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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
215 Fremont Street  
San Francisco, Ca. 94105

18 JUN 1990

Captain L.D. Johnson  
Shipyards Commander  
Long Beach Naval Shipyards  
Terminal Island Complex  
Long Beach, CA 90822-5099

HAZARDOUS WASTE FACILITY PERMIT: LONG BEACH NAVAL SHIPYARD, CA6170023109

The U. S. Environmental Protection Agency (EPA) has made a final permit decision to issue a Resource Conservation and Recovery Act (RCRA) hazardous waste facility permit for the Long Beach Naval Shipyards, Building 314, as provided in the Code of Federal Regulations (CFR), Title 40, Section 124.15.

In accordance with 40 CFR 124.15(b)(3), this final permit decision shall become effective upon receipt of this notice, unless a petition for administrative appeal is filed as allowed under 40 CFR 124.19. The administrative appeal procedures must be completed before action to involve judicial review can be initiated. If you wish to appeal this decision you must file your petition with the EPA administrator within thirty (30) days of the service of this notice.

Enclosed is a copy of the RCRA hazardous waste facility permit and the final permit decision. Should you have any questions or comments regarding this matter, please contact Tom Canaday of the California Permits Section (H-3-2) at (415) 744-1442.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Zelikson".

Jeffrey Zelikson, Director  
Hazardous Waste Management Division

Enclosures

cc: Paul Blais, Chief (w/o enclosures)  
Hazardous Waste Management Section  
Department of Health Services  
Toxic Substances Control Program  
714/744 P Street  
P.O. Box 942732  
Sacramento, CA 94234-7320



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
215 Fremont Street  
San Francisco, Ca. 94105

18 JUN 1990

FINAL PERMIT DECISION  
RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)

In accordance with the requirements of 40 CFR 124.15, EPA is making its final permit decision to issue a RCRA hazardous waste facility permit for the following hazardous waste management facility:

Long Beach Naval Shipyard  
Building 314, Terminal Island Complex  
Long Beach, CA 90822-5099  
EPA ID No. CA6170023109

In accordance with 40 CFR 124.15(b)(3), this final permit decision shall become effective upon receipt of this notice, unless a petition for administrative appeal is filed as allowed under 40 CFR 124.19. The administrative appeal procedures must be completed before action to invoke judicial review can be initiated. If you wish to appeal this decision, you must file your petition with the Regional Administrator within 30 days of the service of this notice.

A copy of the final administrative record for this final decision is available for your review at the Department of Health Services, Toxic Substances Control Program, 245 W. Broadway, Suite 350, Long Beach, CA 90802, between the hours of 8:00 a.m. - 5:00 p.m., Monday through Friday.

Please contact Tom Canaday at (415) 744-1442 should you have any questions on this decision or need additional information.

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Captain L.D. Johnson

Page 2

cc: John A. Hinton, P.E. (w/o enclosures)  
Regional Administrator  
Department of Health Services  
Toxic Substances Control Program  
Region 4  
245 W. Broadway, Suite 350  
Long Beach, CA 90802

Mohinder S. Sandhu, P.E., Chief (w/ enclosures)  
Facility Permitting Unit  
Department of Health Services  
Toxic Substances Control Program  
Region 4  
245 W. Broadway, Suite 350  
Long Beach, CA 90802

Paula Rasmussen, Chief (w/o enclosures)  
Surveillance and Enforcement Unit  
Department of Health Services  
Toxic Substances Control Program  
Region 4  
245 W. Broadway, Suite 350  
Long Beach, CA 90802

Regional Water Quality (w/o enclosures)  
Control Board  
Region 4  
101 Centre Plaza Road  
Monterey Park, CA 91754

Don Cillay (w/o enclosures)  
Health Officer  
City of Long Beach  
Environmental Health Department  
P.O. Box 6157  
2655 Pine Avenue  
Long Beach, CA 90806

Certified Mail  
P 471 076 311  
Return Receipt Requested

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
215 Fremont Street  
San Francisco, Ca. 94105

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
PERMIT  
FOR A HAZARDOUS WASTE MANAGEMENT FACILITY

Permittee: Long Beach Naval Shipyard  
Building 314  
Long Beach, CA 90822-5099

Facility Identification  
Number: CA6170023109

Pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (42 USC 6901 *et seq.*, commonly known as RCRA) and regulations promulgated thereunder by the U.S. Environmental Protection Agency (EPA) (codified and to be codified in Title 40 of the Code of Federal Regulations), a permit is issued to the Long Beach Naval Shipyard (hereafter called the Permittee), to operate a hazardous waste storage facility located in Long Beach, CA (at Building 314), at latitude 33° 45'36" and longitude 118° 13' 23".

The Permittee's hazardous waste operation includes storage in containers. A detailed description of the facility is in Module I of this permit. The Permittee shall undertake corrective action as outlined in Module V of this permit.

The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions contained herein (including those in any attachments) and the applicable regulations contained in 40 CFR Parts 260 through 266, 270, and 124, as specified in the permit. Applicable regulations are those which are in effect on the date of issuance of the permit, in accordance with 40 CFR 270.32(c).

This permit is based on the assumption that the information submitted in the Part B Permit Application attached to the Permittee's letter dated September 18, 1988 (hereafter referred to as the Part B) is accurate and that the facility is constructed and will be operated as specified in the Part B.

Any inaccuracies found in the submitted information may be grounds for the termination, revocation and reissuance, or modification of this permit in accordance with 40 CFR 270.41, 270.42, and 270.43 and for enforcement action. The Permittee must inform EPA of any deviation from or changes in the information in the application which would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

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This Permit is effective as of June 22, 1990 and shall remain in effect until June 22, 1995 unless revoked and reissued under 40 CFR 270.41, terminated under 40 CFR 270.43, or continued in accordance with 270.51(a).

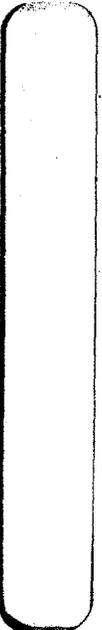
6-18-90

Date



Jeffrey Zelikson, Director  
Hazardous Waste Management  
Division

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LONG BEACH NAVAL SHIPYARD  
FINAL PERMIT MAILING LIST

Paul Blais, Chief  
Hazardous Waste Management Section  
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Toxic Substances Control Program  
714/744 P Street  
P.O. Box 942732  
Sacramento, CA 94234-7320

John A. Hinton  
Regional Administrator  
Department of Health Services  
Toxic Substances Control Program  
Region 4  
245 W. Broadway, Suite 350  
Long Beach, CA 90802

Dave Bailey, Code 410  
Director, Environmental Protection  
Long Beach Naval Shipyard  
Terminal Island Complex  
Long Beach, CA 90822-5099

Captain L.D. Johnson  
Shipyard Commander  
Long Beach Naval Shipyard  
Terminal Island Complex  
Long Beach, CA 90822-5099

Don Cillay  
Health Officer  
City of Long Beach  
Environmental Health Department  
P.O. Box 6157  
2655 Pine Avenue  
Long Beach, CA 90806

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Long Beach Naval Shipyard  
Final Permit Mailing List  
Page 2

Captain Richard McIntyre  
Bureau of Fire Prevention  
City of Long Beach Fire Department  
400 W. Broadway, Room 264  
Long Beach, CA 90802

Robert Paternoster  
Director of Planning & Building  
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Long Beach, CA 90802

Gerhardt H. Felgemaker  
Environmental Officer  
Department of Planning & Building  
City of Long Beach  
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Long Beach, CA 90802

James C. Hankla  
City Manager, City of Long Beach  
333 W. Ocean Blvd., 13th Floor  
Long Beach, CA 90802

Raymond Holland  
Director of Public Works, City of Long Beach  
333 W. Ocean Blvd., 9th Floor  
Long Beach, CA 90802

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Plant Manager, Terminal Island Treatment Plant  
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Deane Dana  
4th District Supervisor  
County of Los Angeles  
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Los Angeles, CA 90012

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Regional Water Quality Control Board  
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101 Center Plaza Road  
Monterey Park, CA 91754

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Long Beach Naval Shipyard  
Final Permit Mailing List  
Page 3

Paula Rasmussen, Chief  
Surveillance and Enforcement Unit  
Department of Health Services  
Toxic Substances Control Program  
Region 4  
245 W. Broadway, Suite 350  
Long Beach, CA 90802

Vincent Nafarette  
Toxics Legal Office  
Department of Health Services  
Toxic Substances Control Program  
Region 4  
245 W. Broadway, Suite 350  
Long Beach, CA 90802

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
215 Fremont Street  
San Francisco, Ca. 94105

18 JUN 1990

TO: Final Permit Mailing List

SUBJECT: FINAL HAZARDOUS WASTE FACILITY PERMIT: LONG BEACH NAVAL SHIPYARD,  
(EPA ID NO. CA6170023109)

Enclosed, please find the Final Hazardous Waste Facility Permit issued to the Long Beach Naval Shipyard.

The permit authorizes the facility at Building 314 to operate under certain specified conditions. It is granted by the United States Environmental Protection Agency in accordance with Title 40 of the Code of Federal Regulations.

Questions regarding this final permit should be directed to Tom Canaday of my staff at (415) 744-1442.

Sincerely,

Jim Breitlow, Chief  
Permits Section

Enclosure

RECEIVED  
JUN 21 1990

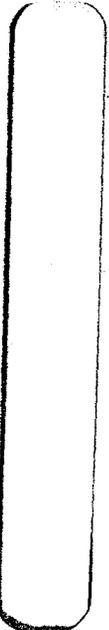
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MODULE I - DESCRIPTION OF FACILITY

The Permittee's hazardous waste storage facility, Building 314, will receive, handle and store hazardous wastes (in containers) generated on-site at the Long Beach Naval Complex. In addition, the facility will receive off-site generated wastes from the Naval Hospital, 7500 E. Carson Street, Long Beach, California and from Naval Ships located at the Southwest Marine Repair Facility, Terminal Island, San Pedro, California. There will be no treatment or disposal of hazardous wastes at the facility; hazardous wastes will be stored in containers in Building 314 prior to transport to a permitted disposal or recycling facility.

The facility consists of a metal storage building, approximately 9,350 square feet, containing eight storage bays (in Room 105). Each bay is approximately 19 feet by 30 feet and enclosed on three sides by an 8-inch high concrete berm; the remaining side is open to the center drive-through area, however, the 6-inch concrete floor of each bay is sloped towards a center sump. Two additional storage rooms are designed for water reactive wastes (Room 106, 19 feet by 22 feet) and PCBs (Room 107, 18 feet by 25 feet). Loading facilities consist of a concrete pad (45 feet by 50 feet) equipped with a sump. The new facility is located within a secure fenced area (394 feet by 172 feet).

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MODULE II - GENERAL PERMIT CONDITIONS

II.A. EFFECT OF PERMIT

The Permittee is allowed to store hazardous waste in accordance with the conditions of this permit. Any storage of hazardous waste not authorized in this permit is prohibited. Subject to 40 CFR 270.4, compliance with this permit generally constitutes compliance, for purposes of enforcement, with Subtitle C of RCRA. Issuance of this permit does not convey any property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local law or regulations. Compliance with the terms of this permit does not constitute a defense to any order issued or any action brought under Sections 3008(a), 3008(h), 3013, or 7003 of RCRA, Sections 106(a), 104 or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. 9601 ~~et seq.~~, commonly known as CERCLA), or any other law providing for protection of public health or the environment. [40 CFR 270.4, 270.30(g)]

II.B. PERMIT ACTIONS

II.B.1. Permit Modification, Revocation and Reissuance, and Termination

This permit may be modified, revoked and reissued, or terminated for cause, as specified in 40 CFR 270.41, 270.42, and 270.43. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay the applicability or enforceability of any permit condition. [40 CFR 270.4(a) and 270.30(f)]

II.B.2. Permit Renewal

This permit may be renewed as specified in 40 CFR 270.30(b) and Permit Condition II.E.2. Review of any application for a permit renewal shall consider improvements in the state of control and measurement technology, as well as changes in applicable regulations. [40 CFR 270.30(b), HSWA Sec. 212]

II.C. SEVERABILITY

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby. [40 CFR 124.16(a)]

#### II.D. DEFINITIONS

For purposes of this permit, terms used herein shall have the same meaning as those in 40 CFR Parts 124, 260, 264, 266, 268, and 270, unless this permit specifically provides otherwise; where terms are not defined in the regulations or the permit, the meaning associated with such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term. "Regional Administrator" means the Regional Administrator of EPA Region IX, or his designee or authorized representative.

#### II.E. DUTIES AND REQUIREMENTS

##### II.E.1. Duty to Comply

The Permittee shall comply with all conditions of this permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit. Any permit noncompliance, other than noncompliance authorized by an emergency permit, constitutes a violation of RCRA and is grounds for enforcement action for permit termination, revocation and reissuance, or modification or for denial of a permit renewal application. [40 CFR 270.30(a), 270.41, 270.42, 270.43, 270.51(c) and 270.61]

##### II.E.2. Duty to Reapply

If the Permittee wishes to continue an activity allowed by this permit after the expiration date of this permit, the Permittee shall submit a complete application for a new permit at least 180 days prior to permit expiration. [40 CFR 270.10(h), 270.30(b)]

##### II.E.3. Permit Expiration

Pursuant to 40 CFR 270.50, this permit shall be effective for a fixed term not to exceed ten years. As long as EPA is the permit-issuing authority, this permit and all conditions herein will remain in effect beyond the permit's expiration date, if the Permittee has submitted a timely, complete application (see 40 CFR 270.10, 270.13 through 270.29) and, through no fault of the Permittee, the Regional Administrator has not issued a new permit, as set forth in 40 CFR 270.51.

##### II.E.4. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for the Permittee, in an enforcement action that it would have been necessary, to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. [40 CFR 270.30(c)]

II.E.5. Duty to Mitigate

In the event of noncompliance with this permit, the Permittee shall take all reasonable steps to minimize releases to the environment and shall carry out such measures, as are reasonable, to prevent significant adverse impacts on human health or the environment. [40 CFR 270.30(d)]

II.E.6. Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this permit. [40 CFR 270.30(e)]

II.E.7. Duty to Provide Information

The Permittee shall furnish to the Regional Administrator, within a reasonable time, any relevant information which the Regional Administrator may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Regional Administrator, upon request, copies of records required to be kept by this permit. [40 CFR 264.74(a), 270.30(h)]

II.E.8. Inspection and Entry

Pursuant to 40 CFR 270.30(i), the Permittee shall allow the Regional Administrator, or an authorized representative, upon the presentation of credentials and other documents, as may be required by law, to:

- II.E.8.a. Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
- II.E.8.b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

- II.E.8.c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- II.E.8.d. Sample or monitor, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location.

For the purpose of this permit condition only (II.E.8), "reasonable times" means that upon presentation of credentials (EPA identification card and a letter from the Regional Administrator stating that the inspector is authorized to inspect the facility), the Permittee shall allow the Regional Administrator or a duly authorized representative immediate access to the facility. Failure to allow immediate access constitutes a violation of this permit condition (II.E.8).

#### II.E.9. Monitoring and Records

- II.E.9.a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix I of 40 CFR Part 261 or an equivalent method approved by the Regional Administrator. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, Standard Methods of Wastewater Analysis, or an equivalent method, as specified in the Waste Analysis Plan (Appendix G of the Part B). [40 CFR 270.30(j)(1)]
- II.E.9.b. The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this permit, the certification required by 40 CFR 264.73(b)(9), and records of all data used to complete the application for this permit for a period of at least 3 years from the date of the sample, measurement, report, record, certification, or application.

These periods may be extended by request of the Regional Administrator at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility. [40 CFR 264.74(b) and 270.30(j)(2)]

- II.E.9.c. Pursuant to 40 CFR 270.30(j)(3), records of monitoring information shall specify:
- i. The dates, exact place, and times of sampling or measurements;
  - ii. The individuals who performed the sampling or measurements;
  - iii. The dates analyses were performed;
  - iv. The individuals who performed the analyses;
  - v. The analytical techniques or methods used; and
  - vi. The results of such analyses.

II.E.10. Reporting Planned Changes

The Permittee shall give notice to the Regional Administrator, as soon as possible, of any planned physical alterations or additions to the permitted facility. If the Regional Administrator determines such planned physical alterations or additions are cause for permit modification, or revocation and reissuance, the Regional Administrator will modify, or revoke and reissue this permit pursuant to Permit condition II.B.1. If the Regional Administrator determines such planned physical alterations or additions are not cause for permit modification, or revocation and reissuance, the Regional Administrator may approve the planned alterations or additions. Any such decision made by the Regional Administrator shall be in writing.

For the purpose of this permit condition only (II.E.10), "as soon as possible" means at least thirty (30) calendar days before any such planned physical alterations or additions are initiated by the Permittee. [40 CFR 270.30(1)(1)]

II.E.11. Reporting Anticipated Noncompliance

The Permittee shall give advance notice to the Regional Administrator of any planned changes in the permitted facility



or activity which may result in noncompliance with permit requirements. If the Regional Administrator determines such planned changes in the permitted facility or activity are cause for permit modification, or revocation and reissuance, the Regional Administrator will modify, or revoke and reissue this permit pursuant to Permit Condition II.B.1. If the Regional Administrator determines such planned changes in the permitted facility or activity are not cause for permit modification, or revocation and reissuance, the Regional Administrator may approve the planned changes in the permitted facility or activity. Any such decision made by the Regional Administrator shall be in writing.

For the purpose of this permit condition only (II.E.11), "advance notice" means at least thirty (30) calendar days before any such planned changes in the permitted facility or activity are initiated by the Permittee. [40 CFR 270.30(1)(2), 270.41 and 270.42]

#### II.E.12. Certification of Construction or Modification

The Permittee may not commence storage of hazardous waste in the new facility until the Permittee has submitted to the Regional Administrator, by certified mail or hand delivery, a letter signed by the Permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the permit; and

- II.E.12.a. The Regional Administrator has inspected the newly constructed facility and finds it is in compliance with the conditions of the permit; or
- II.E.12.b. The Regional Administrator has either waived the inspection or has not within 15 days notified the Permittee of his intent to inspect. [40 CFR 270.30(1)(2)]

#### II.E.13. Transfer of Permits

This permit is not transferable to any person, except after notice to the Regional Administrator. The Regional Administrator may require modification or revocation and reissuance of the permit pursuant to 40 CFR 270.40. Before transferring ownership or operation of the facility during its operating life, the Permittee shall notify the new owner or operator in writing of the requirements of 40 CFR Parts 264 and 270 and this permit. [40 CFR 270.30(1)(3), 264.12(c)]

II.E.14. Twenty-Four Hour Reporting

II.E.14.a. The Permittee shall report to the Regional Administrator any noncompliance which may endanger health or the environment. Any such information shall be reported orally within 24 hours from the time the Permittee becomes aware of the circumstances. The report shall include the following:

- i. Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies.
- ii. Any information of a release or discharge of hazardous waste, or of a fire or explosion from the hazardous waste management facility which could threaten the environment or human health outside the facility.

II.E.14.b. The description of the occurrence and its cause shall include:

- i. Name, address, and telephone number of the owner or operator;
- ii. Name, address, and telephone number of the facility;
- iii. Date, time, and type of incident;
- iv. Name and quantity of materials involved;
- v. The extent of injuries, if any;
- vi. An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and
- vii. Estimated quantity and disposition of recovered material that resulted from the incident.

II.E.14.c. A written submission shall also be provided within five days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period(s) of noncompliance (including exact dates and times); whether the noncompliance has been corrected, and, if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Regional Administrator may waive the five-day written notice requirement in favor of a written report within 15 days. [40 CFR 270.30(l)(6)]

II.E.15. Other Noncompliance

The Permittee shall report all other instances of noncompliance not otherwise required to be reported above, Permit Conditions II.E.10 - 15, at the time monitoring reports are submitted. The reports shall contain the information listed in Permit Condition II.E.14 [40 CFR 270.30(l)(10)]

II.E.16. Other Information

Whenever the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Regional Administrator, the Permittee shall within 15 calendar days submit such facts or information. [40 CFR 270.30(l)(11)]

II.F. SIGNATORY REQUIREMENT

All applications, reports, or information submitted to or requested by the Regional Administrator, his designee, or authorized representative, shall be signed and certified in accordance with 40 CFR 270.11 and 270.30(k).

II.G. REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE REGIONAL ADMINISTRATOR

All reports, notifications, or other submissions which are required by this permit to be sent or given to the Regional Administrator, should be sent by certified mail or given to:

Director, Toxics & Waste Management Division  
U.S. EPA Region IX  
215 Fremont Street  
San Francisco, CA 94105  
Telephone NO. (415) 974-7460

**II.H. CONFIDENTIAL INFORMATION**

In accordance with 40 CFR 270.12, the Permittee may claim confidential any information required to be submitted by this permit. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, the Regional Administrator may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR 270.12.

Claims of confidentiality for the name and address of any permit applicant or Permittee will be denied. [40 CFR 270.12(b)]

**II.I. DOCUMENTS TO BE MAINTAINED AT THE FACILITY**

The Permittee shall maintain at the facility, until closure is completed and certified by an independent, registered professional engineer, the following documents and all amendments, revisions and modifications to these documents:

1. Waste Analysis Plan, as required by 40 CFR 264.13 and this permit.
2. Inspection schedules, as required by 40 CFR 264.15(b)(2) and this permit.
3. Personnel training documents and records, as required by 40 CFR 264.16(d) and this permit.
4. Contingency Plan, as required by 40 CFR 264.53(a) and this permit.
5. Operating record, as required by 40 CFR 264.73 and this permit.
6. Closure Plan as required by 40 CFR 264.112(a) and this permit.

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MODULE III - GENERAL FACILITY CONDITIONS

III.A. DESIGN AND OPERATION OF FACILITY

The Permittee shall construct, maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned, sudden or nonsudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment, as required by 40 CFR 264.31.

III.B. REQUIRED NOTICES

III.B.1. Hazardous Waste Imports

The Permittee shall not receive hazardous waste from a foreign source.

III.B.2. Hazardous Waste from Off-Site Sources

When the Permittee is to receive hazardous waste from an off-site source (except where the Permittee is also the generator), the Permittee must notify the generator, in writing, that the Permittee has the appropriate permits, and will accept the waste the generator is shipping. The Permittee must keep a copy of this written notice as part of the operating record. [40 CFR 264.12(b)]

III.C. GENERAL WASTE ANALYSIS

The Permittee shall follow the waste analysis procedures required by 40 CFR 264.13, as described in the Waste Analysis Plan in Appendix G of the Part B.

The Permittee shall verify the analysis of each waste stream annually as part of its quality assurance program, in accordance with Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, EPA Publication SW-846, or equivalent methods approved by the Regional Administrator. At a minimum, the Permittee shall maintain proper functional instruments, use approved sampling and analytical methods, verify the validity of sampling and analytical procedures, and perform correct calculations. If the Permittee uses a contract laboratory to perform analyses, then the Permittee shall inform the laboratory in writing that it must operate under the waste analysis conditions set forth in this permit.

III.D. SECURITY

The Permittee shall comply with the security provisions of 40 CFR 264.14(b)(2) and (c) and Section VII.D of the Part B.

III.E. GENERAL INSPECTION REQUIREMENTS

The Permittee shall follow the inspection schedule set out in Section VIII.D of the Part B. The Permittee shall remedy any deterioration or malfunction discovered by an inspection, as required by 40 CFR 264.15(c). Records of inspection shall be kept, as required by 40 CFR 264.15(d).

III.F. PERSONNEL TRAINING

The Permittee shall conduct personnel training, as required by 40 CFR 264.16. This training program shall follow Section IX.A and Appendix J of the Part B. The Permittee shall maintain training documents and records, as required by 40 CFR 264.16(d) and (e).

III.G. SPECIAL PROVISIONS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

The Permittee shall comply with the requirements of 40 CFR 264.17(a). The Permittee shall follow the procedures for handling ignitable, reactive, and incompatible wastes set forth in Appendices E and G and Section VI.A.3 of the Part B.

III.H. PREPAREDNESS AND PREVENTION

III.H.1. Required Equipment

At a minimum, the Permittee shall maintain at the facility the equipment set forth in the Contingency Plan, Section X.A of the Part B, as required by 40 CFR 264.32.

III.H.2. Testing and Maintenance of Equipment

The Permittee shall test and maintain the equipment specified in Permit Condition II.H.1, as necessary, to assure its proper operation in time of emergency, as required by 40 CFR 264.33.

III.H.3. Access to Communications or Alarm System

The Permittee shall maintain access to the communications or alarm system, as required by 40 CFR 264.34.

III.H.4. Required Aisle Space

At a minimum, the Permittee shall maintain aisle space, as required by 40 CFR 264.35 and Section VI.A.3.c of the Part B.

III.H.5. Arrangements with Local Authorities

The Permittee shall maintain arrangements with state and local authorities, as required by 40 CFR 264.37. If state or local officials refuse to enter into preparedness and prevention arrangements with the Permittee, the Permittee must document this refusal in the operating record.

III.I. CONTINGENCY PLAN

III.I.1. Implementation of Plan

The Permittee shall immediately carry out the provisions of the Contingency Plan, Section X.A of the Part B, whenever there is a fire, explosion, or release of hazardous waste or constituents which could threaten human health or the environment.

III.I.2. Copies of Plan

The Permittee shall comply with the requirements of 40 CFR 264.53.

III.I.3. Amendments to Plan

The Permittee shall review and immediately amend, if necessary, the Contingency Plan, as required by 40 CFR 264.54.

III.I.4. Emergency Coordinator

A trained emergency coordinator shall be available at all times in case of an emergency, as required by 40 CFR 264.55.

III.J. MANIFEST SYSTEM

The Permittee shall comply with the manifest requirements of 40 CFR 264.71, 264.72, and 264.76.

III.K. RECORDKEEPING AND REPORTING

In addition to the recordkeeping and reporting requirements specified elsewhere in this permit, the Permittee shall do the following:

III.K.1. Operating Record

The Permittee shall maintain a written operating record at the facility, in accordance with 40 CFR 264.73.

III.K.2. Biennial Report

The Permittee shall comply with the biennial reporting requirements of 40 CFR 264.75.

III.L. GENERAL CLOSURE REQUIREMENTS

III.L.1. Performance Standard

The Permittee shall close the facility, as required by 40 CFR 264.111 and in accordance with the Closure Plan, Section XIII and Appendix L of the Part B.

III.L.2. Amendment to Closure Plan

The Permittee shall amend the Closure Plan, in accordance with 40 CFR 264.112(c), whenever necessary.

III.L.3. Notification of Closure

The Permittee shall notify the Regional Administrator in writing at least 45 days prior to the date on which he expects to begin final closure of the facility, as required by 40 CFR 264.112(d).

III.L.4. Time Allowed For Closure

After receiving the final volume of hazardous waste, the Permittee shall remove from the unit or facility all hazardous waste and shall complete closure activities, in accordance with 40 CFR 264.113 and the schedules specified in the Closure Plan, Appendix L of the Part B.

III.L.5. Disposal or Decontamination of Equipment, Structures, and Soils

The Permittee shall decontaminate or dispose of all contaminated equipment, structures, and soils, as required by 40 CFR 264.114 and the Closure Plan, Section XIII and Appendix L of the Part B.

Closure requirements, in addressing potential soil contamination underlying the permeable asphalt paved accumulation area surrounding Building 118 (existing hazardous waste storage facility) and underlying the cracked concrete floor of Building 118, shall include a description of decontamination procedures used for closure, including the method of sampling and testing soils and details for removing contaminated ground surfaces and soils.

III.L.6. Certification of Closure

The Permittee shall certify that the facility has been closed in accordance with the specifications in the Closure Plan, as required by 40 CFR 264.115.

III.M. WASTE MINIMIZATION

Within one (1) year of the date of issuance of this permit, by the Regional Administrator and every four (4) years thereafter, the Permittee shall conduct and complete a source reduction evaluation review and written plan in accordance with the procedures and format provided in the EPA Waste Minimization Opportunity Assessment Manual (EPA/626/7-88/003). The review and plan shall include, at a minimum, all requirements listed in Attachment III-1.

PERMIT ATTACHMENTS REFERENCED IN MODULE III  
GENERAL FACILITY CONDITIONS

Permit  
Attachment No.

Plan or Document

III-1

Hazardous Waste Minimization Requirements

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**PERMIT ATTACHMENT III-1**  
**HAZARDOUS WASTE MINIMIZATION REQUIREMENTS**



ATTACHMENT III-1

HAZARDOUS WASTE MINIMIZATION REQUIREMENTS

I. SOURCE REDUCTION EVALUATION REVIEW PLAN

- A. The source reduction evaluation review and written plan shall include, at a minimum, all of the following:
1. The name and location of the site.
  2. The SIC Code of the site.
  3. Identification of all routinely generated hazardous waste streams which result from ongoing processes or operations that have a yearly volume exceeding 5 percent of the total yearly volume of hazardous waste generated at the site.
  4. For each hazardous waste stream identified in plan requirement 3 (above), the following information shall be included:
    - a. An estimate of the quantity of hazardous waste generated.
    - b. An evaluation of source reduction approaches available to the Permittee which are potentially viable. The evaluation shall consider at least all of the following source reduction approaches:
      - (1) Input change.
      - (2) Operational improvement.
      - (3) Production process change.
      - (4) Product reformulation.
- Refer to the EPA Waste Minimization Manual, pages 15 - 17, for complete definitions of above approaches.
5. A specification of, and a rationale for, the technically feasible and economically practicable source reduction measures which will be taken by the Permittee with respect to each hazardous waste stream identified. The review plan shall fully document any statement explaining the Permittee's rationale for rejecting any available source reduction approach identified in plan requirement 4 (above).

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6. An evaluation, and, to the extent practicable, a quantification, of the effects of the chosen source reduction method on emissions and discharges to air, water, or land.
7. A timetable for making reasonable and measurable progress towards implementation of the selected source reduction measures identified in plan requirement 5 (above).
8. Certification pursuant to Part III.

If a Permittee owns or operates multiple sites with similar processes, operations, and waste streams, the Permittee may prepare a single multisite review plan addressing all of these sites.

II. SOURCE REDUCTION EVALUATION PLAN SUMMARY

Within one (1) year of the issuance of the facility operating permit by the Regional Administrator, and every four (4) years thereafter, a source reduction evaluation plan summary shall be submitted to the Regional Administrator for approval prior to implementation. The plan summary shall include, at a minimum, the information specified in review plan requirements 1, 2, 3, 6, 7 and 8, and a summary of the information required in plan requirements 4 and 5 (listed in Part I, above).

If a Permittee owns or operates multiple sites with similar processes, operations, and waste streams, the Permittee may prepare a single multisite plan summary addressing all of these sites.

III. PROFESSIONAL CERTIFICATION OF THE REVIEW PLAN AND PLAN SUMMARY

- A. Every review plan and plan summary shall be submitted by the Permittee for review and certification by an engineer who is registered as a professional engineer pursuant to Section 6762 of the Business and Professions Code and who has demonstrated expertise in hazardous waste management, or an environmental assessor who has been registered and who has demonstrated expertise in hazardous waste management.
- B. The engineer or assessor shall certify the review plan and plan summary only if the review plan and plan summary meet all of the following requirements:
  1. The review plan addresses each hazardous waste stream identified pursuant to review plan requirement 3 (listed in Part I, above).
  2. The review plan addresses the following source reduction approaches as specified in review plan requirement 4b (defined in Part I, above).

3. The review plan clearly sets forth the measures to be taken with respect to each hazardous waste stream for which source reduction has been found to be technically feasible and economically practicable, with timetables for making reasonable and measurable progress, and properly documents the rationale for rejecting available source reduction measures.
4. The plan summary meets the requirements for a Source Reduction Evaluation Plan Summary as provided in Part II of the permit's waste reduction conditions (listed above).
5. The review plan and plan summary do not merely shift hazardous waste from one environmental medium to another environmental medium by increasing emissions or discharges to air, water, or land.

IV. PERMITTEE CERTIFICATION OF PLAN IMPLEMENTATION

- A. At the time a plan summary is submitted to the Regional Administrator, the Permittee shall also submit a written statement from a responsible official of the facility certifying that the Permittee has implemented, is implementing, or will be implementing, the source reduction measures identified in the plan summary according to the implementation schedule contained in the plan.
- B. A Permittee may determine not to implement a measure selected pursuant to plan requirement 5 (Part I, above) only if the Permittee determines, upon conducting further analysis or due to unexpected circumstances, that the selected measure is not technically feasible or economically practicable, or if attempts to implement that measure reveal that the measure would result in, or has resulted in, any of the following:
  1. An increase in the generation of hazardous waste.
  2. An increase in the release of hazardous chemicals to other environmental media.
  3. Adverse impacts on product quality.
  4. A significant increase in the risk of an adverse impact to human health or the environment.

V. PLAN AND PLAN SUMMARY AMENDMENTS

If the Permittee elects not to implement the review plan or plan summary, including, but not limited to, a selected measure pursuant to the requirements of Part 4 of the waste reduction condition (above), the Permittee shall amend its review plan and plan summary to reflect this rejection and include in the review plan and plan summary proper documentation identifying the rationale for this rejection. Any amendments to the review plan or plan summary should be submitted to the Regional Administrator within 30 days prior to implementation of the changes.

VI. HAZARDOUS WASTE MANAGEMENT PERFORMANCE REPORT

- A. Within one (1) year of the issuance of the facility operating permit by the Regional Administrator or at the time of permit renewal, and every year thereafter, the Permittee shall prepare a hazardous waste management performance report documenting hazardous waste management approaches implemented at the facility. The report shall be prepared for each site in accordance with Section 5 of the EPA Waste Minimization Opportunity Assessment Manual [EPA/625/7-88/003]. The report shall include all of the following:
1. The name and location of the site.
  2. The SIC Code for the site.
  3. All of the following information for each waste stream identified pursuant to requirement 3 of the Source Reduction Evaluation Review Plan (Part I, above).
    - a. An estimate of the quantity of hazardous waste generated and the quantity of hazardous waste managed, both onsite and offsite, during the current reporting year and the baseline year. The current reporting year is the calendar year immediately preceding the year in which the report is to be prepared. The baseline year is either of the following, whichever is applicable:
      - (1) For the initial report, the baseline year is the calendar year in which the facility operating permit is issued.
      - (2) For all subsequent reports, the baseline year is the current reporting year of the immediately preceding report.

b. An assessment of the effect, during the current year, of each hazardous waste management measure implemented since the baseline year, upon the generation and the onsite and offsite management of hazardous waste. The report shall consider, but shall not be limited to, measures which use all of the following approaches:

(1) Source reduction, which means one of the following:

- (a) Any action which causes a net reduction in the generation of hazardous waste,
- (b) Any action taken before the hazardous waste is generated that results in a lessening of the properties which cause it to be classified as a hazardous waste.

Source reduction includes, but is not limited to, all of the following:

- (a) Input change.
- (b) Operational improvement.
- (c) Production process change.
- (d) Product reformulation.

Source reduction does not include any of the following:

- (a) Actions taken after a hazardous waste is generated.
- (b) Actions that merely concentrate the constituents of a hazardous waste to reduce its volume or that dilute the hazardous waste to reduce its hazardous characteristics.
- (c) Actions that merely shift hazardous wastes from one environmental medium to another environmental medium.
- (d) Treatment.

(2) Recycling.

(3) Treatment.

c. A description of factors during the current reporting year that have affected hazardous waste generation and onsite and offsite hazardous waste management since the baseline year, including, but not limited to, any of the following:

- (1) Changes in business activity.
- (2) Changes in waste classification.
- (3) Natural phenomena.
- (4) Other factors that have affected either the quantity of hazardous waste generated or onsite and offsite hazardous waste management requirements.

4. Certification of the report pursuant to Part VIII.

If a Permittee owns or operates multiple sites with similar processes, operations, and waste streams, the Permittee may prepare a single multisite report addressing all of these sites.

#### VII. PERFORMANCE REPORT SUMMARIES

- A. Within one (1) year of issuance of the facility operating permit by the Regional Administrator, and every year thereafter, the Permittee shall prepare and submit to the Regional Administrator a hazardous waste management performance report summary by March 1 of each year. The report summary shall be completed for each source reduction option selected by the Permittee in accordance with the format provided in Worksheet 19 of the EPA Waste Minimization Opportunity Assessment Manual [EPA/625/7-88/003].
- B. In addition, the performance report summary shall provide the information specified in requirements 1 and 2 of the performance report, and a summary of the information specified in requirement 3 of the report (refer to Part VI, above), and shall be certified per Part VIII.
- C. If a Permittee owns or operates multiple sites with similar processes, operations, and waste streams, the Permittee may prepare a single multisite report summary addressing all of these sites.

VIII. PROFESSIONAL CERTIFICATION OF PERFORMANCE REPORTS AND REPORT SUMMARIES

- A. Every hazardous waste management performance report and report summary completed pursuant to Parts VI and VII above shall be submitted by the Permittee for review and certification by an engineer who is registered as a professional engineer and who has demonstrated expertise in hazardous waste management, or by an individual who is responsible for the processes and operations of the site, or by an environmental assessor who is registered and who has demonstrated expertise in hazardous waste management. The engineer, individual, or assessor, shall certify the report and report summary only if the report and report summary meet all of the following requirements, as applicable:
1. The report identifies factors that affect the generation and onsite/offsite management of hazardous wastes and summarizes the effect of those factors on the generation and onsite/offsite management of hazardous wastes.
  2. The report summary complies with the requirements specified in Part VII above.

IX. PERMITTEE RECORD KEEPING REQUIREMENTS

- A. The Permittee shall retain the original of the current review plan, plan summary, report, and report summary; shall maintain a copy of the current review plan, plan summary, report, and report summary at each site, or, for a multisite review and plan, upon request, shall make it available to any authorized representative of the Regional Administrator conducting an inspection pursuant to 40 CFR 270.30(i).
- B. If a Permittee fails to make available to the inspector the review plan, plan summary, report, or report summary, the Regional Administrator or any authorized representative of the Regional Administrator conducting an inspection pursuant to 40 CFR 270.30(i) shall initiate appropriate enforcement action pursuant to 40 CFR 270.30(a).
- C. If the Permittee fails to respond to a request for a copy of its review plan, plan summary, report, or report summary made by the Regional Administrator, within 30 days from the date of the request, the Regional Administrator shall initiate appropriate enforcement action pursuant to 40 CFR 270.30(a).

X. GENERAL OPERATING AND REPORTING REQUIREMENTS

- A. The Permittee shall annually certify the following information:
1. The Permittee has established a program to reduce the volume or quantity and toxicity of hazardous waste generated at the facility to the degree, determined by the Permittee, to be economically practicable.
  2. The proposed method of treatment, storage, or disposal of the hazardous waste generated at the facility is that practicable method currently available to the Permittee which minimizes the present and future threat to human health and the environment.

The Permittee shall make this certification, in accordance with 40 CFR 270.11, by March 1 of each year. The Permittee shall submit the certification to the Regional Administrator and shall record and maintain the certification in the Operating Record.  
[40 CFR 264.73]

- B. The Permittee shall submit to the Regional Administrator detailed descriptions of any programs the Permittee may have to assist generators of hazardous waste in reducing the volume or quantity and toxicity of wastes they produce.
- C. The Permittee shall submit the following information to the Regional Administrator and shall submit revisions or changes to the Regional Administrator within 30 days of those revisions or changes:
1. A list of generators who received information from the Permittee (see item B).
  2. A list of generators who used the Permittee's contractor services on a waste minimization program.
  3. A list of generators known to the Permittee who have a waste minimization program in place and any known results (i.e. has there been a reduction in wastes submitted for treatment, recycling or disposal).

MODULE IV - CONTAINERS USED FOR THE STORAGE OF HAZARDOUS WASTES

IV.A. MODULE HIGHLIGHTS

The facility has a maximum total storage capacity of 672 55-gallon drums: a maximum of 72 in each of the eight bays of Room 105, 48 in Room 106 and 48 in Room 107. The maximum number of containers is based on single stacking.

Wastes at the facility will be stored mainly in 55-(DOT 17E and 17H) or 30-(DOT 17E and 17H) gallon containers. Over-sized containers (DOT E-9618) with capacities of 85 gallons will be used occasionally to contain damaged 55-gallon containers.

IV.B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

IV.B.1. The Permittee may store the following wastes in containers at the facility, subject to the terms of this permit and as follows:

<u>Description of Hazardous Waste</u>	<u>EPA Hazardous Waste Number</u>	<u>Maximum Monthly Quantity (tons)</u>
Absorbant/oils	D001/D002	1.25
Absorbant/paints	D001/D002	0.33
Adhesives	D001/D002	0.33
Antifreeze solution	D001	0.33
Batteries	D002	0.21
Chloroform	U044	0.17
Chromic acid	D002	4.17
Cleaning compounds	D001/D002	13.67
Coal tar distillates	F024	0.25
Crushed containers	D001/D002	3.92
Grease	D001/D002	1.25
Hydrochloric acid	D002	0.25
Mercuric nitrate	D002	0.50
Methyl ethyl ketone	F005	0.17

<u>Description of Hazardous Waste</u>	<u>EPA Hazardous Waste Number</u>	<u>Maximum Monthly Quantity (tons)</u>
Naphtha	F024	0.75
Paint	D001/D002	10.67
Solvents	F001-005	5.90
Thinner	F001-005	0.50
Tributyl tin oxide	D001/D002	0.33
Tricresyl phosphate/ hydro fluid	D001	2.42
Xylene	D001	0.01
1,1,1-Trichloroethane	F002	0.58

IV.B.2. The Permittee is prohibited from storing hazardous waste that is not identified in Permit Condition IV.B.1.

Specifically, the Permittee shall not accept radioactive material, explosives, gasoline classified material, infectious waste, medical supplies, compressed gas cylinders (empty or full), leaking or open containers, sewage, trash, dioxin wastes (F020, F021, F023, F026, F027, F028) and non-hazardous waste.

IV.C. CONDITION OF CONTAINERS

If a container holding hazardous waste is not in good condition (e.g., severe rusting, apparent structural defects) or if it begins to leak, the Permittee shall transfer the hazardous waste from such container to a container that is in good condition or otherwise manage the waste in compliance with the conditions of this permit. [40 CFR 264.171]

IV.D. COMPATIBILITY OF WASTE WITH CONTAINERS

The Permittee must use a container made of or lined with material which will not react with, and is otherwise compatible with, the hazardous waste to be stored so that the ability of the container to contain the waste is not impaired. [40 CFR 264.172]

Containers shall be selected in accordance with 49 CFR requirements.

IV.E. MANAGEMENT OF CONTAINERS

The Permittee shall keep all containers closed during storage, except when it is necessary to add or remove waste, and shall not open, handle, or store containers in a manner which may rupture the container or cause it to leak. [40 CFR 264.173]

IV.F. CONTAINMENT SYSTEMS

The Permittee shall design and implement appropriate facility modifications to meet the requirements/standards contained in 40 CFR 264.175.

IV.G. INSPECTION SCHEDULES AND PROCEDURES

The Permittee shall inspect the container area at least once a week, in accordance with Section VIII.C.1.e of the Part B, to detect container leakage, container deterioration, and deterioration of the containment system caused by corrosion or other factors. [40 CFR 264.174]

IV.H. RECORDKEEPING

The Permittee shall place the results of all waste analyses and trial tests (and any other documentation showing compliance with the requirements of Permit Conditions IV.K.1 and IV.K.2 and 40 CFR 264.17(b) and 264.177) in the facility operating record. [40 CFR 264.73]

IV.I. CLOSURE

- IV.I.1 At closure of the container area, the Permittee shall remove all hazardous waste and hazardous waste residues from the containment system in accordance with the procedures in the Closure Plan, Appendix L of the Part B. [40 CFR 264.178]
- IV.I.2 The Permittee shall submit a Sample Analysis Plan to the Regional Administrator no later than thirty (30) calendar days after closure of the container storage facility. The Sample Analysis Plan must be approved by the Regional Administrator prior to implementation. The plan must include at the minimum:
- a. Location and depth of samples
  - b. Test methods
- IV.I.3 No compositing of samples will be allowed.
- IV.I.4 Sampling depth for the container storage facility area is a minimum of three (3) feet. If a three foot depth cannot be obtained, then an alternate location in the general vicinity shall be used to satisfy the three foot requirement. Samples shall be collected, at a minimum, in areas which have developed cracks in the containment structure.

IV.J SPECIAL CONTAINER PROVISIONS FOR IGNITABLE OR REACTIVE WASTE

- IV.J.1. The Permittee shall not locate containers holding ignitable or reactive waste within 15 meters (50 feet) of the facility's property line. [40 CFR 264.176]
- IV.J.2. The Permittee shall store all reactive wastes in Room 106 and shall take all other necessary precautions to prevent accidental ignition or reaction of ignitable or reactive waste as specified in 40 CFR 264.17(a) and 264.176.

IV.K. SPECIAL CONTAINER PROVISIONS FOR INCOMPATIBLE WASTE

- IV.K.1. The Permittee shall not place incompatible wastes, or incompatible wastes and materials, in the same container.
- IV.K.2. The Permittee shall not place hazardous waste in an unwashed container that previously held an incompatible waste or material. [40 CFR 264.177(b)]

IV.K.3. The Permittee shall separate containers of incompatible wastes in segregated areas of Room 105 as outlined and described in Section VI.3.b of the Part B. The stacking height of containers holding ignitable and reactive wastes, as well as all other containers, shall not exceed one high. [40 CFR 264.177(c)]

IV.L. SPECIAL CONTAINMENT PROVISIONS FOR INCOMPATIBLE WASTES

The Permittee shall maintain the 8-inch high berms and 6-foot high chain link fences segregating incompatible wastes in Room 105. The Permittee shall maintain the individual leak/spill collection systems for each bay in Room 105 and for Rooms 106 and 107 to preclude the possibility of incompatible wastes commingling in a common sump. A 12-foot wide aisle space shall be maintained in the center drive-through area of Room 105.

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MODULE V  
CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS  
SCHEDULE OF COMPLIANCE

V.A. SUMMARY OF RFA FINDINGS/RESULTS

- V.A.1. All references herein to Unit numbers are found in RCRA Facility Assessment, Long Beach Naval Shipyard, Long Beach, California, Department of Health Services, November 30, 1989, 1989. The list of Solid Waste Management Units (SWMUs) identified at the Long Beach Naval Shipyard (LENS) during the RCRA Facility Assessment (RFA) is included as Permit Attachment V-1.
- V.A.2. This permit requires the Permittee to complete a RCRA Facility Investigation (RFI) for five (5) of the Solid Waste Management Units (SWMUs), as described in Permit Condition V.G.1. Additionally, this permit requires the Permittee to complete a RCRA Phase I RFI for eight (8) of the SWMUs as described in Permit Condition V.J.

<u>SWMU</u>	<u>Requirement</u>
1. Area north of Building 210	RFI
2. Hillside East of Drydock 1	RFI
3. Industrial Waste Disposal Site	RFI
4. Parking Lot X	RFI
5. Harbor Sediments	RFI
6. Former quonset hut site (in the vicinity of Building 129)	Phase 1 RFI
7. Parking Lot H Past Operations	Phase 1 RFI
8. Tank Farm 303 (including stained soil along the east fence)	Phase 1 RFI
9. Mole Solid Waste Operations Site	Phase 1 RFI
10. Chemical Material and Waste Storage Area	Phase 1 RFI
11. Mole Extension Sites	Phase 1 RFI
12. Skeet Range Solid Waste Fill Area	Phase 1 RFI
13. Boat Disposal Location	Phase 1 RFI

V.B. DEFINITIONS

For purposes of this Corrective Action Schedule of Compliance the following definitions shall apply:

"Facility" means all contiguous property under the control of the owner or operator seeking a permit under Subtitle C of RCRA.

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"Release" means any spilling, leaking, pouring, emitting, emptying, discharging, injecting, pumping, escaping, leaching, dumping, or disposing of hazardous wastes (including hazardous constituents) into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing hazardous wastes or hazardous constituents).

"Solid waste management unit" means any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at a facility at which solid wastes have been routinely and systematically released.

"Hazardous waste" means a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. The term hazardous waste includes hazardous constituent as defined below.

"Hazardous constituent" means any constituent identified in Appendix VIII of 40 CFR Part 261, or any constituent identified in Appendix IX of 40 CFR Part 264.

V.C. STANDARD CONDITIONS

V.C.1. Section 3004(u) of RCRA, as amended by HSWA, and 40 CFR 264.101 require that permits issued after November 8, 1984, address corrective action for releases of hazardous waste including hazardous constituents from any solid waste management unit (SWMU) at the facility, regardless of when the waste was placed in the unit.

V.C.2. Failure to submit the information required in this Corrective Action Schedule of Compliance, or falsification of any submitted information, is grounds for termination of this permit (40 CFR 270.43). The Permittee shall ensure that all plans, reports, notifications, and other submissions to the Regional Administrator required in this Corrective Action Schedule of Compliance are signed and certified in accordance with 40 CFR 270.11. Two copies of these plans, reports, notifications or other submissions shall be submitted to the Regional Administrator and sent by certified mail or hand delivered to:

U.S. Environmental Protection Agency  
Region IX  
Toxic and Waste Management Division  
215 Fremont Street  
San Francisco, CA 94105

- V.C.3. All plans and schedules required by the conditions of this Corrective Action Schedule of Compliance are, upon approval of the Regional Administrator, incorporated into this Schedule of Compliance by reference and become an enforceable part of this permit. Any non-compliance with such approved plans and schedules shall be termed noncompliance with this permit. Extensions of the due dates for submittals may be granted by the Regional Administrator in accordance with the permit modification processes under 40 CFR 270.41.
- V.C.4. If the Regional Administrator determines that further actions beyond those provided in this Corrective Action Schedule of Compliance, or changes to that which is stated herein, are warranted, the Regional Administrator shall modify the Schedule of Compliance either according to procedures in Section V.R of this permit, or according to the permit modification processes under 40 CFR 270.41.
- V.C.5. All raw data, such as laboratory reports, drilling logs, bench-scale or pilot-scale data, and other supporting information gathered or generated during activities undertaken pursuant to this Corrective Action Schedule of Compliance shall be maintained at the facility (or other location approved by the Regional Administrator) during the term of this permit, including any reissued permits.
- V.C.6. The Permittee may submit information which is developed pursuant to the Department of Defense's Installation Restoration Program (IRP)/Comprehensive Environmental Response, Compensation, Liability Act of 1980 (CERCLA) to meet the RCRA corrective action requirements specified in this module. The information must be accompanied by a checklist which clearly indicates how the RCRA requirements are met, and must reference the specific page(s) in the IRP/CERCLA document in which requirement(s) are met.

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V.D. REPORTING REQUIREMENTS

- V.D.1. The Permittee shall submit to the Regional Administrator signed quarterly progress reports of all activities (i.e., SWMU Assessment, Interim Measures, RCRA Facility Investigation, Corrective Measures Study) conducted pursuant to the provisions of this Corrective Action Schedule of Compliance, beginning no later than ninety (90) calendar days after the Permittee is first required to begin implementation of any requirement herein. These reports shall contain:
- V.D.1.a. A description of the work completed;
  - V.D.1.b. Summaries of all findings, including summaries of laboratory data;
  - V.D.1.c. Summaries of all problems or potential problems encountered during the reporting period and actions taken to rectify problems; and
  - V.D.1.d. Projected work for the next reporting period.
- V.D.2. Copies of other reports (e.g., inspection reports), drilling logs and laboratory data shall be made available to the Regional Administrator upon request.
- V.D.3. As specified under Permit Condition V.C.4., the Regional Administrator may require the Permittee to conduct new or more extensive assessments, investigations, or studies, as needed, based on information provided in these progress reports or other supporting information.

V.E. NOTIFICATION REQUIREMENTS FOR AND ASSESSMENT OF NEWLY IDENTIFIED SOLID WASTE MANAGEMENT UNITS(S)

- V.E.1. The Permittee shall notify the Regional Administrator in writing of any newly-identified SWMU(s) (i.e., a unit not specifically identified during the RFA, Permit Condition V.A.1.), discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means, no later than fifteen (15) calendar days after discovery.
- V.E.2. After such notification, the Regional Administrator may request, in writing, that the Permittee prepare a Solid Waste Management Unit (SWMU) Assessment Plan and a proposed schedule of implementation and completion of the plan for any additional SWMU(s) discovered subsequent to the issuance of this permit.

V.E.3. Within ninety (90) calendar days after receipt of the Regional Administrator's request for a SWMU Assessment Plan, Permittee shall prepare a SWMU Assessment Plan for determining past and present operations at the unit, as well as any sampling and analysis of ground water, land surface and subsurface strata, surface water or air, as necessary to determine whether a release of hazardous waste including hazardous constituents from such unit(s) has occurred, is likely to have occurred, or is likely to occur. The SWMU Assessment Plan must demonstrate that the sampling and analysis program, if applicable, is capable of yielding representative samples and must include parameters sufficient to identify migration of hazardous waste, including hazardous constituents from the newly discovered SWMU(s), to the environment.

V.E.4. After the Permittee submits the SWMU Assessment Plan, the Regional Administrator shall either approve or disapprove the Plan in writing.

If the Regional Administrator approves the Plan, the Permittee shall begin to implement the Plan within fifteen (15) calendar days of receiving such written notification.

If the Regional Administrator disapproves the Plan, the Regional Administrator shall either (1) notify the Permittee in writing of the Plan's deficiencies and specify a due date for submittal of a revised Plan, or (2) revise the Plan and notify the Permittee of the revisions. This Regional Administrator-revised Plan becomes the approved SWMU Assessment Plan. The Permittee shall implement the Plan within fifteen (15) calendar days of receiving written approval.

V.E.5. The Permittee shall submit a SWMU Assessment Report to the Regional Administrator no later than twenty-five (25) calendar days from completion of the work specified in the approved SWMU Assessment Plan. The SWMU Assessment Report shall describe all results obtained from the implementation of the approved SWMU Assessment Plan. At a minimum, the Report shall provide the following information for each newly identified SWMU:

V.E.5.a. The location of the newly-identified SWMU in relation to other SWMUs;

V.E.5.b. The type and function of the unit;

- V.E.5.c. The general dimensions, capacities, and structural description of the unit (supply any available drawings);
  - V.E.5.d. The period during which the unit was operated;
  - V.E.5.e. The specifics on all wastes that have been or are being managed at the SWMU, to the extent available; and
  - V.E.5.f. The results of any sampling and analysis required for the purpose of determining whether releases of hazardous wastes including hazardous constituents have occurred, are occurring, or are likely to occur from the unit.
- V.E.6. Based on the results of this Report, the Regional Administrator shall determine the need for further investigations at specific unit(s) covered in the SWMU Assessment. If the Regional Administrator determines that such investigations are needed, the Regional Administrator may require the Permittee to prepare a plan for such investigations. This plan will be reviewed for approval as part of the RFI Workplan under Permit Condition V.G.3. of this Corrective Action Schedule of Compliance.
- V.F. NOTIFICATION REQUIREMENTS FOR NEWLY-DISCOVERED RELEASES AT SWMUS

The Permittee shall notify the Regional Administrator, in writing, of any release(s) of hazardous waste including hazardous constituents discovered during the course of ground-water monitoring, field investigation, environmental auditing, or other activities undertaken after the commencement of the RFI, no later than fifteen (15) calendar days after discovery. Such newly-discovered releases may be from newly-identified units, from units for which, based on the findings of the RFA, the Regional Administrator had discovered that no further investigation was necessary, or from units investigated as part of the RFI. The Regional Administrator may require further investigation of the newly-identified release(s). A plan for such investigation will be reviewed for approval as part of the RFI Workplan under Permit Condition V.G.3.

V.G. RCRA FACILITY INVESTIGATION PLAN (RFI) WORKPLAN

V.G.1. On or before one (1) year after the effective date of this permit the Permittee shall submit a Workplan to the Regional Administrator to address those units, releases of hazardous waste including hazardous constituents, and media of concern which, based on the results of the RFA, require further investigation.

V.G.1.a. The Workplan shall describe the objectives of the investigation and the overall technical and analytical approach to complimenting all actions necessary to characterize the nature, direction, rate, movement, and concentration of releases of hazardous waste including hazardous constituents from specific units or groups of units, and their actual or potential receptors. The Workplan shall detail all proposed activities and procedures to be conducted at the facility, the schedule for implementing and completing such investigations, the qualifications of personnel performing or directing the investigations, including contractor personnel, and the overall management of the RFI. The RFI Plan shall be designed according to the guidelines and performance standards outlined in Attachment V-2.

V.G.1.b. In addition, the Workplan shall discuss sampling and data collection quality assurance and data management procedures, including formats for documenting and tracking data and other results of investigations, and health and safety procedures.

V.G.2. After the Permittee submits the Workplan, the Regional Administrator will either approve or disapprove the Workplan in writing.

If the Regional Administrator disapproves the Workplan, the Regional Administrator shall either (1) notify the Permittee in writing of the Workplan's deficiencies and specify a due date for submittal of a revised Plan, or (2) revise the Workplan and notify the Permittee of the revisions. This modified Workplan becomes the approved RFI Workplan.

V.G.3. The Regional Administrator shall review for approval as part of the RFI Workplan any plans developed pursuant to Permit Condition V.E.6., addressing further investigations of newly-identified SWMUs, or Section V.F., addressing new releases from previously-identified units. The Regional Administrator shall modify the Schedule of Compliance either according to procedures in Section V.R. of this permit, or according to the permit modification procedures under 40 CFR 270.41, to incorporate these units and releases into the RFI Workplan.

V.H. RCRA FACILITY INVESTIGATION WORKPLAN IMPLEMENTATION

No later than fifteen (15) calendar days after the Permittee has received written approval from the Regional Administrator for the RFI Workplan, the Permittee shall begin implementation of the RCRA Facility Investigation according to the schedules specified in the RFI Workplan. Pursuant to Permit Condition V.C.3., the RFI shall be conducted in accordance with the approved RFI Workplan.

V.I. RCRA FACILITY INVESTIGATION FINAL REPORT AND SUMMARY REPORT

V.I.1. Within sixty (60) calendar days after the completion of the RFI, the Permittee shall submit an RFI Final Report and Summary Report. The RFI Report shall describe the procedures, methods, and results of all facility investigations of SWMUs and their releases, including information on the type and extent of contamination at the facility, sources and migration pathways, and actual or potential receptors. The RFI Final Report shall present all information gathered under the approved RFI Workplan. The Final Report must contain adequate information to support further corrective action decisions at the facility. The Summary Report shall describe more briefly the procedures, methods, and results of the RFI.

V.I.2. After the Permittee submits the RFI Final Report and Summary Report, the Regional Administrator shall either approve or disapprove the Reports in writing.

If the Regional Administrator approves the RFI Report and Summary Report, the Permittee shall mail the approved Summary Report to all individuals on the facility mailing list established pursuant to 40 CFR 124.10(c)(1)(viii), within fifteen (15) calendar days of receipt of approval.

If the Regional Administrator determines the RFI Final Report and Summary Report do not fully detail the objectives stated under Permit Condition V.G.1., the Regional Administrator may disapprove the RFI Final Report and Summary Report. If the Regional Administrator disapproves the Reports, the Regional Administrator shall notify the Permittee in writing of the Reports' deficiencies and specify a due date for submittal of a revised Final and Summary Report. The Summary Report, once approved, shall be mailed to all individuals on the facility mailing list.

V.J. PHASE I - RFI: SPECIFIC PLANS AND REPORTS

V.J.1. For all RCRA Phase I RFI sites listed in Section V.A.2:

V.J.1.a. No later than one hundred eighty (180) calendar days after the effective date of this permit, the owner or operator shall submit to the Regional Administrator a Phase I RFI Workplan. The Phase I RFI Workplan shall include, at a minimum, the requirements described below.

- i. The Phase I RFI Workplan shall include provision for soil sampling and analysis of the wastes to assess information on previous hazardous waste releases.
- ii. The Phase I RFI Workplan shall include a proposed schedule for implementation and completion of the plan.
- iii. The Phase I RFI Workplan shall demonstrate that all applicable requirements described in Permit Attachment V-3 are met. If the owner or operator believes that certain requirements in Permit Attachment V-3 are not applicable, the specific requirements shall be identified and the rationale for inapplicability shall be provided.
- iv. The Permittee shall prepare a cost estimate for implementation of the Phase I RFI Workplan. The cost estimate shall be submitted to the Regional Administrator no later than ninety (90) calendar days after the effective date of this permit.

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- V.J.1.b. No later than thirty (30) calendar days after the Permittee has received written approval of the Phase I RFI Workplan from the Regional Administrator, the Permittee shall begin implementing the Workplan. The Permittee shall implement the Workplan according to the schedule specified in the Workplan, as approved or modified by the Regional Administrator. If the Phase I RFI Workplan submitted by the Permittee is not approved, the Regional Administrator may require the Permittee to revise the Workplan and resubmit it on a specified date.
- V.J.1.c. The Permittee shall submit a Phase I RFI Report to the Regional Administrator no later than thirty (30) calendar days after the Regional Administrator has completed implementation of the Phase I RFI Workplan. The Phase I RFI Report shall describe all results obtained from implementation of the Phase I RFI Workplan.

V.J.2. Review of Phase I RFI Reports

After reviewing the Phase I RFI Report described in condition V.J.1.c, the Regional Administrator will determine the need for a RFI at the SWMU covered in the Report. If the Regional Administrator determines that an RFI is needed at the specific SWMU, the Permittee shall prepare an RFI Workplan for that SWMU as specified in condition V.G.

V.K. INTERIM MEASURES

- V.K.1. If during the course of any activity initiated under this Corrective Action Schedule of Compliance, the Regional Administrator determines that a release or potential release of hazardous waste including hazardous constituents from a SWMU poses a threat to human health and the environment, the Regional Administrator may specify interim measures. The Regional Administrator shall determine the specific action(s) that must be taken to implement the interim measure, including potential permit modifications and the schedule for implementing the required measures. The Regional Administrator shall notify the Permittee in writing of the requirement to perform such interim measures. The Regional Administrator shall modify the Corrective Action Schedule of Compliance either according to procedures in Section V.R of this permit, or according to the permit modification procedures under 40 CFR 270.41, to incorporate such interim measures into the permit.

V.K.2. The following factors may be considered by the Regional Administrator in determining the need for interim measures:

- V.K.2.a. Time required to develop and implement a final remedy;
- V.K.2.b. Actual and potential exposure of human and environmental receptors;
- V.K.2.c. Actual and potential contamination of drinking water supplies and sensitive ecosystems;
- V.K.2.d. The potential for further degradation of the medium absent interim measures;
- V.K.2.e. Presence of hazardous waste in containers that may pose a threat of release;
- V.K.2.f. Presence and concentration of hazardous waste including hazardous constituents in soils that have the potential to migrate to ground water or surface water;
- V.K.2.g. Weather conditions that may affect the current levels of contamination;
- V.K.2.h. Risks of fire, explosion, or accident; and
- V.K.2.i. Other situations that may pose threats to human health and the environment.

V.L. DETERMINATION OF NO FURTHER ACTION

- V.L.1. Based on the results of the RFI and other relevant information, the Permittee may submit an application to the Regional Administrator for a Class III permit modification under 40 CFR 270.42(c) to terminate the Corrective Action Schedule of Compliance. This permit modification application must contain information demonstrating that there are no releases of hazardous wastes including hazardous constituents from SWMUs at the facility that pose a threat to human health and the environment, as well as information required in 40 CFR 270.42(c), which incorporates by reference 40 CFR 270.13 through 270.21, 270.62, and 270.63.

If, based upon review of the Permittee's request for a permit modification, the results of the RFI, and other information, including comments received during the 60-day public comment period required for Class III permit modifications, the Regional Administrator determines that releases or suspected releases which were investigated either are non-existent or do not pose a threat to human health and the environment, the Regional Administrator will grant the requested modification.

V.L.2. A determination of no further action shall not preclude the Regional Administrator from requiring continued or periodic monitoring of air, soil, ground water, or surface water, when site-specific circumstances indicate that releases of hazardous wastes including hazardous constituents are likely to occur, if necessary to protect human health and the environment.

V.L.3. A determination of no further action shall not preclude the Regional Administrator from requiring further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicates a release or likelihood of a release from a SWMU at the facility that is likely to pose a threat to human health or the environment. In such a case, the Regional Administrator shall initiate either a modification to the Corrective Action Schedule of Compliance according to procedures in Permit Condition V.R of this permit or a major permit modification according to 40 CFR 270.41.

V.M. CORRECTIVE MEASURES STUDY PLAN

V.M.1. If the Regional Administrator has reason to believe that a SWMU has released concentrations of hazardous constituents in excess of an action level, or if the Regional Administrator determines that contaminants present at levels below the action level pose a threat to human health and the environment given site-specific exposure conditions, the Regional Administrator may require a Corrective Measures Study (CMS) and shall notify the Permittee in writing. This notice shall identify the hazardous constituent(s) which have exceeded action levels as well as those which have been determined to threaten human health and the environment given site-specific exposure conditions. The notification may also specify remedial alternatives to be evaluated by the Permittee during the CMS.

- V.M.2. The Permittee shall submit a CMS Plan to the Regional Administrator within forty-five (45) calendar days from notification of the requirement to conduct a CMS.

The CMS Plan shall provide the following information:

- V.M.2.a. A description of the general approach to investigating and evaluating potential remedies;
  - V.M.2.b. A definition of the overall objectives of the study;
  - V.M.2.c. The specific plans for evaluating remedies to ensure compliance with remedy standards;
  - V.M.2.d. The schedules for conducting the study; and
  - V.M.2.e. The proposed format for the presentation of information.
- V.M.3. If the Regional Administrator disapproves the CMS Plan, the Regional Administrator shall either (1) notify the Permittee in writing of the Plan's deficiencies and specify a due date for submittal of a revised Plan, or (2) revise the Plan and notify the Permittee of the revisions. This modified Plan becomes the approved CMS Plan.

V.N. CORRECTIVE MEASURES STUDY IMPLEMENTATION

No later than fifteen (15) calendar days after the Permittee has received written approval from the Regional Administrator for the CMS Plan, the Permittee shall begin to implement the Corrective Measures Study according to the schedules specified in the CMS Plan. Pursuant to Permit Condition V.C.3., the CMS shall be conducted in accordance with the approved Plan.

V.O. CORRECTIVE MEASURES STUDY FINAL REPORT

- V.O.1. Within sixty (60) calendar days after the completion of the CMS, the Permittee shall submit a CMS Final Report. The CMS Final Report shall summarize the results of the investigations for each remedy studied and of any bench-scale or pilot tests conducted. The CMS Report must include an evaluation of each remedial alternative. The CMS Report shall present all information gathered under the approved CMS Plan. The final report must contain adequate information to support the Regional Administrator in the remedy selection decision-making process, described under Permit Condition V.P. of the Corrective Action Schedule of Compliance.

V.O.2. If the Regional Administrator determines that the CMS Final Report does not fully satisfy the information requirements specified under Permit Condition V.M.2., the Regional Administrator may disapprove the CMS Final Report. If the Regional Administrator disapproves the Final Report, the Regional Administrator shall notify the Permittee in writing of deficiencies in the Report and specify a due date for submittal of a revised Final Report.

V.O.3. As specified under Permit Condition V.C.4, based on preliminary results and the final CMS report, the Regional Administrator may require the Permittee to evaluate additional remedies or particular elements of one or more proposed remedies.

V.P. REMEDY SELECTION

V.P.1. Based on the results of the CMS and any further evaluations of additional remedies under this study, the Regional Administrator shall select a remedy from the remedial alternatives evaluated in the CMS that will (1) be protective of human health and the environment; (2) meet the concentration levels of hazardous constituents in each medium that the remedy must achieve to be protective of human health and the environment; (3) control the source(s) of release(s) so as to reduce or eliminate, to the maximum extent practicable, further releases that might pose a threat to human health and the environment; and (4) meet all applicable waste management requirements.

V.P.2. In selecting the remedy which meets the standards for remedies established under Permit Condition V.O.1, the Regional Administrator shall consider the following evaluation factors, as appropriate:

V.P.2.a. Long-term reliability and effectiveness. Any potential remedy(s) may be assessed for the long-term reliability and effectiveness it affords, along with the degree of certainty that the remedy will prove successful. Factors that shall be considered in this evaluation include:

- i. Magnitude of residual risks in terms of amounts and concentrations of waste remaining following implementation of a remedy, considering the persistence, toxicity, mobility and propensity to bioaccumulate of such hazardous wastes including hazardous constituents;

- ii. The type and degree of long-term management required, including monitoring, operation and maintenance;
- iii. Potential for exposure of human and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with excavation, transportation, redispasal or containment;
- iv. Long-term reliability of the engineering and institutional controls, including uncertainties associated with land disposal of untreated wastes and residuals; and
- v. Potential need for replacement of the remedy.

V.P.2.b. Reduction of toxicity, mobility, and volume. A potential remedy(s) may be assessed as to the degree to which it employs treatment that reduces toxicity, mobility or volume of hazardous wastes including hazardous constituents. Factors that shall be considered in such assessments include:

- i. The treatment processes the remedy(s) employs and materials it would treat;
- ii. The amount of hazardous wastes including hazardous constituents that would be destroyed or treated;
- iii. The degree to which the treatment is irreversible; and
- iv. The residuals that will remain following treatment, considering the persistence, toxicity, mobility and propensity to bioaccumulate of such hazardous wastes including hazardous constituents.

V.P.2.c. The short-term effectiveness of a potential remedy(s) may be assessed considering the following:

- i. Magnitude of reduction of existing risks;

- ii. Short-term risks that might be posed to the community, workers, or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and redisposal or containment; and
  - iii. Time until full protection is achieved.
- V.P.2.d. Implementability. The ease or difficulty of implementing a potential remedy(s) may be assessed by considering the following types of factors:
- i. Degree of difficulty associated with constructing the technology;
  - ii. Expected operational reliability of the technologies;
  - iii. Need to coordinate with and obtain necessary approvals and permits from other agencies;
  - iv. Availability of necessary equipment and specialists; and
  - v. Available capacity and location of needed treatment, storage and disposal services.
- V.P.2.e. Cost. The types of costs that may be assessed include the following:
- i. Capital costs;
  - ii. Operation and maintenance costs;
  - iii. Net present value of capital and operation and maintenance costs; and
  - iv. Potential future remedial action costs.

V.Q. PERMIT MODIFICATION FOR REMEDY

V.Q.1. Based on information the Permittee submits in the RFI Final and Summary Reports, the CMS Final Report, and other information, the Regional Administrator will select a remedy and initiate a major permit modification to this permit, pursuant to 40 CFR 270.41.

The modification shall specify the selected remedy and include, at a minimum, the following:

- V.Q.1.a. Description of all technical features of the remedy that are necessary for achieving the standards for remedies established under Permit Condition V.P.1., including length of time for which compliance must be demonstrated at specified points of compliance;
- V.Q.1.b. All concentration levels of hazardous constituents in each medium that the remedy must achieve to be protective of human health and the environment;
- V.Q.1.c. All requirements for achieving compliance with these concentration levels;
- V.Q.1.d. All requirements for complying with the standards for management of wastes;
- V.Q.1.e. Requirements for removal, decontamination, closure, or post-closure of units, equipment, devices or structures that will be used to implement the remedy;
- V.Q.1.f. A schedule for initiating and completing all major technical features and milestones of the remedy; and
- V.Q.1.g. Requirements for submission of reports and other information.

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V.R. MODIFICATION OF THE CORRECTIVE ACTION SCHEDULE OF COMPLIANCE

V.R.1. If at any time the Regional Administrator determines that modification of the Corrective Action Schedule of Compliance is necessary, he or she may initiate a modification to the Schedule of Compliance according to the procedures of this Section. If the Regional Administrator initiates a modification, he or she shall:

V.R.1.a. Notify the Permittee in writing of the proposed modification and the date by which comments on the proposed modification must be received; and

V.R.1.b. Publish a notice of the proposed modification in a locally distributed newspaper, mail a notice to all persons on the facility mailing list maintained according to 40 CFR 124.10(c)(1)(viii), and place a notice in the facility's information repository (i.e., a central source of all pertinent documents concerning the remedial action, usually maintained at the facility or some other public place, such as a public library, that is accessible to the public) if one is required.

i. If the Regional Administrator receives no written comment on the proposed modification, the modification shall become effective five (5) calendar days after the close of the comment period.

ii. If the Regional Administrator receives written comment on the proposed modification, the Regional Administrator shall make a final determination concerning the modification after the end of the comment period.

V.R.1.c. Notify the Permittee in writing of the final decision.

i. If no written comment was received, the Regional Administrator shall notify individuals on the facility mailing list in writing that the modification has become effective and shall place a copy of the modified Corrective Action Schedule of Compliance in the information repository, if a repository is required for the facility.

- ii. If written comment was received, the Regional Administrator shall provide notice of the final modification decision in a locally distributed newspaper and place a copy of the modified corrective action Schedule of Compliance in the information repository, if a repository is required for the facility.
- V.R.2. Modifications that are initiated and finalized by the Regional Administrator according to this procedure shall not be subject to administrative appeal.
- V.R.3. Modifications to the Corrective Action Schedule of Compliance do not constitute a reissuance of the permit.

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COMPLIANCE SCHEDULE SUMMARY

Below is a summary of the planned reporting and implementation requirements pursuant to the Corrective Action portion of this permit:

<u>Item</u>	<u>Due Date</u>
Notification of newly-identified SWMUs	fifteen (15) calendar days after discovery
Notification of newly-discovered releases	fifteen (15) calendar days after discovery
Progress reports on all activities	quarterly, monthly, etc., no later than ninety (90) calendar days after Permittee is required to begin implementation
SWMU Assessment Plan for newly-identified SWMUs	ninety (90) calendar days after receipt of request
Revised SWMU Assessment Plan	as determined
SWMU Assessment Report	twenty-five (25) calendar days after completion of implementation of SWMU Assessment Plan
RFI Workplan for SWMU(s) identified for further investigation in this permit	one (1) year after the effective date of this permit
Cost Estimates for Implementation the RFI	ninety (90) calendar of days after the effective date of this permit
Revised RFI Workplan	as determined
Implementation of RFI Workplan	fifteen (15) calendar days after RFI Workplan approval
RFI Report and Summary Report	sixty (60) calendar days after completion of RFI
Revised RFI Report and Summary Report	as determined

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Compliance Schedule Summary

Phase I RFI Workplan for SWMUs  
identified in this permit

Cost Estimate for Phase 1 RFI  
Workplan

Revised Phase I RFI Workplan

Implementation of Phase 1  
RFI Workplan

Phase 1 RFI Report

Revised Phase I RFI Report and  
Summary Report

CMS Plan

Revised CMS Plan

Implementation of CMS

CMS Report

Revised CMS Report

Due Date

one hundred-eighty  
(180) calendar days  
after the effective  
date of this permit

ninety (90) calendar  
days after the  
effective date of this  
permit

as determined

thirty (30) calendar  
days after Phase 1 RFI  
Workplan approval

thirty (30) calendar  
days after completed  
implementation of the  
Phase I RFI Workplan

thirty (30) calendar  
days after notification  
of deficiency

forty-five (45)  
calendar days after  
notification of  
requirement to perform  
CMS

as determined

fifteen (15) calendar  
days after CMS Plan  
approval

sixty (60) calendar  
days after completion  
of CMS

as determined

PERMIT ATTACHMENTS REFERENCED IN MODULE V  
CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS  
SCHEDULE OF COMPLIANCE

<u>Permit Attachment No.</u>	<u>Plan or Document</u>
V-1	Solid Waste Management Units (SWMUs) identified at the Long Beach Naval Shipyards (from the RFA identified in Permit Condition V.A.1.)
V-2	RFI Plan Requirements
V-3	Phase I RFI Plan Requirements
V-4	Phase I RFI Sampling and Analysis Plan

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PERMIT ATTACHMENT V-1

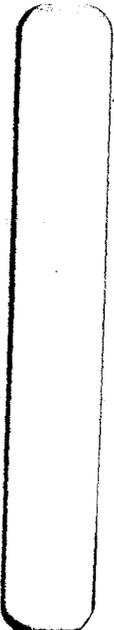
Solid Waste Management Units (SWMUs) Identified at the  
Long Beach Naval Shipyard

PERMIT ATTACHMENT V-1

Solid Waste Management Units (SWMUs) Identified at the  
Long Beach Naval Shipyard

<u>SWMU#</u>	<u>Designation</u>	<u>Dates of Operation</u>
1.	Building 118 Hazardous Waste Storage Facility	1980 - Present
2.	Building 314 Hazardous Waste Storage Facility	Awaiting permit
3.	Building 202 (Paint Shop) 90-day Accumulation Area	1980 - Present
4.	Building 54 (Transportation Shop) 90-day Accumulation Area	1940's - Present
5.	Building 130 (Sheet Metal Shop, Shop 17) 90-day Accumulation Area and Process Tank Area	1945 - Present
6.	Building 129 (Marine Machine Shop) and 90-day Accumulation Area	1940 - Present
7.	Building 132 (Machine Shop) and 90-day Accumulation Area	1943 - Present
8.	Plating Operations (Shop 5106 in Building 210) and 90-day Accumulation Area	1970's - Present
9.	Electrical Shop (Shop 51), Electronics Shop (Shop 66), Weapons Shop (Shop 67) in Building 210 and 90-day Accumulation Area	1960's - Present
10.	Building 210 PCB 90-day Accumulation Area	1972 - Present
11.	Building 128 (Shipfitter Shop) and 90-day Accumulation Area	1945 - Present
12.	Building 7 (Public Works and Maintenance Shop) 90-day Accumulation Area	1940's - Present
13.	Utilities Shop Operations (Shop 03)	1943 - Present
14.	Pipefitters Shop (Shop 56) in Building 132 East	1977 - Present

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<u>SWMU#</u>	<u>Designation</u>	<u>Dates of Operation</u>
15.	Supply Department (Code 500)	1943 - Present
16.	Supply Department Buildings 59, P-30 and P-41	1943 - Present
17.	Quality Assurance Laboratory Waste Oil Storage Tank	1943 - Present
18.	On-site Still (Freon Cleaning and Reclamation Unit) in Building 210	1982 - Present
19.	On-site Still (TCE Reclamation) in Building 128	1970's - Present
20.	Parking Lot H Past Operations	1952 - 1957
21.	Hillside East of Drydock 1	1974 - 1975
22.	Parking Lot X	1971 - 1988
23.	Tank Farm 303 and Building 303 90-day Accumulation Area	1970 - Present
24.	Pier Accumulation Areas	1943 - Present
25.	"Donut" Oil Water Separators	1940's - 1960's
26.	Mole Solid Waste Operations Site	1940's - 1960's
27.	Chemical Material and Waste Storage Area	1960's - 1980
28.	Industrial Waste Disposal Site	1940's - 1970's
29.	Mole Extension Sites	1950's - 1972
30.	Skeet Range Solid Waste Fill Area	1930's - 1968
31.	Boat Disposal Location	1942 - 1965
32.	Harbor Sediments	1940's - Present
33.	Underground Storage Tanks	

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ATTACHMENT V-2  
REF PLAN REQUIREMENTS

ATTACHMENT V-2

RFI PLAN REQUIREMENTS

I. RFI WORKPLAN REQUIREMENTS

The Permittee shall prepare a RCRA Facility Investigation (RFI) Plan that meets the requirements of the Corrective Action Section of this document. This Plan shall also include the development of the following plans, which shall be prepared concurrently.

A. Project Management Plan

The Permittee shall prepare a Project Management Plan which will include a discussion of the technical approach, schedules, and personnel. The Project Management Plan will also include a description of qualifications of personnel performing or directing the RFI, including contractor personnel. This plan shall also document the overall management approach to the RCRA Facility Investigation.

B. Sampling and Analysis Plan

The Permittee shall prepare a plan to document all monitoring procedures: sampling, field measures and sample analysis, performed during the investigation to characterize the environmental setting, source, and releases of hazardous constituents, so as to ensure that all information and data are valid and properly documented.

1. Sampling/Field Measurement Procedures

The sampling section of this workplan shall be in accordance with Characterization of Hazardous Waste Sites, A Methods Manual: Volume II. Available Sampling Methods, EPA-600/4-83-040. The workplan shall also at a minimum discuss the following:

- a. Selecting appropriate sampling locations, depths, etc. (locate on facility map);
- b. Providing a statistically sufficient number of sampling sites;
- c. Obtaining all necessary ancillary data;
- d. Determining conditions under which sampling should be conducted;

- e. Determining which media are to be sampled (e.g., groundwater, air soil, sediment, etc);
- f. Determining which parameters are to be measured and where;
- g. Selecting the frequency of sampling and length of sampling period;
- h. Selecting the types of samples (e.g., composites vs. grabs) and number of samples to be collected;
- i. Documenting field sampling operations and procedures, including:
  - (1) Documentation of procedures for preparation of reagents or supplies which become an integral part of the sample (e.g., filters, preservatives, and adsorbing reagents);
  - (2) Procedures and forms for recording the exact location and specific considerations associated with sample acquisition;
  - (3) Documentation of specific sample preservation method;
  - (4) Calibration of field instruments;
  - (5) Submission of field-biased blanks, where appropriate;
  - (6) Potential interferences present at the facility;
  - (7) Construction materials and techniques, associated with monitoring wells and piezometers;
  - (8) Field equipment listing and sampling containers;
  - (9) Sampling order; and,
  - (10) Decontamination procedures.
- j. Selecting appropriate sample containers;
- k. Sampling preservation; and

1. Chain-of-custody, including:

- (1) Standardized field tracking reporting forms to establish sample custody in the field prior to shipment; and,
- (2) Pre-prepared sample labels containing all information necessary for effective sample tracking.

2. Sample Analysis

Sample Analysis shall be conducted in accordance with SW-846: "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods". The sample analysis section of the Sampling and Analysis Plan shall specify the following:

a. Chain-of-custody procedures, including:

- (1) Identification of a responsible party to act as sampling custodian at the laboratory facility authorized to sign for incoming field samples, obtain documents of shipment, and verify the data entered onto the sample custody records;
- (2) Provision for a laboratory sample custody log consisting of serially numbered standard lab-tracking report sheets; and,
- (3) Specification of laboratory sample custody procedures for sample handling, storage, and dispersment for analysis.

b. Sample storage;

c. Sample preparation methods;

d. Analytical procedures, including:

- (1) Scope and application of the procedure;
- (2) Sample matrix;
- (3) Potential interferences;
- (4) Precision and accuracy of the methodology; and,
- (5) Method detection limits.

- e. Calibration procedures and frequency;
- f. Data reduction, validation and reporting;
- g. Internal quality control checks, laboratory performance and systems audits and frequency, including:
  - (1) Method blank(s);
  - (2) Laboratory control sample(s);
  - (3) Calibration check sample(s);
  - (4) Replicate sample(s);
  - (5) Matrix-spiked sample(s);
  - (6) Control charts;
  - (7) Surrogate samples;
  - (8) Zero and span gases; and,
  - (9) Reagent quality control checks.
- h. Preventive maintenance procedures and schedules;
- i. Corrective action (for laboratory problems); and,
- j. Turnaround time.

C. Data Management Plan

The Permittee shall develop and initiate a Data Management Plan to document and track investigation data and results. This plan shall identify and set up data documentation materials and procedures, project file requirements, and project-related progress reporting procedures and documents. The plan shall also provide the format to be used to present the raw data and conclusions of the investigation.

1. Data Record

The electronic data record shall include the following:

- a. Unique sample or field measurement code;
- b. Sampling or field measurement location and sample or measurement type;

- c. Sampling or field measurement raw data;
- d. Laboratory analysis ID number;
- e. Property or component measured; and,
- f. Result of analysis (e.g., concentration).
- g. Description of QA/QC procedures

2. Tabular Displays

The following data shall be presented in tabular displays:

- a. Unsorted (raw) data;
- b. Results for each medium, or for each constituent monitored;
- c. Data reduction for statistical analysis, as appropriate; and,
- d. Sorting of data by potential stratification factors (e.g., location, soil layer, topography).

3. Graphical Displays

The following data shall be presented in graphical formats (e.g., bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transects, three dimensional graphs, etc.):

- a. Display sampling location and sampling grid;
- b. Indicate boundaries of sampling area, and area where more data are required;
- c. Display geographical extent of contamination;
- d. Illustrate changes in concentration in relation to distances from the source, time, depth or other parameters; and,
- e. Indicate features affecting intramedia transport and show potential receptors.

D. Health and Safety Plan

The Health and Safety Plan shall include the availability of resources such as roads, water supply, electricity and telephone service; the known hazards and risks associated with each activity to be conducted; and the key personnel and alternates responsible for site safety, response operations and protection of the public health. The plan shall delineate the work area, describe levels of protection to be worn by personnel in the work area, procedures to control site access, and decontamination procedures for personnel and equipment. Site emergency procedures shall be established and any special training required for site personnel shall be identified. The Health and Safety Plan shall be consistent with:

1. NIOSH Occupational and Health Guidance Manual for Hazardous Waste Site Activities (1985);
2. EPA Order 1440.1 - Respiratory Protection;
3. EPA Order 1440.3 - Health and Safety Requirements for Employees Engaged in Field Activities;
4. Facility Contingency Plan;
5. OSHA regulations particularly in 29 C.F.R. 1910 and, 1926;
6. State and local regulations;
7. EPA Standard Operating Safety Guide (1984).

II. RFI Technical Requirements

The Permittee shall follow the procedures described in this section when conducting investigations to: characterize the facility (Environmental Setting); define the source (Source Characterization); define the degree and extent of release of hazardous constituents (Contamination Characterization); and identify actual or potential receptors.

The investigation shall result in data of adequate technical content and quality to support the development and evaluation of the Corrective Action Plan if necessary. The information contained in the Part B and/or RCRA Section 3019 Exposure information Report may be referenced as appropriate.

The scope of all sampling and analyses shall be conducted in accordance with the Sampling and Analysis Plan. All sampling locations shall be documented in a log and identified on a detailed site map.

A. Environmental Setting

The Permittee shall collect information to supplement and/or verify Part B information on the environmental setting at the facility. The Permittee shall characterize the following as they relate to identified sources, pathways, and areas of releases of hazardous constituents from SMUs.

1. Hydrogeology

The Permittee shall conduct a program to evaluate hydrogeologic conditions at the facility or refer to such a program previously submitted with the Part B Application. This program shall provide the following information:

- a. A description of the regional and facility specific geologic and hydrogeologic characteristics affecting ground water flow in the saturated and unsaturated zones beneath the facility, including:
  - (1) Regional and facility specific stratigraphy: description of strata including strike and dip, identification of stratigraphic contacts;
  - (2) Structural geology: description of local and regional structural features (e.g., folding, faulting, tilting, jointing, etc.);
  - (3) Depositional history;
  - (4) Regional and facility specific ground water flow patterns; and,
  - (5) Identification and characterization of areas and amounts of recharge and discharge.
- b. An analysis of any topographic features that might influence the ground water flow system.
- c. Based on field data, tests, and cores, a representative and accurate classification and description of the hydrogeologic units which may be part of the migration pathways at the facility (i.e., the aquifers and any intervening saturated and unsaturated units), including:
  - (1) Hydraulic conductivity and porosity (total and effective);

- (2) Lithology, grain size, sorting, degree of cementation;
  - (3) An interpretation of hydraulic interconnections between saturated zones; and,
  - (4) The attenuation capacity and mechanisms of the natural earth materials (e.g., ion exchange capacity, organic carbon content, mineral content, etc.).
- d. Based on data obtained from ground water monitoring wells and piezometers installed upgradient and downgradient of the potential contaminant source, a representative description of water level or fluid pressure monitoring including:
- (1) Water level contour and/or potentiometric maps;
  - (2) Hydrologic cross sections showing vertical gradients;
  - (3) The flow system, including the vertical and horizontal components of flow; and
  - (4) Any temporal changes in hydraulic gradients, for example, due to tidal or seasonal influences.
- e. A description of man-made influences that may affect the hydrology of the site, identifying:
- (1) Local water supply and production wells with an approximate schedule of pumping; and,
  - (2) Man-made hydraulic structures (pipelines, french drains, ditches, etc.).

2. Soils

The Permittee shall conduct a program to evaluate soils at the facility (or refer to such a program previously submitted with the Part B) which shall provide the following information:

- a. Surface soil distribution;
- b. Soil profile, including ASTM classification of soils;

- c. Transects of soil stratigraphy;
- d. Hydraulic conductivity (saturated and unsaturated);
- e. Relative permeability;
- f. Bulk density;
- g. Porosity;
- h. Soil sorptive capacity;
- i. Cation exchange capacity (CEC);
- j. Soil organic content;
- k. Soil pH;
- l. Particle size distribution;
- m. Depth of water table;
- n. Moisture content;
- o. Effect of stratification on unsaturated flow;
- p. Infiltration;
- q. Evapotranspiration;
- r. Storage capacity;
- s. Vertical flow rate; and
- t. Mineral content.

3. Surface Water and Sediment

The Permittee shall conduct a program to evaluate surface water bodies in the vicinity of the facility. Such characterization may include, but not be limited to, the following activities and provide the following information:

- a. Description of the temporal and permanent surface water bodies including:

- (1) For lakes and estuaries: location, elevation, surface area, inflow, outflow, depth, temperature stratification, and volume;
  - (2) For impoundments: location, elevation surface area, depth, volume, freeboard, and construction and purpose;
  - (3) For streams, ditches, harbors and channels: location, elevation, flow, velocity, depth, width, seasonal fluctuations, flooding tendencies (i.e., 100 year event), discharge point(s), and general contents;
  - (4) Drainage patterns; and,
  - (5) Evapotranspiration.
- b. Description of the chemistry of the natural surface water and sediments. This includes determining the pH, total dissolved solids, total suspended solids, biological oxygen demand, alkalinity, conductivity, dissolved oxygen profiles, nutrients, chemical oxygen demand, total organic carbon, specific contaminant concentrations, etc.
- c. Description of sediment characteristics including:
- (1) Deposition area;
  - (2) Thickness profile; and
  - (3) Physical and chemical parameters (e.g., grain size, density, organic carbon content, ion exchange, pH, etc.).
4. Air

The Permittee shall provide information characterizing the climate in the vicinity of the facility. Such information may include, but not be limited to:

- a. A description of the following parameters:
- (1) Annual and monthly rainfall averages;
  - (2) Monthly temperature averages and extremes;

- (3) Wind speed and direction;
  - (4) Relative humidity/dew point;
  - (5) Atmospheric pressure;
  - (6) Evaporation data;
  - (7) Development of inversions; and,
  - (8) Climate extremes that have been known to occur in the vicinity of the facility, including frequency of occurrence (i.e., hurricanes).
- b. A description of topographic and man-made features which affect air flow and emission patterns, including:
- (1) Ridges, hills or mountain areas;
  - (2) Canyons or valleys;
  - (3) Surface water bodies (e.g., rivers, lakes, bays, etc.);
  - (4) Buildings.

B. Source Characterization

For those sources from which releases of hazardous constituents have been detected, the Permittee shall collect analytic data to completely characterize the wastes and the areas where wastes have been placed, to the degree possible without undue safety risks, including: type, quantity; physical form; disposition (containment or nature of deposits); and facility characteristics affecting release (e.g., facility security, and engineering barriers). This shall include quantification of the following specific characteristics, at each source area:

1. Unit/Disposal Area Characteristics:
  - a. Location of unit/disposal area;
  - b. Type of unit/disposal area;
  - c. Design features;
  - d. Operating practices (past and present);

- e. Period of operation;
- f. Age of unit/disposal area;
- g. General physical conditions; and,
- h. Method used to close the unit/disposal area.

2. Waste Characteristics

- a. Type of wastes placed in the unit:
  - (1) Hazardous classification (e.g., flammable, reactive, corrosive, oxidizing or reducing agent);
  - (2) Quantity; and
  - (3) Chemical composition.
- b. Physical and chemical characteristics such as:
  - (1) Physical form (solid, liquids, gas);
  - (2) Physical description (e.g., powder, oily, sludge);
  - (3) Temperature;
  - (4) pH;
  - (5) General chemical class (e.g., acid, base, solvent);
  - (6) Molecular weight;
  - (7) Density;
  - (8) Boiling point;
  - (9) Viscosity;
  - (10) Solubility in water;
  - (11) Cohesiveness of the waste; and
  - (12) Vapor pressure.

c. Migration and dispersal characteristics of the waste such as:

- (1) Sorption capability;
- (2) Biodegradability, bioconcentration, biotransformation;
- (3) Photodegradation rates;
- (4) Hydrolysis rates; and
- (5) Chemical transformations.

The Permittee shall document the procedures used in making the above determination.

c. Characterization Of Release Of Hazardous Constituents

The Permittee shall collect analytical data on ground water, soils, surface water, sediment, and subsurface gas contamination in the vicinity of the facility in accordance with the sampling and analysis plan as required above. These data shall be sufficient to define the extent, origin, direction, and rate of movement of contamination. Data shall include time and location of sampling, media sampled, concentrations found, conditions during sampling, and the identity of the individuals performing the sampling and analysis. The Permittee shall follow the procedures described below when investigating each of the media:

1. Groundwater Contamination

The Permittee shall collect at a minimum the following information when conducting investigations of ground water contamination at the facility:

- a. A description of the horizontal and vertical extent of any plume(s) of hazardous constituents originating from the facility;
- b. The horizontal and vertical direction of contamination movement;
- c. The velocity of contaminant movement;
- d. The horizontal and vertical concentration profiles of hazardous constituents in the plume(s);

- e. An evaluation of factors influencing the plume movement; and
- f. An extrapolation of future contaminant movement.

The Permittee shall document the procedures used in making the above determinations (e.g., well design, well construction, geophysics, modeling, etc.).

2. Soil Contamination

The Permittee shall collect at a minimum the following information when conducting investigations of soil contamination at the facility:

- a. A description of the vertical and horizontal extent of contamination;
- b. A description of appropriate contaminant and soil chemical properties within the contaminant source area and plume. This may include contaminant solubility, speciation, adsorption, leachability, exchange capacity, biodegradability, hydrolysis, photolysis, oxidation and other factors that might affect contaminant migration and transformation;
- c. Specific contaminant concentrations;
- d. The velocity and direction of contamination movement; and
- e. An extrapolation of future contaminant movement.

The Permittee shall document the procedures used in making the above determinations.

3. Surface Water and Sediment Contamination

The Permittee shall collect at a minimum the following information when conducting investigations of surface water and sediment contamination at the facility:

- a. A description of the horizontal and vertical extent of any plume(s) originating from the facility, and the extent of contamination in underlying sediments;
- b. The horizontal and vertical direction of contaminant movement;

- c. The contaminant velocity;
- d. An evaluation of the physical, biological and chemical factors influencing contaminant movement;
- e. An extrapolation of future contaminant movement; and,
- f. A description of the chemistry of the contaminated surface waters and sediments. This includes determining the pH, total dissolved solids, specific contaminant concentrations, etc.

4. Subsurface Gas Contamination

The Permittee shall collect at a minimum the following information when conducting investigations of air contamination at the facility:

- a. A description of the horizontal and vertical extent of the subsurface gases mitigation;
- b. The chemical composition of the gases being emitted;
- c. The rate, amount, and density of the gases being emitted; and
- d. Horizontal and vertical concentration profiles of the subsurface gases emitted.

The Permittee shall document the procedures used in making the above determinations.

D. Potential Receptors

The Permittee shall collect data describing the human populations and environmental systems that are susceptible to contaminant exposure from the facility. Chemical analysis of biological samples and/or data on observable effects in ecosystems may also be obtained as appropriate. The following characteristics shall be identified:

1. Current local uses and planned future uses of ground water:
  - a. Type of use (e.g., drinking water source, municipal or residential, agricultural, domestic/ non-potable, and industrial); and

- b. Location of ground water users, to include withdrawal and discharge wells, within one mile of the impacted area.

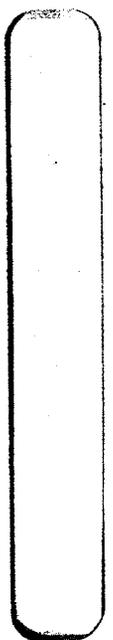
The above information should also indicate the aquifer or hydrogeologic unit used and/or impacted for each item.

- 2. Current local uses and planned future uses of surface waters directly impacted by the facility:
  - a. Domestic and municipal (e.g., potable and lawn/ gardening watering);
  - b. Recreational (e.g., swimming, fishing);
  - c. Agricultural;
  - d. Industrial; and,
  - e. Environmental (e.g., fish and wildlife propagation).
- 3. Human use of or access to the facility and adjacent lands, including but not limited to:
  - a. Recreation;
  - b. Hunting;
  - c. Residential;
  - d. Commercial; and,
  - e. Relationship between population locations and prevailing wind direction.
- 4. A general description of the biota in surface water bodies on, adjacent to, or affected by the facility.
- 5. A general description of the ecology within and adjacent to the facility, including animal species known to be present.
- 6. A general demographic profile of the people who use or have access to the facility and adjacent land, including, but not limited to: age, sex, and sensitive subgroups.
- 7. A description of any known or documented endangered or threatened species near the facility.

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PERMIT ATTACHMENT V-3

PHASE I RFI  
PLAN REQUIREMENTS



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PERMIT ATTACHMENT V-3

PHASE I RFI  
PLAN REQUIREMENTS

The Permittee shall ensure that each Phase I Plan meets the following requirements:

- I. The Regional Administrator may split samples from any sampling activity which takes place as part of the Phase I RFI.
- II. The Phase I RFI Plan shall provide details about the SWU including:
  - A. the type of unit;
  - B. the location of the unit on a topographic map of appropriate scale;
  - C. the general dimensions and capacities;
  - D. the function of the unit;
  - E. the dates that the unit was operated;
  - F. a description of the wastes that were placed in the unit; and,
  - G. a description of any known releases or spills (to include ground water data, soil analyses, and/or surface water data).
- III. The Phase I RFI Plan shall include a Project Management Plan which describes the technical approach, schedules, budget, and personnel involved in preparation and implementation of the Phase I RFI Plan and Phase I RFI Report. The Project Management Plan shall also include a description of the qualifications of personnel performing or directing the Phase I RFI Plan, including contractor personnel, and shall document the overall management approach.
- IV. The Phase I RFI Plan shall include a sampling and analysis program which addresses the applicable requirements in Permit Attachment V-4.
- V. The sampling and analysis program shall be capable of yielding representative samples. The sampling program shall include a list of parameters capable of detecting migration of hazardous waste or hazardous constituents from the unit into soil. The list shall include the basis for selecting each proposed indicator parameter, including any analysis or calculations performed. The basis for selection shall, where possible, include chemical analysis of the unit's waste and/or leachate as appropriate. In choosing parameters, the owner or operator shall consider:

- A. the types, quantities, and concentration of constituents in waste managed at the solid waste management unit, including incidental constituents which may be released from process areas associated with or in close proximity to the solid waste management unit;
  - B. the mobility, stability, and persistence of waste constituents or their reaction products;
  - C. the detectability of waste constituents, or their reaction products, and,
  - D. the natural variations in background concentrations of known or suspected waste constituents or their reaction products.
- VI. The Phase I RFI Plan shall be sufficient to determine the presence of hazardous waste or hazardous constituents at the SWMU and enable the owner or operator to recommend appropriate further action.
- VII. Each Phase I RFI shall identify the criteria to be used by the owner or operator to determine if further investigation is warranted. Options include but are not limited to:
- A. additional Phase I RFI sampling;
  - B. preparation and implementation of an RFI Plan; or
  - C. no further action is required.

PERMIT ATTACHMENT V-4  
PHASE I RFI  
SAMPLING AND ANALYSIS PLAN REQUIREMENTS

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ATTACHMENT V-4

PHASE I RFI SAMPLING AND ANALYSIS PLAN REQUIREMENTS

I. SAMPLING AND ANALYSIS PLAN

The owner or operator shall prepare a plan to document all monitoring procedures: sampling, field measures and sample analysis, performed during the investigation to characterize the environmental setting, source, and releases of hazardous constituents, so as to ensure that all information and data are valid and properly documented.

A. Sampling/Field Measurement Procedures

The sampling section of this workplan shall be in accordance with Characterization of Hazardous Waste Sites, A Methods Manual: Volume II. Available Sampling Methods, EPA-600/4-83-040. The workplan shall also at a minimum discuss the following:

1. Selecting appropriate sampling locations, depths, etc. (locate on facility map);
2. Providing a statistically sufficient number of sampling sites;
3. Obtaining all necessary ancillary data;
4. Determining conditions under which sampling should be conducted;
5. Determining which media are to be sampled (e.g., groundwater, air soil, sediment, etc);
6. Determining which parameters are to be measured and where;
7. Selecting the frequency of sampling and length of sampling period;
8. Selecting the types of samples (e.g., composites vs. grabs) and number of samples to be collected;
9. Documenting field sampling operations and procedures, including:
  - (a) Documentation of procedures for preparation of reagents or supplies which become an integral part of the sample (e.g., filters, preservatives, and adsorbing reagents);
  - (b) Procedures and forms for recording the exact location and specific considerations associated with sample acquisition;

- (c) Documentation of specific sample preservation method;
  - (d) Calibration of field instruments;
  - (e) Submission of field-biased blanks, where appropriate;
  - (f) Potential interferences present at the facility;
  - (g) Construction materials and techniques, associated with monitoring wells and piezometers;
  - (h) Field equipment listing and sampling containers;
  - (i) Sampling order; and,
  - (j) Decontamination procedures.
- 10. Selecting appropriate sample containers;
  - 11. Sampling preservation; and
  - 12. Chain-of-custody, including:
    - (a) Standardized field tracking reporting forms to establish sample custody in the field prior to shipment; and,
    - (b) Pre-prepared sample labels containing all information necessary for effective sample tracking.

B. Sample Analysis

Sample Analysis shall be conducted in accordance with SW-846: "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods". The sample analysis section of the Sampling and Analysis Plan shall specify the following:

- 1. Chain-of-custody procedures, including:
  - (a) Identification of a responsible party to act as sampling custodian at the laboratory facility authorized to sign for incoming field samples, obtain documents of shipment, and verify the data entered onto the sample custody records;
  - (b) Provision for a laboratory sample custody log consisting of serially numbered standard lab-tracking report sheets; and,
  - (c) Specification of laboratory sample custody procedures for sample handling, storage, and dispersment for analysis.

2. Sample storage
3. Sample preparation methods
4. Analytical procedures, including:
  - (a) Scope and application of the procedure;
  - (b) Sample matrix;
  - (c) Potential interferences;
  - (d) Precision and accuracy of the methodology; and,
  - (e) Method detection limits.
5. Calibration procedures and frequency;
6. Data reduction, validation and reporting;
7. Internal quality control checks, laboratory performance and systems audits and frequency, including:
  - (a) Method blank(s);
  - (b) Laboratory control sample(s);
  - (c) Calibration check sample(s);
  - (d) Replicate sample(s);
  - (e) Matrix-spiked sample(s);
  - (f) Control charts;
  - (g) Surrogate samples;
  - (h) Zero and span gases; and,
  - (i) Reagent quality control checks.
8. Preventive maintenance procedures and schedules;
9. Corrective action (for laboratory problems); and,
10. Turnaround time.

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