

010-101-0100-A2-0005

mb

M60050.000801
MCAS EL TORO
SSIC # 5090.3



HAZARDOUS WASTE MANAGEMENT
AND
POLYCHLORINATED BIPHENYL CONTROL
COMPLIANCE ASSESSMENT

MARINE CORPS AIR STATIONS, EL TORO AND TUSTIN

NOVEMBER 1983

TITLE: HAZARDOUS WASTE MANAGEMENT &
POLYCHLORINATED BIPHENYL CONTROL
COMPLIANCE ASSESSMENT

AUTHOR: US NAVY, WESTERN DIVISION

DATE: 11/01/83

CATEGORY: 1.2

1141
SOUTHWEST ENVIRONMENTAL SECTION
DEPARTMENT OF THE NAVY
WESTERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
SAN BRUNO, CALIFORNIA 94066

HAZARDOUS WASTE MANAGEMENT AND PCB CONTROL
COMPLIANCE ASSESSEMNT
MARINE CORPS AIR STATION, EL TORO AND TUSTIN

2 NOVEMBER 1983

REFERENCES:

- (a) OPNAVINST 5090.1
- (b) MARCORPS Order P11000.8B

EXECUTIVE SUMMARY

1. Purpose.

a. Authority. Navy and Marine Corps activities have a legal obligation to comply with all Federal regulations unless specifically exempted, and with substantive and procedural requirements of State and local environmental laws. This obligation is established by references (a) and (b) and includes compliance of the Resource Conservation and Recovery Act (RCRA, Public Law 94-580) and the Toxic Substances Control Act (TSCA, Public Law 94-469).

b. This Hazardous Waste Management and PCB Control Compliance Assessment is made to assist activity Commanders in meeting the responsibilities to protect the environment, and has the following objectives:

(1) Ensure that facilities and operations are environmentally acceptable.

(2) Ensure that hazardous wastes and PCBs are properly managed, including provisions for generation, transportation, treatment, storage, and disposal.

(3) Identify areas where facilities or equipment are inadequate and assist activities in the initiation of corrective actions, including the preparation and submission of Pollution Control Report (PCR) funding requests in accordance with OMB Circular A-106.

(4) Satisfy the requirement set forth in reference (a) to conduct Hazardous Waste and PCB Compliance Assessments at Navy and Marine Corps activities, and reporting all findings to activity commanding officers, major claimants, and to CNO (OP-45).

2. Discussion.

a. Scope of Assessment. A Hazardous Waste Management and PCB Control Compliance Assessment consists of an on-site visit to an activity by qualified engineers to identify environmental deficiencies. In general, OSHA or public health problems are not within the definition of environmental deficiencies covered by this assessment; however, observed deficiencies may be noted in the report. Detailed engineering studies and evaluations to develop solutions are not within the scope of the assessment; however, the identification of the need for detailed investigations, along with recommendations on how to initiate such investigations, are provide as needed.

b. Assessment Team and Personnel Contacted. The on-site assessment of the Marine Corps Air Stations, El Toro and Tustin was conducted during the period 17-20 October 1983 by Messrs. Alan B. Freeman and Chris A. Kotas, Environmental Engineers, Southwest Environmental Section of this Command. Also included in this assessment was an evaluation of Defense Property Disposal Office (DPDO) operations (see Appendix "A"). The following personnel were contacted concerning hazardous waste management and PCB control:

LT Davis Kirkman, Energy/Environmental Officer
 Mr. Jeff Simko, Environmental Engineer
 Mr. John Rogers, Chief, DPDO El Toro

c. Certification of Compliance/Non-compliance with Regulations. Compliance with hazardous waste regulations 40 CFR 260-265, PCB regulation to CFR 761, and State and local laws and regulations is shown below. Certification is based upon observations and information obtained during the conduct of this assessment. No assurance is made that all sources of pollution or areas of non-compliance were identified in the assessment, or coincide with determinations made by regulatory agencies.

<u>AREA OF REQUIREMENT</u>	<u>COMPLIANCE</u>
(1) Hazardous Waste Management	NO
(a) Generator Requirements	NO
(b) Transporter Requirements	N/A
(c) Storage Facility Requirements	NO
(d) Treatment Facility Requirements	N/A
(e) Disposal Facility Requirements	N/A
(f) Records/Reports	NO
(2) PCB Control	NO
(a) In-Service Requirements	NO
(b) Storage/Disposal Requirements	NO
(3) Oil/Oily Waste Management	NO
(a) Oil Pollution Control	NO
(b) Oily Waste Management	No

d. Description of Activity Assessed.

(1) The Marine Corps Air Station (MCAS), El Toro and Marine Corps Air Station, Tustin (MCAS-H) are both situated in the north-central area of Orange County. MCAS El Toro is located on approximately 4700 acres in unincorporated territory approximately seven miles from the cities of Irvine and Tustin, and approximately eight miles southeast of Santa Ana. MCAS-H is located on approximately 1,560 acres three miles east of the City of Santa Ana, bordered on the east and south by the City of Irvine, and contiguous to the southern boundary of the City of Tustin.

(2) The missions of both these activities is to maintain and operate facilities and provide support services and material to Marine Aircraft Wing operations and other units as designated by the Commandant of the Marine Corps in coordination with the Chief of Naval Operations. MCAS El Toro provides home-port facilities for the Third Marine Air Wing while MCAS-H is the home of Marine Aircraft Group 16 (Helicopter), a unit of the Third Marine Air Wing.

3. Summary of Findings and Recommendations. The management of hazardous waste for both the MCAS El Toro and MCAS-H is performed by the MCAS El Toro Environmental Staff. The current status of the hazardous waste management program (including PCB control and oil/oily waste management) at both stations could result in notices of violation, fines, and/or penalties if a routine inspection by the appropriate regulatory agency was made. Many of the deficiencies identified during the assessment are the result of past practices conducted at both stations and should not be attributed to the current environmental staffing. Following is a list of the major deficiencies identified during the assessment along with recommendations.

a. Hazardous Waste Management.

(1) Storage of Hazardous Wastes - It was noted during the assessment that drums containing unidentified hazardous wastes are being stored at various locations, both at MCAS El Toro and MCAS-H. Two options for legal disposal; 1) complete identification for turn-in to DPDO (estimated cost \$200 to \$1000 per drum depending on contents); 2) on-site identification and disposal by private contractor (estimated cost \$150 per drum). Recommended option #2.

(2) Hazardous Waste Storage Facility Requirements - The Interim Status Document (ISD) issued by the State of California has specific compliance requirements (see Appendix "B") for the operation of a hazardous waste storage facility. Recommend Appendix "B" be reviewed to assist in bringing current operations into compliance.

(3) Hazardous Waste Management Plan - The hazardous waste management plan is still in draft form and is not an official document. This document is critical for hazardous waste operations at both stations as a mechanism for assuring safe and legal disposal of hazardous wastes. Recommend full command support be given to finalizing and implementing the plan.

b. PCB Control.

(1) In-Service Transformers - Inspections of PCB transformers as required by Federal regulations on a weekly or quarterly basis, are not being performed. In addition, a spot check of PCB transformers was made during the assessment and it was observed that some were leaking. Leaking (moderate) PCB transformers are required by Federal regulations to have repair work initiated within 48 hours. Strongly recommend performing a transformer risk assessment, implementing a regular inspection program, and repair all leaking PCB transformers.

(2) Storage/Disposal Requirements - Inspections of PCB transformers awaiting disposal as required by Federal regulations every 30 days are not being performed. The transformers are also required to be labeled with the date they entered storage. It was observed that some of the transformers were leaking (NOTE: The lighting in the facility was too poor to inspect all the transformers in storage). A Spill Prevention Control and Countermeasure (SPCC) Plan is required for the facility. Recommend leaky transformers be repaired prior to disposal through DPDO, regular inspection program be initiated and a SPCC Plan developed.

c. Oil/Oily Waste Management.

(1) Oil Pollution Control - The triennial review of the Oil Spill Prevention Control and Countermeasure (SPCC) Plan as required by Federal Regulations has not been performed. Recommend review be performed (both stations) and certified by a Professional Engineer.

4. Discussion of Findings and Recommendations.

a. Hazardous Waste Management. The management of hazardous wastes (including PCB Control and Oil/Oily Wastes Management) is performed by personnel from the MCAS El Toro Environmental staff. The current status of the program could result in notices of violation, fines, and/or penalties if a routine inspection by the appropriate regulatory agency was made. Many of the deficiencies identified are the result of past practices and should not be attributed to the current environmental staffing.

(1) General - Both the MCAS El Toro and MCAS-H have applied for a hazardous waste permits for collection and storage of wastes. A Part "A" application was initially submitted (November 1980) to the Environmental Protection Agency (EPA). The State of California has interim status permitting authority; therefore, the applications were forwarded by EPA to the State. According to the State, an Interim Status Document (ISD) was sent to the MCAS El Toro and MCAS-H, establishing interim compliance requirements for operating a hazardous waste collection/storage facility. Personnel at the MCAS El Toro said that to the best of their knowledge the ISD was never received for either facility, nor has the State conducted an interim status inspection. In March 1983 the State sent a letter to the MCAS El Toro, referencing the ISD and requesting an operation plan be submitted within 45 days. Per that request an operation plan for MCAS El Toro and MCAS-H was submitted to the State Department of Health Services.

(a) While performing the assessment it was observed that there are differing opinions by MCAS El Toro personnel as to whether the activity desires to maintain its current status as a hazardous waste collection and storage facility; or, whether to request an exemption as a collection storage facility and dispose of all hazardous waste (including oils) in less than 90 days.

(b) Defense Property Disposal Office (DPDO). There is a DPDO located within the confines of the MCAS El Toro. As part of this assessment DPDO operations are included as Appendix "A".

(c) Recommendations. It is strongly recommended that a decision be made by MCAS El Toro personnel as to how the management of hazardous waste will be accomplished. The first option is to retain the existing permit for a collection and storage facility. The second option is to request an exemption from the original permit and fall into the category of generator only. Presently, either option chosen would be in violation of various Federal and State rules and regulations for improper storage and disposal. The first option would be more labor intensive for the Public Works Department. The second option will be successful only if DPDO can administer a disposal contract that will allow for disposal of hazardous wastes within 90 days of accumulation (including PCB transformers and items, and waste oils); or, if DPDO cannot administer such a contract, than MCAS El Toro would have to administer a contract. It is felt by

this Command that the second option is more feasible for both stations. The conditions that will be set by the State for operating a collection/storage facility will be very strict, and the quantities of hazardous waste generated are relatively small (except for oils). In addition DPDO has plans to construct such a facility in FY 1986.

(2) Generator Requirements.

(a) Hazardous waste generated at the MCAS El Toro and MCAS-H are from a variety of maintenance activities. Wastes generated include chlorinated hydrocarbons, organic solvents, lubricating oil, hydraulic and cutting oils, paint wastes, and acids.

(b) The MCAS El Toro and MCAS-H have been generating quantities of various hazardous wastes for a period of years. Because of past practices, the wastes have never been identified sufficiently enough to legally dispose of. The drums containing wastes are not labeled as to contents, date of accumulation, etc. Many of the containers are leaking or have leaked in the past. Efforts have been made by MCAS El Toro personnel to centralize storage sites for the drums. Weekly inspections of these sites are not made.

(c) Recommendations. It is strongly recommended that immediate efforts be made by MCAS El Toro personnel to legally dispose of the unknown chemicals currently stored at the stations. It is important that the MCAS El Toro initiate disposal efforts because current operations are in violation of the existing permit requirements; and would be in violation if the activity decides to request an exemption as a collection/storage facility.

1. There are two options for the MCAS El Toro to legally dispose of the unknown chemicals. One option would be to have the material completely identified via laboratory analysis and turn the material over to DPDO for disposal. All containers would have to be prepared for disposal by MCAS El Toro personnel (non-leaking, transportable condition etc.). Estimated cost for laboratory analysis only ranges from \$200.00 to \$1000.00 per drum (NOTE: The cost of the analysis varies according to the unknown material because of the different laboratory equipment necessary for identification). The second option would be to hire a private contractor identify and dispose of the material. By using a private contractor the material would not have to be identified as completely as it would for turn in to DPDO. Estimated cost for identification and disposal via private contractor is \$100.00 to \$150.00 per drum.

(3) Storage Facility Requirements - As stated above, both the MCAS El Toro and MCAS-H applied for an EPA permit for the collection and storage of hazardous wastes. The State of California has been granted interim status by EPA. Following review of a permit request the State issues an ISD establishing compliance requirements. Upon receipt of an ISD the State expects an activity to be in compliance or begin initiating actions to bring that activity into compliance. The ISD, according to MCAS El Toro personnel has never been received. Appendix "B" contains a typical ISD and should be reviewed to assist MCAS El Toro personnel in bringing the current hazardous waste operation into compliance.

(a) It does not appear that the MCAS El Toro has allocated the necessary resources (personnel, equipment and funds required to operate a hazardous waste collection/storage facility).

(b) Recommendations. It is realized that many of the deficiencies associated with the MCAS El Toro hazardous waste collection/storage operation would not occur if DPDO would fund and operate the facility (as planned), or DPDO would develop a contract to allow disposal of hazardous wastes (including PCB transformers and oils) in less than 90 days (as promised). Even if either of the two aforementioned alternatives occur, the burden is still on MCAS El Toro personnel to properly identify and prepare hazardous wastes prior to disposal. It is therefore recommended that to prevent potential notices of violations, fines and/or penalties additional resources be allocated, to comply with existing permit requirements. This would include providing personnel (properly trained), equipment, and supplies needed to operate a hazardous waste storage facility. This recommendation is more critical if the MCAS El Toro does not request exemptions from their hazardous waste collection/storage facility permits. Also recommend that key personnel in this operation make a two or three day field trip to observe the operations of a hazardous waste storage facility at either the Navy Public Works Center, San Diego or the Naval Shipyard Long Beach. This recommendation is valid even if an exemption is applied for, because as mentioned above, it would still be the responsibility of MCAS El Toro personnel to ensure of containers are prepared properly prior to disposal.

(4) Records/Reports.

(a) Records. The following required operating records have never been kept.

1. Description and quantity of each hazardous waste received and dates of storage or disposal.

2. Results of waste analyses.

3. Summary reports and details of spills/incidents.

4. Results of inspections.

(b) Reports. Although annual reports have been submitted as part of MBO requirements, a review of the reports indicated that they may have been submitted inaccurately. The quantities of hazardous waste generated was listed as zero. This assessment identified drums of unknown chemicals that have accumulated for the past year(s). In addition, waste oils and contaminates fuels generated at MCAS El Toro are classified as hazardous wastes by the State of California.

(c) Hazardous Waste Management Plan. The hazardous waste management plan is still in draft form and is not an official document. It must receive full command support otherwise the accumulation of unknown chemicals will continue. Disposal of unknown chemicals is very costly, not only in laboratory costs for analysis, but also increases the manpower resources necessary in handling, collection, and storage of the unknown chemicals.

(d) Recommendations.

1. It is strongly recommended that full command support be given to the adoption and implementation of the hazardous waste management plan. Until this occurs there is no mechanism at the MCAS El Toro for the safe and legal disposal of hazardous wastes.

2. Following implementation of the hazardous waste management plan, the required operating records can be maintained.

3. Recommend the MBO report be reviewed and inaccurate responses be corrected with next submission.

b. Polychlorinated Biphenyl (PCB) Control.

(1) General - In addition to EPA's regulation of PCB's the State of California also regulates storage, marking, transport, and disposal. The State regulates PCB contaminated liquid wastes down to 7 ppm, whereas the EPA limit is 50 ppm, and solid wastes with 50 ppm PCB concentration or greater are considered hazardous. Storage of PCB materials for greater than 90 days requires a State permit.

(2) In-Service Requirements.

(a) An initial inventory for PCB transformers was performed by a private contractor. As part of the inventory transformers were analyzed for PCB concentrations and PCB transformers were marked with the required EPA approved label.

(b) Inspections as required by Federal regulations have not been performed at either station. As part of the assessment spot checks were made of PCB transformers and it was observed that some were leaking. Leaking (moderate) transformers are required to be repaired or have repair work begin within 48 hours. Discrepancies were also noted between the inventory records and field verification.

(c) An annual report of the status of PCB transformers was submitted as part of the MBO requirement. With the discrepancies noted in the inventories at both stations, it is doubtful if the report was accurate.

(d) Recommendations.

1. It is strongly recommended that a transformer risk assessment be performed. In conjunction with the assessment, a regular inspection program should be developed, and repairs to leaking transformers should be made.

2. It is highly recommended that key personnel responsible for the PCB Control Program read and become familiar with the PCB Compliance Assessment, and Spill Control Guide, August 1982 (NESSA 20.2-028A).

(3) Storage/Disposal Requirements.

(a) PCB transformers and items awaiting disposal are being stored in an abandoned concrete jet engine test cell at the MCAS El Toro. The storage facility is marked PCB's and all containers are protected from rain water. The storage facility is more than adequate to store existing transformers and containers; however, the lighting inside the facility was extremely poor.

(b) The following deficiencies were noted during the assessment:

1. Transformers and containers not marked with date the items entered storage.
2. Monthly inspections of condition of containers and transformers not made as required.
3. Some of the PCB transformers were leaking.
4. No SPCC Plan for facility as required.

(c) The Disposal Turn-In Document (DTID) for the PCB transformers and items as required by DPDO for disposal has not yet been completed. DLA has a contract currently advertised for disposal of PCB transformers and items that will include MCAS El Toro.

(d) Recommendations.

1. Provide lighting for storage facility to allow for regular inspections and whatever repairs may be required.
2. Mark PCB transformers and items with date they entered storage facility.
3. Conduct monthly inspections for condition of transformers and/or containers. Maintain written log of inspections.
4. Prepare DTID's for disposal of PCB transformers and items, turn-in to DPDO and repair all leaking transformers and/or containers prior to disposal.
5. Prepare a SPCC Plan for storage facility.

c. Oil/Oily Waste Management.

(1) General - The collection, storage, treatment, and disposal of oils is regulated by the State of California and in most cases, re-use/recycle of oils is considered the same as hazardous wastes. For this reason oil/oily waste management has been included in the assessment.

(2) Oil Pollution Control - The triennial review of the SPCC Plan for the MCAS El Toro, as required by Title 40, Code of Federal Regulations, Part 112 has not been performed. Large quantities of fuels and oils are stored and handled at the MCAS El Toro. The storm water drainage system at the MCAS El Toro discharges eventually to Newport Bay. The system currently receives large quantities of oily waste from various operations. As a precaution to remove oily waste from the storm drainage system two oil-water separators have been installed on the major drainage courses (Bee Canyon Wash and Aqua Chinon Wash). Unfortunately siltation and mechanical problems with both separators have made the systems unreliable.

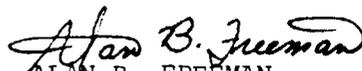
(a) MILCON Project P-325. This project provided for the installation of oil/water separators at aircraft washracks and steam cleaning facilities with discharges connecting with the sanitary sewer. Construction has been completed on this project and should substantially reduce oily waste discharges to the storm water drainage systems.

(b) The past SPCC Plan identified many areas for potential spills because of improper handling and storage of waste oil near storm water catch basins. The list should be upgraded during the triennial review.

(c) Recommendations. It is highly recommended that a triennial review of the SPCC Plan be performed. The review must be certified by a Professional Engineer.

(3) Oily Waste Management - Waste oils and contaminated fuels generated at the MCAS El Toro are collected and stored at the tank farms. The fuels and oils are stored in bulk. DTIS's are completed by the fuel division and turned into DPDO for disposal when quantities approach 30,000 gallons. Length of storage has never been a consideration in the past; however, if storage exceeds 90 days this operation must be included as part of the hazardous waste collection, storage, treatment permit.


CHRISTOPHER KOTAS
Environmental Engineer


ALAN B. FREEMAN
Environmental Engineer

Appendix:
"A" Defense Property Disposal Office Assessment
"B" Sample Interim Status Document

A P P E N D I X

" A "

HAZARDOUS WASTE MANAGEMENT AND PCB CONTROL
COMPLIANCE ASSESSMENT
DEFENSE PROPERTY DISPOSAL OFFICE (DPDO), EL TORO
25 NOVEMBER 1983

REFERENCES:

- (a) OPNAVINST 5090.1
- (b) COMNAVFACENGCOM ltr Ser 1121A/TJZ of 13 Jan 1983
- (c) Defense Environmental Quality Program Policy Memorandum (DEQPPM) 80-5 of 13 May 1980

EXECUTIVE SUMMARY

1. Authority. Reference (a) requires that Naval Facilities Engineering Command Engineering Field Divisions (EFD) conduct hazardous waste management and PCB control compliance assessments at Navy and Marine Corps activities. Reference (b) directs EFDs to assess all activity tenants, including Defense Property Disposal Offices (DPDO). The concept of hazardous waste management and PCB control compliance assessments is to assist activities in identifying hazardous management deficiencies, and to make recommendations for achieving regulatory compliance.

2. Assessment Team and Personnel Contacted. The on-site assessment of DPDO El Toro was conducted on 19 October 1983 by Mssrs. David Fischer, Alan Freeman, and Christopher Kotas, Environmental Engineers, Southwest Environmental Section of this Command. Mr. John L. Rogers, Chief, DPDO El Toro, was contacted regarding hazardous waste management and PCB control.

3. Certification of Compliance/Non-Compliance With Regulations. Compliance with hazardous waste regulations 40 CFR 260-265, PCB regulation 40 CFR 761, and State and local laws and regulations is shown below. Certification is based upon observations and information obtained during the conduct of this assessment. No assurance is made that all sources of pollution or areas of non-compliance were identified in the assessment, or coincide with determinations made by regulatory agencies.

<u>AREA OF REQUIREMENT</u>	<u>COMPLIANCE</u>
(1) Hazardous Waste Management	No
(a) Generator Requirements	N/A
(b) Transporter Requirements	N/A
(c) Storage Facility Requirements	No
(d) Treatment Facility Requirements	N/A
(e) Disposal Facility Requirements	N/A
(f) Records/Reports	No
(2) PCB Control	N/A
(a) In-service Requirements	N/A
(b) Storage/Disposal Requirements	N/A

4. Summary of Findings and Recommendations

a. DPDO El Toro now acts as a hazardous waste "broker" and handles only paperwork; however, several drums of past accumulated waste oils and solvents are

stored in DPDO's nonconforming storage facility. The DPDO storage facility is a gravel yard lacking in both physical and documentation/records requirements of a hazardous waste storage facility. Recommend that all hazardous waste drums be properly marked and labelled and contracted out for disposal.

b. Preparation of the permit application for the planned Fiscal Year 1986 DPDO hazardous waste storage facility should begin as soon as possible. Required first, however, is an engineering study which will provide useful, practical information and recommendations on facility cost, size, design, siting, compatibility with surroundings, and access to transportation. Such an engineering study has recently been completed; unfortunately, the first submitted report contains little if any useful information.

c. Upcoming PCB, hazardous waste, and waste oil disposal contracts need to provide timely service that will enable customer activities to be in compliance with hazardous waste permit requirements.

5. Discussion.

a. Reference (c) designated the Defense Logistic Agency (DLA) as the responsible agency within the Department of Defense for worldwide disposal of hazardous material. This task was subsequently assigned to the Defense Property Disposal Service and, on a local level, to the individual DPDOs.

b. As recognized by the California Department of Health Services, DPDO El Toro operates a hazardous waste storage facility under a Part A Interim Status Permit issued to the host activity, the Marine Corps Air Station (MCAS) El Toro. Realistically, however, DPDO El Toro is neither a generator, transporter, or treatment, storage, or disposal facility for hazardous waste. Its role in hazardous waste management is that of a "broker". Upon receipt of a turn-in document (Form 1348-1) from a customer activity, and after a subsequent inspection of goods, DPDO El Toro will accept accountability, but not physical custody, of hazardous wastes. Due to the lack of a conforming storage facility on the DPDO El Toro yard, the generating activity is always chosen as the "most nearly" conforming storage facility and retains physical custody of the waste. DPDO El Toro then initiates contracts or agreements for re-use or disposal. The generating activity signs the State manifest as generator while DPDO retains a copy for its records.

c. The DPDO El Toro storage facility consists of a gravel yard surrounded by a chain-link fence. Hazardous material, inspected daily by trained hazardous material handlers, is stored in the yard. No PCB or PCB-contaminated (7 ppm or greater) items are in storage or accepted for physical custody. Hazardous waste is also not accepted for physical custody; however, at the time of this assessment, 20-30 drums of waste oil and waste solvents were in storage in the DPDO yard. These have been accumulated through past contracting oversights and have storage dates of greater than 90 days. As such, DPDO El Toro is out of compliance as a hazardous waste storage facility -- no secure enclosure with an impermeable base, secondary containment, alarm and fire control systems, etc. As required, the waste drums are inspected weekly, with results recorded in an inspection log. Other necessary plans and records, however, are absent -- no waste analysis plan, closure plan, etc. Proper marking and labelling of the waste drums have also not been provided for. In addition to the Department of Transportation hazard labels (flammable liquid, corrosive, for example), each container under 110

gallons must be marked with the following statement: "HAZARDOUS WASTE - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U. S. Environmental Protection Agency." Each label -- not just turn-in document -- must list generator name, address, composition and amount of waste, and date of acceptance at storage facility. Recommend that all hazardous waste drums be properly marked and labelled and contracted out for re-use or disposal.

d. As mentioned previously, DPDO El Toro operates under a Part A Interim Status Permit issued to MCAS El Toro. DLA now requires all DPDOs to pursue a Part B Final Permit, and to report monthly on permit status. At present, the DPDO hazardous waste operation at El Toro involves only paperwork; also, the present storage area could not pass a State DOHS inspection as a conforming storage facility. A conforming DPDO hazardous waste storage facility at MCAS Tustin is planned for Fiscal Year 1986 construction. New storage facilities must apply for and receive a Part B Final Permit before actual physical construction is allowed to begin -- very often a lengthy bureaucratic headache. For the above mentioned reasons, it is recommended that full and immediate attention be given to preparing the permit application for the new facility. Vitally needed, however, is accurate information addressing costs, size, siting and proximity to generators, access to transportation, and compatibility with surrounding land use of the planned storage facility. Such a study has recently been prepared for the Naval Facilities Engineering Command. The first submitted report, dated 26 August 1983, unfortunately contains little, if any, useful information.

e. Clearly, DLA in general and DPDOs in particular need to provide quick, responsive customer oriented service in the area of hazardous waste management. To this end, a west coast PCB disposal contract (to include DPDO El Toro) is tentatively scheduled to be awarded in December, 1983, or January, 1984, with pick-up of PCB and PCB-contaminated items to begin in January or February. DPDO El Toro is planning to award a similar contract for hazardous waste disposal in early 1984. It cannot be overemphasized that disposal contracts for hazardous wastes, PCBs, and waste oil provide timely service -- pick-ups in less than 90 days -- that will enable customer activities to be in compliance with hazardous waste permit requirements.

Christopher Kotas

Christopher Kotas
Environmental Engineer

A P P E N D I X

" B "

ATTACHMENT A

Interim Status Document

I. GENERAL CONDITIONS

1. Identification and general responsibilities of operator.

United States Navy, hereinafter called the operator and/or owner, shall comply with the provisions of the California Health and Safety Code, including Chapter 6.5 of Division 20, and with the Minimum Standards for Management of Hazardous and Extremely Hazardous Wastes (Chapter 30, Division 4, Title 22 of the California Administrative Code). The following requirements set forth in Chapter 30, Division 4, Title 22, California Administrative Code, should be particularly noted:

- (a) The owner or operator shall ensure that the operation of the facility will not imperil public health and safety, wildlife, domestic livestock, or the environment.
- (b) The owner or operator shall allow the California State Department of Health Services or the local health agency to inspect the facility, take samples of wastes, and inspect pertinent records.
- (c) The owner or operator shall maintain the qualified personnel and the equipment necessary to provide for the safe operation of the facility.
- (d) The owner or operator shall notify the California State Department of Health Services of a proposed change in ownership of the facility, in the method of operation of the facility, or of proposed closure of the facility 30 days prior to such event.
- (e) The operator shall report to the California State Department of Health Services, within 24 hours after occurrence, all accidents involving hazardous wastes which resulted in, or could have resulted in, a hazard to public health and safety, wildlife, domestic livestock, or to the environment.

2. Records.

The owner or operator shall file this Interim Status Document at the facility and at his place of business.

3. Operation plan.

Unless he has already done so, the owner or operator shall submit to the California State Department of Health Services within six months of the effective date of this document, an operation plan in accordance with Section 66376, Title 22 of the California Administrative Code.

4. Prohibited acts.

The owner or operator shall not do any of the following acts:

- (a) Treat, store, or dispose of hazardous wastes which are not identified.
- (b) Employ processes not described in the application.
- (c) Make substantial modifications or additions to the facility.

5. Limitation.

The owner or operator shall comply with the conditions of this document and with any new or modified conditions which the California State Department of Health Services deems necessary to protect public health or the environment. A new interim status condition or a modification of an existing interim status condition shall become effective on the date that written notice of such change is received by the owner or operator.

NOTE: Unless explicitly stated otherwise, all cross references to items in this Interim Status Document shall refer only to items occurring within the same Part. All Parts are identified by Roman numerals. The items set forth in each Part shall apply to the owner, operator, and/or facility in addition to the items set forth in any preceding and/or following Part of this document.

II. SPECIAL CONDITIONS

1. Storage in tanks.

- (a) Each hazardous waste storage tank situated above ground shall have a spill confinement structure (e.g., dike or trough) capable of holding the entire contents of the tank plus sufficient freeboard.
- (b) Hazardous waste storage tanks shall be constructed of materials which are compatible with the wastes to be contained or shall be protected by liners which are compatible with those wastes.
- (c) Prior to use, hazardous waste storage tanks and their appurtenances shall be certified by an engineer registered in California to be structurally sound and of adequate construction for the intended use.
- (d) Each hazardous waste storage tank and storage area shall be individually marked with the internationally recognized hazard identification system placards developed by the National Fire Prevention Association (NFPA).
- (e) Valves on hazardous waste storage tanks shall be kept locked when the facility is unattended.

2. Storage in containers.

- (a) Containers used for storing hazardous waste shall be in a condition such that the containers can be safely transported, handled or moved.
- (b) Areas used for storing containers of hazardous waste shall be widely separated, or physical barriers shall be provided to ensure that commingling of incompatible hazardous wastes cannot occur if a container on one pad ruptures.
- (c) A label shall be maintained on all containers in which hazardous wastes are stored for 90 days or more and records for the storage of all hazardous wastes shall be maintained pursuant to Section 66545, Title 22 of the California Administrative Code. Labels shall include the following information:
 - (1) Composition and physical state of the waste;
 - (2) Special safety recommendations and precautions for handling the waste;

- (3) Statement or statements which call attention to the particular hazardous properties of the waste;
 - (4) Amount of waste and name and address of the person producing the waste; and
 - (5) Date of acceptance at the storage facility.
- (d) Empty containers contaminated with hazardous materials shall be stored, handled, processed and disposed of as hazardous wastes.

3. Wastes prohibited.

Hazardous wastes described below shall not be handled at the facility:

- (a) Extremely hazardous wastes as defined in Sections 66064 and 66685, Title 22, California Administrative Code, unless specifically approved by a written permit from the California State Department of Health Services.
- (b) Flammable wastes and water-reactive wastes as defined in Sections 66072 and 66236, respectively, Title 22 of the California Administrative Code.
- (c) Wastes such as organic solvents or sludges containing volatile, toxic substances in excess of 10 percent by weight.
- (d) Burning wastes.

4. Management of incompatible wastes.

Each of the following categories of incompatible hazardous wastes shall be adequately separated during all handling, storage, and disposal operations:

- (a) Alkalies and cyanides.
- (b) Acids.

5. Nonpotable water supply.

If an onsite water supply is used for controlling dust and fires, cleaning equipment or other purposes, and does not meet all health standards for drinking water, all faucets or taps connected to that supply shall be clearly labeled in English, "Polluted-Not Safe For Human Use", and Spanish, "Peligro, Contaminacion, No Usar".

6. Public water supply.

If a public water supply is used at the facility, the service connection shall be protected from contamination as specified in Section 7604, Title 17 of the California Administrative Code.

7. Fencing.

The perimeter of the hazardous waste area of the facility shall be secured by a well-maintained fence, capable of preventing the intrusion of livestock and of discouraging entry by unauthorized persons. If the entire facility is appropriately fenced, if the general public does not have access to the hazardous waste area, and if the hazardous waste area is posted with warning signs as described elsewhere in this document, no additional fence shall be required around the hazardous area unless the absence of such a fence could result in a hazard to health, safety, or the environment.

8. Operation at night.

When the facility is operated during hours of darkness, the operator shall provide sufficient lighting to ensure safe, effective management of hazardous wastes.

9. Warning signs.

Signs indicating that the facility, or the hazardous waste area of the facility, contains hazardous waste shall be placed on the perimeter fence at locations where it is anticipated that hunters and other trespassers may enter the facility such as at trails, major drainages, and ridges. Wording of the signs shall be in English, "Caution-Hazardous Waste Area-Unauthorized Persons Keep Out", and Spanish, "Cuidado! Zona de Residuos Peligrosos. Prohibida la Entrada a Personas No Autorizadas".

10. Telephone or radio communications.

A telephone or radio for summoning aid in the event of an emergency shall be in workable condition and available for immediate use by personnel working in the hazardous waste area of the facility.

11. Safety showers.

The owner or operator shall provide to personnel working in the hazardous waste area of the facility adequate numbers of safety showers. The safety showers shall be in workable condition and available for immediate use.

12. Eyewashes.

The owner or operator shall provide to personnel working in the hazardous waste area of the facility adequate numbers of eyewashes. The eyewashes shall be in workable condition and available for immediate use.

13. First-aid kit.

The owner or operator shall provide to personnel working in the hazardous waste area of the facility adequate numbers of industrial-type first-aid kits. The kits shall be maintained and available for immediate use.

14. Protective clothing.

The owner or operator shall provide to personnel working in the hazardous waste area of the facility adequate numbers of the following National Institute of Occupational Safety and Health (NIOSH) approved equipment if appropriate:

- (a) Protective head gear and face masks.
- (b) Chemically resistant apparel and gloves.
- (c) Self-contained breathing apparatus and respirators with the approved cartridges.

15. Warning alarm system.

If at any time there is a sole employee on the premises, the employee shall have immediate access to an alarm or other communication device capable of summoning external emergency assistance.

III. SAFETY, EQUIPMENT, AND EMERGENCY RESPONSE

1. Identification number.

The facility owner or operator shall have an identification number issued by the U.S. Environmental Protection Agency (EPA).

2. Notices.

(a) If the owner or operator has arranged to receive hazardous waste from a foreign source, he shall notify the California State Department of Health Services in writing at least four weeks in advance of the date that the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source is not required.

(b) Before transferring ownership or operation of the facility during its operating life or during the post-closure care period, the owner or operator shall notify the new owner or operator in writing of the conditions of this document.

3. Analysis of waste.

(a) (1) Before the owner or operator treats, stores, or disposes of a particular type of hazardous waste for the first time, he shall obtain a detailed chemical and physical analysis of a representative sample of the waste. At a minimum, this analysis shall contain all the information which must be known to treat, store, or dispose of the waste in accordance with the conditions of this document.

(2) The analysis may include data developed for other purposes, and existing published or documented data on the hazardous waste or on waste generated from similar processes.

(3) The analysis shall be repeated as necessary to ensure that it is accurate and up-to-date. At a minimum, the analysis must be repeated when the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous waste has changed.

(b) Upon the effective date of this document, the owner or operator shall follow a written waste analysis plan which describes the procedures which will be used to comply with Item 3 (a). The plan shall be subject to approval by the California State Department of Health Services and shall be kept at the facility. At a minimum, the plan shall specify:

- (1) The parameters for which each hazardous waste will be analyzed and the rationale for the selection of these parameters;
- (2) The test methods which will be used to test for these parameters;
- (3) The sampling method which will be used to obtain a representative sample of the waste to be analyzed. A representative sample may be obtained using either:
 - (i) One of the sampling methods described in Appendix I, Part 261, Title 40, Code of Federal Regulations; or
 - (ii) An equivalent sampling method approved by the California State Department of Health Services.
- (4) The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up-to-date;
- (5) Where applicable, the methods which will be used to meet any additional waste analysis requirements for specific waste management methods as specified elsewhere in this document.

4. Security.

- (a) The owner or operator shall prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of the facility.
- (b) The facility shall have:
 - (1) A 24-hour surveillance system which continuously monitors and controls entry onto the active portion of the facility; or
 - (2) (i) An artificial or natural barrier which completely surrounds the active portion of the facility and which would prevent unauthorized entry; and
 - (ii) A means to control entry, at all times, through the gates or other entrances to the active portion of the facility (e.g., an attendant, television monitors, locked entrance, or controlled roadway access to the facility).

- (c) Upon the effective date of this document, a sign with the legend, "Caution - Hazardous Waste Area - Unauthorized Persons Keep Out," shall be posted at each entrance to the active portion of the facility, and at other locations, in sufficient numbers to be seen from any approach to this active portion. The legend shall be written in English and Spanish, "Cuidado! Zona De Residuos Peligrosos. Prohibida La Entrada A Personas No Autorizadas", and shall be legible from a distance of at least 25 feet. Existing signs with a legend other than "Caution - Hazardous Waste Area - Unauthorized Persons Keep Out" may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion, and that entry onto the active portion can be dangerous.
5. Inspections.
- (a) The owner or operator shall inspect the facility for malfunctions and deterioration, operator errors, and discharges which may be causing--or may lead to--release of hazardous waste constituents to the environment or a threat to human health. The owner or operator shall conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.
- (b) (1) The owner or operator shall follow a written schedule for inspecting all monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards.
- (2) The schedule shall be subject to approval by the California State Department of Health Services.
- (3) He shall keep this schedule at the facility.
- (4) The schedule shall identify the types of problems (e.g., malfunctions or deterioration) which are to be looked for during the inspection (e.g., inoperative sump pump, leaking fitting, eroding dike, etc.).
- (5) The frequency of inspection may vary for the items on the schedule. However, it shall be based on the rate of

possible deterioration of the equipment and the probability of an environmental or human health incident if the deterioration or malfunction or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas shall be inspected daily when in use. At a minimum, the inspection schedule shall include the items and frequencies called for elsewhere in this document.

- (c) The owner or operator shall remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which shall be subject to approval by the California State Department of Health Services and which shall ensure that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action shall be taken immediately.
- (d) The owner or operator shall record inspections in an inspection log or summary. He shall keep these records for at least three years from the date of inspection. At a minimum, these records shall include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

6. Personnel training.

- (a) (1) Facility personnel shall successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the conditions of this document. The owner or operator shall ensure that this program includes all the elements described under Item 6 (a)(3).
- (2) This program shall be directed by a person trained in hazardous waste management procedures, and shall include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed.
- (3) At a minimum, the training program shall be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including where applicable:
 - (i) Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;
 - (ii) Key parameters for automatic waste feed cut-off systems;

- (iii) Communications or alarm systems;
 - (iv) Response to fires or explosions;
 - (v) Response to ground-water contamination incidents;
and
 - (vi) Shutdown of operations.
- (b) Facility personnel shall have successfully completed the program required in Item 6 (a) by the effective date of this document or within six months after the date of their employment or assignment to a facility, or to a new position at a facility, whichever is later. Employees hired after the effective date of this document shall not work in unsupervised positions until they have completed the training requirements of Item 6 (a).
- (c) Facility personnel shall take part in an annual review of the initial training required in Item 6 (a).
- (d) The owner or operator shall maintain the following documents and records at the facility:
- (1) The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job.
 - (2) A written job description for each position listed under Item 6 (d)(1). This description may be consistent in its degree of specificity with descriptions for other similar positions in the same company location or bargaining unit, but shall include the requisite skill, education, or other qualifications, and duties of facility personnel assigned to each position;
 - (3) A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed under Item 6 (d) (1); and
 - (4) Records that document that the training or job experience required under Items 6 (a), (b), and (c) has been given to, and completed by, facility personnel.
- (e) Training records on current personnel as required in Item 6 (d) 4 shall be kept until closure of the facility. Training records on former employees shall be kept for at least three years from the date the employee last worked at the facility. Personnel training records may accompany personnel transferred within the same company.

7. Ignitable, reactive, or incompatible wastes.

- (a) The owner or operator shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste shall be separated and protected from sources of ignition or reaction. While ignitable or reactive waste is being handled, the owner or operator shall confine smoking and open flame to specially designated locations. "No Smoking" signs shall be conspicuously placed wherever there is a hazard from ignitable or reactive waste.
- (b) The treatment, storage, or disposal of ignitable or reactive waste, and the mixture or commingling of incompatible wastes, or incompatible wastes and materials shall be conducted so that it does not:
- (1) Generate extreme heat or pressure, fire or explosion, or violent reaction;
 - (2) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health;
 - (3) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
 - (4) Damage the structural integrity of the device or facility containing the waste; or
 - (5) Through other like means threaten human health or the environment.

8. Maintenance and operation of facility.

The facility shall be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

9. Testing and maintenance of equipment.

All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, shall be tested and maintained as necessary to ensure its proper operation in time of emergency.

10. Required aisle space.

The owner or operator shall maintain aisle space as needed to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency.

11. Arrangements with local authorities.

(a) Upon the effective date of this document, the owner or operator shall attempt to make the following arrangements, as appropriate for the type of waste handled at the facility and the potential need for the services of these organizations:

- (1) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes;
- (2) Where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority;
- (3) Agreements with State emergency response teams, emergency response contractors, and equipment suppliers; and
- (4) Arrangements to familiarize local hospitals with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

(b) Where State or local authorities decline to enter into such arrangements, the owner or operator shall document the refusal in the operating record.

12. Purpose and implementation of contingency plan.

(a) Upon the effective date of this document, the owner or operator shall have a contingency plan for the facility. The contingency plan shall be subject to approval by the California State Department of Health Services and shall be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.

- (b) The provisions of the plan shall be carried out immediately wherever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

13. Content of contingency plan.

- (a) The contingency plan shall describe the actions facility personnel shall take to comply with Items 12 and 17 in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility.
- (b) If the owner or operator has already prepared some other emergency or contingency plan, he need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the conditions of this document.
- (c) The plan shall describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services pursuant to Item 13.
- (d) The plan shall list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator (see Item 18), and this list shall be kept up to date. Where more than one person is listed, one shall be named as primary emergency coordinator and others shall be listed in the order in which they will assume responsibility as alternates.
- (e) The plan shall include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required. This list shall be kept up to date. In addition, the plan shall include the location and a physical description of each item on the list, and a brief outline of its capabilities.
- (f) The plan shall include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan shall describe signal(s) to be used to begin evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous wastes or fires).

14. Copies of contingency plan.

A copy of the contingency plan and all revisions to the plan shall be:

- (a) Maintained at the facility; and
- (b) Submitted to the California State Department of Health Services and to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services.

15. Amendment of contingency plan.

The contingency plan shall be reviewed, and immediately amended, if necessary, whenever:

- (a) Applicable regulations are revised;
- (b) The plan fails in an emergency;
- (c) The list of emergency coordinators changes; or
- (d) The list of emergency equipment changes.

16. Emergency coordinator.

At all times, there shall be at least one employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator shall be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person shall have the authority to commit the resources needed to carry out the contingency plan.

17. Emergency procedures.

- (a) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) shall:
 - (1) Immediately activate internal facility alarms or communication systems, where applicable, to notify all facility personnel;
 - (2) Immediately notify appropriate State or local agencies with designated response roles if their help is needed; and
 - (3) Notify the California State Department of Health Services by telephone or telegraph within 24 hours of occurrence.

- (b) Whenever there is a release, fire, or explosion, the emergency coordinator shall immediately identify the character, exact source, amount, and areal extent of any released materials. This may be done by observation or review of facility records or manifests and, if necessary, by chemical analysis.
- (c) Concurrently, the emergency coordinator shall assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment shall consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-offs from water or chemical agents used to control fire and heat-induced explosions).
- (d) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, the findings shall be reported as follows:
- (1) The emergency coordinator shall immediately notify either the government official designated as the on-scene coordinator for that geographical area (in the applicable regional contingency plan under Part 1510, Title 40, Code of Federal Regulations), or the National Response Center (using their 24-hour toll free number: 800/424-8802). The report shall include:
 - (i) Name and telephone number of reporter;
 - (ii) Name and address of facility;
 - (iii) Time and type of incident (e.g., release, fire);
 - (iv) Name and quantity of material(s) involved, to the extent known;
 - (v) The extent of injuries, if any; and
 - (vi) The possible hazards to human health, or the environment, outside the facility.
 - (2) If his assessment indicates that evacuation of local areas may be advisable, appropriate local authorities shall be notified immediately. The emergency coordinator shall be available to help appropriate officials decide whether local areas should be evacuated.
- (e) During an emergency the emergency coordinator shall take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous

waste at the facility. These measures shall include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.

- (f) If the facility stops operations in response to a fire, explosion or release, the emergency coordinator shall monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.
- (g) Immediately after an emergency, the emergency coordinator shall provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.
- (h) The emergency coordinator shall ensure that, in the affected area(s) of the facility:
 - (1) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and
 - (2) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.
- (i) The owner or operator shall notify the California State Department of Health Services and local authorities, that the facility is in compliance with Item 17 (h) before operations are resumed in the affected area(s) of the facility.
- (j) The owner or operator shall note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within 30 days after the incident, he shall submit a written report on the incident to the California State Department of Health Services. The report shall include:
 - (1) Name, address, and telephone number of the owner or operator;
 - (2) Name, address, and telephone number of the facility;
 - (3) Date, time, and type of incident (e.g., fire, explosion);
 - (4) Name and quantity of material(s) involved;
 - (5) The extent of injuries, if any;

- (6) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
- (7) Estimated quantity and disposition of recovered material that resulted from the incident.

IV. RECORDKEEPING

1. Operating record.

- (a) The owner or operator shall keep a written operating record at the facility.
- (b) The following information shall be recorded, as it becomes available, and maintained in the operating record until closure of the facility:
 - (1) A description and the quantity of each hazardous waste received, and the method(s) and date(s) of its treatment, storage, or disposal at the facility;
 - (2) The location of each hazardous waste within the facility and the quantity at each location. This information shall include cross-references to specific manifest document numbers, if the waste was accompanied by a manifest;
 - (3) Records and results of waste analyses and trial tests performed;
 - (4) Summary reports and details of all incidents that require implementing the contingency plan;
 - (5) Records and results of inspections (except these data need be kept only three years);
 - (6) Monitoring, testing or analytical data where required; and
 - (7) All closure cost estimates.

2. Availability, retention, and disposition of records.

- (a) All records including plans, required in this document shall be furnished upon request, and made available at all reasonable times for inspection, by any officer, employee, or representative of the California State Department of Health Services who is duly designated by the Director;
- (b) The retention period for all records required in this document is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the California State Department of Health Services;

- (c) A copy of records of waste disposal locations and quantities in Item 1 (b)(2) shall be submitted to the California State Department of Health Services and local land authority upon closure of the facility.

3. Annual report.

The owner or operator shall prepare and submit a single copy of an annual report to the California State Department of Health Services by March 1 of each year beginning March 1, 1982. The annual report shall cover facility activities during the previous calendar year and shall include the following information:

- (a) The EPA identification number, name, and address of the facility;
- (b) The calendar year covered by the report;
- (c) A description and the quantity of each hazardous waste the facility received during the year;
- (d) The method of treatment, storage, or disposal for each hazardous waste;
- (e) Monitoring data where required;
- (f) The most recent closure cost estimate;
- (g) The certification signed by the owner or operator of the facility or his authorized representative.

4. Additional reports.

In addition to submitting the annual report required in Item 3, the owner or operator shall also report to the California State Department of Health Services:

- (a) Releases, fires, and explosions;
- (b) Ground-water contamination and monitoring data;
- (c) Facility closure.

V. CLOSURE

1. Closure.

The owner or operator shall close his facility in a manner that: (a) minimizes the need for further maintenance, and (b) controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous waste constituents, leachate, contaminated rainfall, or waste decomposition products to the ground water, or surface waters, or to the atmosphere.

2. Closure plan and amendment of plan.

- (a) The owner or operator shall have a written closure plan. This plan shall be subject to approval by the California Regional Water Quality Control Board and shall be kept at the facility. This plan shall identify the steps necessary to close the facility completely at any point during its intended life and at the end of its intended life. The closure plan shall include, at least:
- (1) A description of how and when the facility will be partially closed, if applicable, and ultimately closed. The description shall identify the maximum extent of the operation which will be unclosed during the life of the facility, and how Item 1 and other applicable conditions of this document will be met;
 - (2) An estimate of the maximum inventory of wastes in storage or in treatment at any given time during the life of the facility;
 - (3) A description of the steps needed to decontaminate facility equipment during closure; and
 - (4) A schedule for final closure which shall include, as a minimum, the anticipated date when wastes will no longer be received, the date when completion of final closure is anticipated, and intervening milestone dates which will allow tracking of the progress of closure. (For example, the expected date for completing treatment or disposal of waste inventory shall be included, as must the planned date for removing any residual wastes from storage facilities and treatment processes.)

- (b) The owner or operator may amend his closure plan at any time during the active life of the facility. (The active life of the facility is that period during which wastes are periodically received.) The owner or operator shall amend his plan any time changes in operating plans or facility design affect the closure plan.
 - (c) The owner or operator shall submit his closure plan to the California Regional Water Quality Control Board at least 180 days before the date he expects to begin closure. The California Regional Water Quality Control Board will modify, approve, or disapprove the plan within 90 days of receipt and after providing the owner or operator and the affected public (through a newspaper notice) the opportunity to submit written comments.
3. Time allowed for closure.
- (a) Within 90 days after receiving the final volume of hazardous wastes, the owner or operator shall treat all hazardous wastes in storage or in treatment, or remove them from the site, or dispose of them on-site, in accordance with the approved closure plan.
 - (b) The owner or operator shall complete closure activities in accordance with the approved closure plan and within six months after receiving the final volume of wastes. The California Regional Water Quality Control Board may approve a longer closure period under Item 2 (c) if the owner or operator can demonstrate that: (1) the required or planned closure activities will, of necessity, take him longer than six months to complete, and (2) that he has taken all steps to eliminate any significant threat to human health and the environment from the unclosed but inactive facility.
4. Disposal or decontamination of equipment.

When closure is completed, all facility equipment and structures shall have been properly disposed of, or decontaminated by removing all hazardous waste and residues.

5. Certification of closure.

When closure is completed, the owner or operator shall submit to the California Regional Water Quality Control Board certification both by the owner or operator and by an independent registered professional engineer that the facility has been closed in accordance with the specifications in the approved closure plan.

VI. FINANCIAL RESPONSIBILITY

1. Cost estimate for facility closure.

- (a) The owner or operator shall have a written estimate of the cost of closing the facility in accordance with the applicable closure requirements of this document. The owner or operator shall keep this estimate, and all subsequent estimates, at the facility. The estimate shall equal the cost of closure at the point in the facility's operating life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan.
- (b) The owner or operator shall prepare a new closure cost estimate whenever a change in the closure plan affects the cost of closure.
- (c) On each anniversary of the effective date of this document, the owner or operator shall adjust the latest closure cost estimate using an inflation factor derived from the annual Implicit Price Deflator for Gross National Product as published by the U.S. Department of Commerce in its *Survey of Current Business*. The inflation factor shall be calculated by dividing the latest published annual Deflator by the Deflator for the previous year. The result is the inflation factor. The adjusted closure cost estimate shall equal the latest closure cost estimate (see Item 1(b)) times the inflation factor.

VII. TANKS

1. Operation.

- (a) Treatment or storage of hazardous waste in tanks shall comply with Item 7 (b), Part III of this document.
- (b) Hazardous waste or treatment reagents shall not be placed in a tank if they could cause the tank or its inner liner to rupture, leak, corrode, or otherwise fail before the end of its intended life.
- (c) Uncovered tanks shall be operated to ensure at least 60 centimeters (2 feet) of freeboard, or the tank shall be equipped with a containment structure (e.g., dike or trench), a drainage control system, or a diversion structure (e.g., standby tank) with a capacity that equals or exceeds the volume of the top 60 centimeters (2 feet) of the tank.
- (d) If hazardous waste is continuously fed into a tank, the tank shall be equipped with a means to stop this inflow (e.g., a waste feed-cutoff system or by-pass system to a stand-by tank).

2. Analysis of waste and trial tests.

(a) If a tank is to be used for:

- (1) Chemically treating or storing a hazardous waste which is substantially different from waste previously treated or stored in that tank; or
- (2) Chemically treating hazardous waste with a substantially different process than any previously used in that tank; the owner or operator shall before treating or storing the different waste or using the different process:
 - (i) Conduct waste analyses and trial treatment or storage tests (e.g., bench scale or pilot plant scale tests) to document that this proposed treatment or storage will comply with Items 1(a) and (b); or
 - (ii) Obtain written information on similar storage or treatment of similar waste under similar operating conditions to document that this proposed treatment or storage will comply with Items 1 (a) and (b).

3. Inspections.

(a) The owner or operator of a tank must inspect, if applicable:

- (1) Discharge control equipment (e.g., waste feed cut-off systems, and drainage systems), at least once each operating day, to ensure that it is in good working order;
- (2) Data gathered from monitoring equipment (e.g., pressure and temperature gauges), at least once each operating day, to ensure that the tank is being operated according to its design;
- (3) The level of waste in the tank, at least once each operating day, to ensure compliance with Item 1 (c);
- (4) The construction materials of the tank, at least weekly, to detect corrosion or leaking of fixtures or seams; and
- (5) The construction materials of, and the area immediately surrounding, discharge confinement structures (e.g., dikes), at least weekly, to detect erosion or obvious signs of leakage (e.g., wet spots or dead vegetation).

4. Closure.

At closure, all hazardous waste and hazardous waste residues shall be removed from tanks, discharge control equipment, and discharge confinement structures.

5. Ignitable or reactive waste.

(a) Ignitable or reactive waste shall not be placed in a tank, unless:

- (1) The waste is treated, rendered, or mixed before or immediately after placement in the tank so that the resulting waste, mixture, or dissolution of material is no longer ignitable or reactive and Item 7 (b), Part III of this document is complied with; or
- (2) The waste is stored or treated in such a way that it is protected from any material or conditions which may cause the waste to ignite or react; or
- (3) The tank is used solely for emergencies.

(b) If the owner or operator treats or stores ignitable or reactive waste in covered tanks, he shall comply with the National Fire Protection Association's (NFPA's) buffer zone requirements for tanks, contained in Tables 2-1 through 2-6 of the "Flammable and Combustible Code--1977".

6. Incompatible Wastes.

- (a) Incompatible wastes, or incompatible wastes and materials, shall not be placed in the same tank, unless Item 7 (b), Part III of this document is complied with.
- (b) Hazardous waste shall not be placed in an unwashed tank which previously held an incompatible waste or material.

VIII. WASTE PILES

1. Wind dispersal.

The owner or operator of a pile containing hazardous waste which wind could disperse shall cover or otherwise manage the pile so that such dispersal is prevented.

2. Analysis of waste.

The owner or operator shall analyze a representative sample of waste from each incoming movement before adding the waste to any existing pile, unless the only wastes the facility receives which are amenable to piling are compatible with each other, or the waste received is compatible with the waste in the pile to which it is to be added. The analysis conducted shall be capable of differentiating between the types of hazardous waste the owner or operator places in piles so that mixing of incompatible waste does not occur. The analysis shall include a visual comparison of color and texture.

3. Leachate and runoff.

If leachate or run-off from a pile is a hazardous waste, then either:

- (a) The pile shall be placed on an impermeable base that is compatible with the waste under the conditions of treatment or storage, run-on shall be diverted away from the pile, and any leachate and run-off from the pile shall be collected and managed as a hazardous waste (effective November 19, 1981); or
- (b) (1) The pile shall be protected from precipitation and run-on by some other means (effective November 19, 1981); and
- (2) No liquids or wastes containing free liquids shall be placed in the pile.

4. Ignitable or reactive waste.

- (a) Ignitable or reactive wastes shall not be placed in a pile, unless:
 - (1) Addition of the waste to an existing pile results in the waste or mixture no longer meeting the definition of ignitable or reactive waste, and complies with Item 7 (b), Part III of this document; or

- (2) The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.

5. Incompatible wastes.

- (a) Incompatible wastes, or incompatible wastes and materials shall not be placed in the same pile, unless the requirements of Item 7 (b), Part III of this document are met.
- (b) A pile of hazardous waste that is incompatible with any waste or other material stored nearby in other containers, piles, open tanks, or surface impoundments shall be separated from the other materials, or protected from them by means of a dike, berm, wall, or other device.
- (c) Hazardous waste shall not be piled on the same area where incompatible wastes or materials were previously piled, unless that area has been decontaminated sufficiently to ensure compliance with Item 7 (b), Part III of this document.

IX. STORAGE OF CONTAINERS**1. Condition.**

If a container holding hazardous waste is not in good condition, or if it begins to leak, the owner or operator shall transfer the hazardous waste from this container to a container that is in good condition, or manage the waste in some other way that complies with the conditions of this document.

2. Compatibility of waste.

The owner or operator shall use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

3. Management.

(a) A container holding hazardous waste shall remain closed during storage, except when it is necessary to add or remove waste.

(b) A container holding hazardous waste shall not be opened, handled, or stored in a manner which might rupture the container or cause it to leak.

4. Inspections.

The owner or operator shall inspect areas where containers are stored, at least weekly, looking for leaks and for deterioration caused by corrosion or other factors.

5. Ignitable or reactive waste.

Containers holding ignitable or reactive waste shall be situated at least 15 meters (50 feet) from the property line of the facility.

6. Incompatible wastes.

(a) Incompatible wastes, or incompatible wastes and materials, shall not be placed in the same container, unless the requirements of Item 7 (b), Part III of this document are met.

(b) Hazardous waste shall not be placed in an unwashed container that previously held an incompatible waste or material unless the requirements of Item 7 (b), Part III of this document are met.

- (c) A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers, piles, open tanks, or surface impoundments shall be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.