inhaled at high concentrations. It may also be hepatotoxic (toxic to the liver) in humans. Human health effects associated with chronic inhalation of this compound include potential kidney and liver injury and lung irritation. 1,1-DCA is also a skin irritant and eye irritant upon dermal contact. 1,1-DCA is a hazardous substance listed in 40 CFR 302.4.

2. **1,1,1-Trichloroethane (TCA).** Long-term exposure to TCA produces a narcotic effect and depresses the central nervous system. Acute exposure symptoms include dizziness, uncoordination, drowsiness, increased reaction time, unconsciousness, and death. TCA is a listed hazardous substance in 40 CFR 302.4.

3. **Tetrachloroethylene (PCE, Perchloroethylene).** Short-term exposure to PCE through ingestion and inhalation may cause nausea, vomiting, headache, dizziness, drowsiness, and tremors. Skin contact with PCE in the liquid state causes irritation and blistering. Both the liquid and vapor state are irritating to the eyes. Long term exposure may cause liver and kidney damage. PCE has been classified by the IARC in Category 3 (possible human carcinogen). PCE is a listed hazardous substance in 40 CFR 302.4.

4. **Trichloroethylene (TCE).** Acute exposure to TCE depresses the central nervous system, causing such symptoms as headache, dizziness, vertigo, tremors, irregular heartbeat, fatigue, nausea, vomiting and blurred vision. TCE in a gaseous state may cause irritation of the eyes, nose, and throat. TCE in a liquid state may cause burning irritation and damage to the eyes. Repeated or prolonged skin contact with the liquid may cause dermatitis. Long-term effects may include liver and kidney injury. TCE is included in IARC Category 3 (possible human carcinogen). TCE is a listed hazardous substance in 40 CFR 302.4 and a listed hazardous material (No. 744) in Section 66680, Title 22, California Administrative Code.

5. **Benzene.** The primary toxicological effects of short-term exposure to benzene through inhalation and ingestion are on the central nervous system. Symptoms include headache, dizziness, drowsiness and nausea which may progress to convulsions, respiratory paralysis and death with high vapor concentrations. The International Agency for Research on Carcinogens ("IARC") lists benzene in Category 1 (sufficient evidence of human carcinogenicity) in its weight-of-evidence ranking for potential carcinogens. Benzene is a listed hazardous substance in 40 CFR

302.4 and a listed hazardous material (No. 101) in Section 66680, Title 22, California Administrative Code.

6. **Xylene.** Inhalation of xylene vapors by humans produces central nervous system depression with symptoms such as dizziness, nausea, vomiting, drowsiness, abdominal pain, and loss of appetite. Liquid xylene and high concentration xylene vapors are eye irritants, with possibie reversible damage to the cornea. Liquid aspiration of the compound may cause chemical pneumonitis, pulmonary edema, and hemorrhage in the lungs. Chronic effects are similar to acute effects but are potentially irreversible. Xylene is a listed hazardous substance in 40 CFR 302.4 and is a listed hazardous material (No. 776) in Section 66680, Title 22, California Administrative Code.

7. **Toluene.** Inhalation of toluene vapors may produce irritation of the upper respiratory tract, disturbance of vision, dizziness, nausea, collapse, and coma. Direct contact with skin and eyes causes burning. Exposure may cause headache, nausea, loss of appetite, lassitude, and impairment of coordination and reaction time. Higher concentrations may cause anemia, leucopenia and enlargement of the liver. Toluene is a listed hazardous substance in 40 CFR 302.4.

8. **Ethylbenzene.** Ethylbenzene vapors induce irritation of the eyes and skin in humans at high concentrations. Inhalation of vapors irritates the nose and throat. At extremely high concentrations, narcosis can occur. Animal data indicate liver and kidney damage upon ingestion of concentrations averaging 500 mg/kg/day over a short-term exposure period. Ethylbenzene is a listed hazardous substance in 40 CFR 302.4 and is a listed hazardous material (No. 320) in Section 66680, Title 22, California Administrative Code.

9. **1,2; 1,3; 1,4; Dichlorobenzene (ortho, meta, para).** Dichlorobenzene is a halogenated hydrocarbon and all three isomers are toxic. The ortho-isomer is probably more toxic than the meta and para forms. They are all irritants to skin and mucous membrane with highest irritation via oral route. Experiments have produced liver and kidney injury in laboratory animals. Para-isomer has been reported to cause liver injury in humans. All three isomers are listed hazardous substance in 40 CFR 302.4 and are listed hazardous material (No.257) in Section 66680, Title 22, California Administrative Code.

10. **Chlorobenzene.** Acute exposure to chlorobenzene causes sedation, anesthesia and death due to respiratory failure. Chronic exposure to chlorobenzene may result blood poisoning, and lung, liver and kidney damage. Chlorobenzene may be a human carcinogen. Chlorobenzene is a listed hazardous substance in 40 CFR 302.4 and is a hazardous substance (Health and Safety Code, Section 25316, Title 22, California Administrative Code, Section 66680(d) (No.191) and 66696.

11. **Vinyl Chloride.** Inhalation of vinyl chloride causes headache, dizziness, abdominal pain, numbness, and tingling of the extremities. The vapors cause eye irritation. Skin contact with the liquid causes irritation and frostbite due to evaporation; skin contact with the vapor may also cause irritation. The long term effects due to exposure to vinyl chloride include liver damage and liver cancer. There is evidence of mutagenicity. The IARC has classified vinyl chloride in Category 1 for carcinogens (known human carcinogen). Vinyl chloride is a listed hazardous substance in 40 CFR 302.4 and is a listed hazardous material (No. 769) in Section 66680, Title 22, California Administrative Code; and is also a listed "Extremely Hazardous Waste" as defined in Section 66720, Title 22, California Administrative Code.

12. **Polychlorinated Biphenyls.** Reported adverse effects from humans exposed to PCBs include chloracne, impairment of liver function, a variety of neurobehavioral and affective symptoms, minor birth abnormalities, and probably increased incidence of cancer. PCBs are carcinogenic in rats and mice and, in appropriate circumstances, enhance the effects of other carcinogens (U.S. EPA, 1985b). The EPA CAG has classified PCBs as B2 carcinogens (probable human carcinogen) (U.S. EPA, 1985a). PCB is a listed hazardous substance in 40 CFR 302.4 and is a listed hazardous material (No. 606) in Section 66680, Title 22, California Administrative Code.

13. **Naphthalene.** Naphthalene causes hemolysis with subsequent blocking of renal tubules by precipitated hemoglobin. The systemic reaction of exposure to naphthalene are nausea, headache, diaphoresis, hematuria, fever, anemia, liver damage, vomiting, convulsion, and coma. The fatal dose of ingested naphthalene is approximately 2 grams. This chemical is most dangerous in children up to age six, in whom absorption occurs rapidly. Naphthalene is a listed hazardous substance in 40 CFR 302.4 and is also a listed hazardous material (No. 524) in Section 66680, Title 22, California Administrative Code.

14. **Chromium.** Chromium has been classified by the U.S. Environmental Protection Agency's Carcinogen Assessment Group as a human carcinogen when exposure occurs through inhalation. Chromium compounds are listed hazardous substances in 40 CFR 302.4 and are listed hazardous materials (No. 204) in Section 66680, Title 22, California Administrative Code.

15. **Lead.** Short-term exposure to lead can cause reversible kidney damage, but prolonged exposure at high concentrations may result in progressive kidney damage and possibly kidney failure. Anemia, due to the inhibition of hemoglobin synthesis and a reduction in the lifespan of circulating red blood cells, is an early manifestation of lead poisoning. The most serious effects associated with markedly elevated blood level are severe neurotoxic effects that include irreversible brain damage, as indexed by the occurrence of acute or chronic encephalophatic

symptoms. Lead compounds are listed hazardous substance in 40 CFR 302.4 and are listed as hazardous materials (No. 406) in Section 66680, Title 22, California Administrative Code.

16. **Mercury.** Acute poisoning of animals and humans by mercury is marked by stomatitus, tremors, psychic disturbances, excessive salivation, and in some cases gingivitis with loosening of the teeth and a dark line on the gum margins. Mercury and mercury compounds are listed hazardous substances in 40 CFR 302.4 and are listed hazardous materials (No. 472 and No. 473) in Section 66680, Title 22, California Administrative Code. Mercury and/or mercury compounds are a listed "persistent and bioaccumulative toxic substance" in Section 66699, Title 22, California Administrative Code. Mercury and its compounds are also an "Extremely Hazardous Waste" as defined in Section 66720, Title 22, California Administrative Code.

17. **Cadmium.** Acute and chronic exposure to cadmium in animals and humans results in renal dysfunction, hypertension, anemia, and altered liver microsomal activity. The kidney is considered to be the critical target organ in humans chronically exposed to cadmium by ingestion. Cadmium has been classified by EPA as a probable human carcinogen according to EPA's Proposed Guidelines for Carcinogen Risk Assessment, based upon evidence of carcinogenicity in humans through inhalation exposure. Cadmium compounds are listed hazardous substance in 40 CFR 302.4 and are listed hazardous materials (No. 152) in Section 66680, Title 22, California Administrative Code.

18. **Nickel.** The absorption of dietary nickel from the gastrointestinal tract appears to be quite low with the majority of nickel excreted in the feces. Laboratory studies have demonstrated depressed body weight gain, alterations in hematology parameters, cytochrome oxidase activity, and iron contents of organs following high-dose oral exposure. The chemical form and route of exposure are important factors in determining the carcinogenic potential of nickel. Metallic nickel, nickel subsulfide, and nickel carbonyl, which are insoluble nickel compounds, have been shown to produce tumors through inhalation exposure in animals. The EPA CAG has classified nickel as a human carcinogen through the inhalation route. Nickel is a listed hazardous substance in 40 CFR 302.4 and is a listed hazardous material (No. 528) in Section 66680, Title 22, California Administrative Code.

19. **Copper.** Copper salts are skin irritants, causing itching, erythema, and dermatitis. Copper salts may cause conjunctivitis in the eyes and ulceration and turbility of the cornea. Fumes and dust of copper may cause upper respiratory tract irritation, nausea, and gastrointestinal tract irritation. In man, the ingestion of a large quantity of copper sulfate has caused vomiting, gastric pain, dizziness, exhaustion, anemia, cramps, convulsions, shock, coma and death. Symptoms attributed to damage to the nervous system and kidney have been recorded. Jaundice has been observed and, in some cases, the liver has been enlarged.

Copper compounds are listed hazardous substance in 40 CFR 302.4 and are a listed hazardous material (No. 221) in Section 66680, Title 22, California Administrative Code.

20. **Asbestos.** Prolonged inhalation of asbestos dust can cause cancer of the lung, pleura and peritoneum, and has experimentally produced cancers of the peritoneum, intestine, bronchus and oropharynx. Clinically, the most striking sign is shortness of breath of gradually increasing intensity, often associated with a dry cough. In the early stages physical signs are absent or slight. In the later stages rales may be heard, and there is frequently clubbing of the fingers. Asbestos is a listed hazardous material (No. 75) in Section 66680, Title 22, California Administrative Code.

21. **Zinc.** Zinc is an essential nutrient involved in enzyme functions, protein synthesis and carbohydrate metablism. Diets deficient in zinc can result in adverse health consequences. At high concentrations, zinc can be toxic. Inhalation of zinc mists or fumes may irritate the respiratory tract. Ingestion of excessive amounts of zinc may cause fever, vomiting, stomach cramps, and diarrhea. There is no data to suggest that zinc is mutagneic or teratogenic in animals or humans, nor is there evidence to suggest that it causes cancer in humans. However, zinc may be indirectly important with regard to cancer in that its presence seems to be necessary for the growth of tumors.

Reported acute toxicity values saltwater aquatic organisms range from 2,730 to 83,000 ug/liter for saltwater fish and from 166 to 55,000 ug/liter for invertebrate saltwater species. Zinc produces chronic toxicity in the mysid shrimp at 166 ug/liter. The final acute-chronic ratio for saltwater species is 3.0. Toxic effects are observed in saltwater plant species at zinc concentrations of 50 to 25,000 ug/liter. Bioconcentration factors of edible portions of aquatic organisms range from 43 for the soft-shell clam to 16,700 for the oyster.

Zinc is a listed hazardous substance in 40 CFR 302.4.

22. **Silver.** Exposure to high levels of silver can cause argyria (an impregnation of the tissues) and lesions of the liver, kidney, bone marrow, and lungs in humans. Liver and kidney damage, central nervous system effects, and pulmonary edema and congestion have been reported in experimental animals exposed to various silver compounds. There are no studies to suggest that silver is carcinogenic in humans. Silver does not appear to have significant mutagenic or teratogenic activity in humans or experimental animals. Acute values for saltwater organisms range from 4.7 ug/liter for the summer flounder to 1,400 ug/liter for the sheepshead minnow. A chronic value of 18 ug/liter, and an acute-chronic ratio of 14 is reported for the mysid shrimp.

Silver is a listed hazardous substance in 40 CFR 302.4.

ATTACHMENT C

Statement of Facts

ATTACHMENT C

STATEMENT OF FACTS

Federal Facility Description. Naval Shipyard Treasure Island, Hunters Point Annex (the "Federal Facility"), which is the subject of this Agreement is located on and adjacent to San Francisco Bay in the southeast corner of the city of San Francisco. The Federal facility encompasses approximately 964 acres, 450 acres of which are submerged by the San Francisco Bay. (See map, Attachment A).

Federal facility Ownership. The Federal Facility is owned by the United States Department of the Navy ("the Navy") on behalf of the United States.

History Prior to July 1, 1976. In 1869, a commercial ship repair facility was established at Hunters Point. In 1939, the Navy purchased the site and subsequently developed it as an annex to the Navy Yard at Mare Island. In 1945, Hunters Point became a separate Naval Shipyard until it was decommissioned in 1974.

History From July 1, 1976 to the Present Time. Beginning on July 1, 1976, and ending on June 30, 1986, Triple A Machine Shop Incorporated ("Triple A") leased the site from the Navy. However, Triple A vacated the site in March, 1987. Triple A used drydocks, adjacent berths, machine shops, power plants, various offices, and warehouses for the purpose of repairing commercial and Naval vessels. Triple A also subleased part of the site to other small businesses. Some of these small businesses currently occupy various areas of the site under an agreement with the Navy.

Generation of Hazardous Substances Prior to July 1, 1976. Prior to July 1, 1976, the Navy generated hazardous substances during the normal course of shipyard work. The hazardous substances or wastes which were generated include spent acids, spent solvents, radium dials, paint sludges, spent blasting grit and waste oil. The activities which resulted in the generation of these hazardous substances are listed in the Navy's Initial Assessment Study (see Attachment D).

Storage and Disposal of Hazardous Substances Prior to July 1, 1976. Prior to July 1 , 1976, the Navy stored and disposed hazardous substances at the site. Some of these hazardous substances are known to have been released or disposed in the following areas:

a. Oil Reclamation Ponds

b. Industrial Landfill

c. Scrap Yard

d. Old Transformer Storage Yard

e. Power Plant Near Building 521

f. Pickling and Plate Yard

g. Bay Fill Area

h. Tank Farm

i. Battery and Electroplating Shop

j. Sub-base Sand Blast Fill and Painting Area

k. Bay Sediments

Generation, Storage, and Disposal of Hazardous Substances and Wastes After July 1, 1976. From July 1, 1976 until March, 1987, Triple A occupied the site for the purpose of repairing commercial and Naval vessels. Activities conducted by Triple A which resulted in the generation of hazardous substances and wastes included: (1) removing hazardous substances and wastes, such as waste oil and contaminated bilge water, from ships under repair; (2) construction, demolition, or renovation of buildings at the site which involved disposal of asbestos lagging materials and electric capacitors and transformers containing PCB oil; and (3) ship repairing which generated metal-containing sand blast fines, waste paint, and spent solvents. Some of these hazardous substances are known to have been released or disposed in the areas listed above and/or other areas at the site.

Other Releases of Hazardous Substances. Other releases of hazardous substances at the site are described below.

PCB Contaminated Area Near Building 503. In September, 1986, a previously unknown PCB-contaminated area was unearthed during construction work near Building 503. Initial results showed PCB concentrations as high as 910 ppm in the soil samples. Since then, the Navy has implemented source removal action to remove soil with PCB concentrations higher than 25 ppm.

Sub-base Sand Blast Fill Area. The westernmost subarea of the Sub-Base Sand Blasting and Painting area is an irregularly shaped section bordered by the Bay to the north, the Sub-Base Sand Blasting Fill area to the east, Donahue Street to the southeast, a parking area to the southwest, and the Hunters Point Annex property line to the northwest. In addition to heavy metal contamination of soil in this area, limited soil samples indicate that the soil is also contaminated with aromatic hydrocarbons.

Hazardous Substances Found at the site. Since 1983, the Navy has been investigating the site to determine the nature and extent of the contamination which resulted from past releases of hazardous substances. These investigations indicate that soil and ground water at the site are contaminated with hazardous substances and contain constituents which may have adverse impacts on public health and the environment. The highest concentrations of certain hazardous substances detected in soil or ground water at selected locations are listed below in Table 1 and Table 2. This list is not an exhaustive list of all the hazardous substances which may be present at the site. Other hazardous substances detected at the site are reported in the Navy's "Confirmation Study/Verification Step Report" (March 19, 1987) and the Navy's "Area Study for Asbestos Containing Material and Organic and Inorganic Soil Contamination" (July 2, 1987).

Population at Risk. Approximately 1,500 workers employed by the Navy and private companies work at the site. The site also contains restaurants and other commercial establishments which are frequented by the public. In addition, there is a residential area immediately adjacent to and west of the site.

Environment at Risk. Existing and potential beneficial uses of the ground water and surface waters underlying and adjacent to the Hunters Point Naval Shipyard may include:

a. Industrial process water supply

b. Industrial service water supply

c. Navigation

d. Water contact recreation

e. Non-contact water recreation

f. Ocean commercial and sport fishing

g. Wildlife habitat

h. Preservation of rare and endangered species

Table 1. Selected Hazardous Substances Detected in Soil Samples at Selected Locations

Hazardous Substances	Highest Concentration Detected (in ppm)	Location of Sample
TCE	15	Bay Fill Area (BL)
PCE	620	Bay Fill Area (BL)
1,1-DCA	20	Bay Fill Area (BL)
TCA	44	Bay Fill Area (BL)
Benzene	0.3	Oil Reclamation Pond
Toulene	16	Industrial Landfill (I-5)
Xylene	42	Industrial Landfill (I-5)
Ethylbenzene	12	Industrial Landfill (I-5)
Chlorobenzene	6	Oil Reclamation Pond (O-A)
1,2-Dichlorobenzene	110	Oil Reclamation Pond (O-A)
1,3-Dichlorobenzene	92	Oil Reclamation Pond (O-A)
1,4-Dichlorobenzene	70	Oil Reclamation Pond (O-A)
PCBs	460.5	Study Area A1 (AE4-12)
Naphthalene	84	Industrial Landfill (I-5)
Chromium	55,000	Pickling and Plating Yard (RES-1)
Lead	52,000	Industrial Landfill (I-9)
Mercury	6.1	Industrial Landfill (I-5)
Cadmium	150	Battery & Electroplating Shop (BES-1)
Nickel	1,100	Sub-base Sand Blast (S-C)
Copper	6,300	Industrial Landfill (I-4)
Asbestos	34%	Scrap Yard

Table 2. Selected Hazardous Substances Detected in Groundwater Samples at Selected Locations

Hazardous Substances	Highest Concentration Detected (in ppb)	Location of Sample
TCE	3	Industrial Landfill (I-4)
Benzene	29	Industrial Landfill (I-4)
Toulene	50	Industrial (I-4)
Xylene	35	Oil Reclamation Pond (O-3)
Ethylbenzene	13	Industrial Landfill (I-3)
Chlorobenzene	198	Oil Reclamation Pond (O-3)
1,2-Dichlorobenzene	49	Industrial Landfill (I-4)
1,3-Dichlorobenzene	33	Industrial Landfill (I-4)
1,4-Dichlorobenzene	90	Oil Reclamation Pond (O-3)
Vinyl Chloride	57	Oil Reclamation Pond (O-2)
Naphthalene	290	Oil Reclamation Pond(O-3)

i. Fish migration

j. Fish spawning

k. Shellfish harvesting

l. Estuaries habitat

One or more of these potential or existing beneficial uses may be impacted by releases from the site.

Exposure Pathways. Hazardous substances and constituents have been detected in soil and ground water at the site. These hazardous substances may migrate or may continue to migrate off-site and expose humans and/or flora and fauna through four possible exposure pathways. These pathways are described as follows:

Ground Water. Hazardous substances and constituents have migrated into and contaminated ground water underlying the site and may have adverse impacts to beneficial uses of the waters of the State. These substances may migrate or may be migrating off-site and into the Bay.

Air. Potential releases of hazardous substances from the site to the air may occur. Exposure to air contaminants could result from inhalation.

Soil. Dermal contact with or ingestion of contaminated surface soil may result in exposure to hazardous substances.

Surface Water. Hazardous substances and constituents may migrate or may continue to migrate from the site into the Bay. Such migration causes or threatens to cause a condition of pollution in the Bay, which may adversely affect beneficial uses. Direct contact with, or ingestion of, surface water or polluted flora or fauna, may result in human exposure to these pollutants.

ATTACHMENT D

"Initial Assessment Study of Hunters Point Naval Shipyard (Disestablished)"

NEESA 13-059

10/01/84

(incorporated by reference)

ATTACHMENT E

"Verification of Hazardous Waste Contamination at Specific Sites"

9/23/87

(incorporated by reference)

ATTACHMENT F

"Area Study for Asbestos-containing Material and Organic and Inorganic Soil Contamination"

7/02/87

(2 volumes)

(incorporated by reference)

ATTACHMENT G

EPA Comments on RI/FS Workplan

prepared by Harding-Lawson and Associates

for U. S. Navy

Attachment G

EPA Comments on RI/FS Workplan

The following are EPA's comments on the 8-volume RI/FS Workplan prepared for the U. S. Navy by Harding-Lawson and Associates. In accordance with Section 8 of this Agreement, these comments are to be addressed in a revised Workplan.

1. The ground water monitoring program needs to include a plan for evaluating tidal influence on the subsurface saturated zone.

2. A plan for evaluating the integrity of the stormwater sewer lines and outfalls, and the potential for releases from these lines and outfalls, needs to be included. Such a plan would, at a minimum, establish a program to sample the sewer lines and outfalls during rainfall events (i.e., when sufficient water to collect samples is present in the sewer lines), or to sample soils and/or ground water in areas where potential releases from the sewer lines may occur.

3. In the Community Relations Plan, Table 1, "Schedule of Community Relations Activities - Technical Milestones," the "X" denoting preparation of a Responsiveness Summary should be moved from the "Draft Remedial Design" column to the "Final RAP" column. To ensure consistency with Federal terminology, it may be useful to add below "Final RAP" the parenthetical phrase "(Proposed Plan)".

4. The following comments address the "Public Health and Environmental Evaluation Plan" (PHEE).

Page 1-2. Additional guidance documents have recently been published that were not included in the workplan. Most important of these is the new Superfund human health risk assessment guidance: Risk Assessment Guidance for Superfund: Human Health Evaluation Manual, Part A, September 1989, USEPA 9285.701A. Additional Region IX risk assessment guidance is given in Risk Assessment Guidance for Superfund: Human Health Risk Assessment: US EPA Region IX Recommendations (December 15, 1989, Interim Final. These documents should be consulted in the preparation of the final PHEE documents.

Page 1-6. Aquatic toxicity evaluations for surface water and ground water releases are to follow different procedures. The rationale for the difference in evaluation procedures should be justified in the PHEE.

Page 3-5. Current Superfund guidance on reduction in the number of chemicals included in a risk assessment presented in Chapter 5 of the Risk Assessment Guidance for Superfund (RAGS) should be consulted prior to adopting what was previously termed an "indicator chemical" approach. Given the improvement in computational capabilities, this approach is now strongly

discouraged. Specifically, the new guidance states that such a step should be made in consultation with the EPA Remedial Project Manager and should be well documented. The level of effort for documentation, analysis and risk screening calculations required to justify reduction of chemicals assessed may be extensive.

Page 3-8. Statistically significant elevation of chemical concentrations above background or above regulatory criteria is proposed as a benchmark for exclusion. However, it should be emphasized that sufficient sampling of both site-affected and background areas is required for any such statistical test to be meaningful. Secondly, presence of a chemical below a regulatory criteria may not be sufficient grounds for exclusion from the risk assessment.

Page 3-12. The likelihood of changes in total population and population movements (changes in land use) should be considered in assessment of future health risks.

Page 3-18. The term "Acceptable Level" is not a preferred phrase as determination of acceptability of projected risks are not made in the risk assessment itself. Such decisions will only be made after completion of and consideration of the risk assessment as well as other relevant information.

Page 3-18. Absorption rates of less than 100% should be used with caution. Guidance on this issue is provided in Risk Assessment Guidance for Superfund: Human Health Risk Assessment: US EPA Region IX Recommendations, December 15, 1989, Interim Final, pp. 11-12.

Page 3-20. As noted above, the issue of acceptability of estimated health risks should be avoided in the risk assessment.

5. Generally, the Workplan does not clearly outline how the potential impacts of contamination on San Francisco Bay will be determined. The Workplan should include additional detail concerning how an ecological assessment will be conducted which will evaluate the need for, and alternatives for, remedial action to remedy known or potential impacts affecting beneficial uses and/or biota and fauna, including natural resource trustee resources. Additional sampling and analysis may be needed, including more extensive sediment sampling, surface water sampling of Bay waters, and bioassays.

EPA recently published guidance which should be consulted in preparing for and conducting the ecological assessment: Risk Assessment Guidance for Superfund -- Environmental Evaluation Manual (Interim Final)," EPA OSWER Directive 9285.7-01 (EPA 540/1-89-001A) and Draft Risk Assessment Guidance for Superfund: Ecological Assessments/Region IX. A manual of field methods is also available: "Ecological Assessments of Hazardous Waste Sites: A Field and Laboratory Reference Document" (EPA 600/3-89-013).