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HAZARDOUS WASTE
PROGRAM

October 6, 1994

Ms. Stephanie Kruse
State of New Mexico, Environment Department
Hazardous & Radioactive Materials Bureau
525 Camino De Los Marquez
Santa Fe, New Mexico 87502

CERTIFIED MAIL
P 555 298 767

re: Philips Semiconductors, NMD000709782, RCRA Permit Modification

Dear Ms. Kruse:

Philips Semiconductors is submitting the enclosed draft permit modification and revised Part A for your review. As requested, to denote the modifications, those parts of the permit that are being changed have been lined through. The replacement language appears in bold face immediately following such. The requested changes are considered to be Class 1 Modifications based on 40 CFR 270.42. Should you have any questions, please contact me at (505) 822-7634.

Respectfully yours,

Zeke Sherman
Environmental Engineer

cc: J. Cochran

file: PERMCOV.DOC

PHILIPS SEMICONDUCTORS

OCT 1994
RECEIVED
HAZARDOUS WASTE
PROGRAM

STATE RCRA PERMIT MODIFICATION

EPA ID NO. - NMD000709782

September 30, 1994

Philips Semiconductors
9201 Pan American Freeway NE
Albuquerque, New Mexico 87113

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MODULE I - STANDARD CONDITIONS

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. Compliance with this permit constitutes compliance, for purposes of enforcement, with the New Mexico Hazardous Waste Act, §74-4-1 et seq., NMSA 1978. Issuance of this permit does not convey 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 §74-4-1 et seq., NMSA 1978, or any other law providing for protection of public health or the environment.

B. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause as specified in HWMR-2, Section 302.M., N., and O. 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.

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.

D. Duties and Responsibilities.

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 the New Mexico Hazardous Waste Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application.

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 before this permit expires.

3. Permit Expiration. 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 and through no fault of the Permittee the ~~Director~~ **Secretary of the NM Environment Department (the Secretary)** has not issued a new permit.

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.

5. Duty to Mitigate. The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

6. Proper Operation and Maintenance. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and 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 include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facility or similar systems only when necessary to achieve compliance with the conditions of this permit.

7. Duty to Provide Information. The Permittee shall furnish to the ~~Director~~ **Secretary**, within a reasonable time, any relevant information which the ~~Director~~ **Secretary** 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 ~~Director~~ **Secretary**, upon request, copies of records required to be kept by this permit.

8. Inspection and Entry. The Permittee shall allow the ~~Director~~ **Secretary**, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:

   (a) Enter at reasonable times upon the Permittee's premises where a regulated activity is located or conducted, or where records must be kept under the conditions of this permit;

   (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

   (c) Inspect at reasonable times any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

   (d) Sample or monitor, at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the New Mexico Hazardous Waste Act, any substances or parameters at any location.

9. Monitoring and Records.

(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 an accepted and appropriate method such as described in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, ~~1982~~ **1986**, as revised, or equivalent. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, ~~1982~~ **1986**, as revised; Standard Methods for the Examination of Water and Waste Water, Fifteenth Edition, 1980 and 1981 Supplement, or current edition; or an equivalent method as specified in Permit Attachment A (Section C.2, Waste Analysis Plan).

(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, 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 or record. These periods may be extended by request of the ~~Director~~ **Secretary** at any time and are automatically extended during the course of any unresolved enforcement action regarding this facility.

(c) 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.

10. Reporting Planned Changes. The Permittee shall give notice to the ~~Director~~ **Secretary** as soon as possible of any planned physical alterations or additions to the permitted facility.

11. Anticipated Noncompliance. The Permittee shall give advance notice to the ~~Director~~ **Secretary** of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

12. Transfer of Permits. This permit may be transferred to a new owner or operator only if it is modified or revoked and reissued pursuant to HWMR-2, Sections 302.M.2.b, or 302.0.4. 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 HWMR-2, Sections 206.A., B., D., 301, and 302.

13. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in this permit shall be submitted as follows (See Permit Attachment B):

    (a) Notification of compliance with the manifest requirements of Permit Attachment B shall be submitted no later than 14 days following the initial shipment of hazardous waste requiring such certification; and

    (b) Certification of the waste minimization program required by Permit Attachment B shall be submitted as requested by the ~~Director~~ **Secretary** or an required by the appropriate Act and/or Regulation.

14. Twenty-Four Hour Reporting. The Permittee shall report to the ~~Director~~ **Secretary** any noncompliance with the permit 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. This report shall include the following:

    (a) Information concerning the release of any hazardous waste which may endanger public drinking water supplies.

    (b) Information concerning the release or discharge of any hazardous waste, or of a fire or explosion at the facility, which could threaten the environment or human health outside the facility. 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 hazard 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.

(c) The 24-hour report shall be made by calling (505) 827-2929, or (505) 827-9329 (24-hour emergency line).

A written submission shall also be provided within five (5) 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 periods 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 Permittee need not comply with the five day written notice requirement if the ~~Director~~ **Secretary** waives the requirement and the Permittee submits a written report within fifteen (15) days of the time the Permittee becomes aware of the circumstances. The written report shall be submitted by certified mail to:

~~EID Director~~ **Secretary, NM Environment Department**
~~P.O. Box 968~~ **P. O. Box 26110**
Santa Fe, New Mexico ~~87504-0968~~ **87502**

15. Other Noncompliance. The Permittee shall report all other instances of noncompliance not otherwise required to be reported above, at the time monitoring reports, as required by this permit, are submitted. The reports shall contain the information listed in Permit Condition I.D.14.

16. Other Information. Whenever the Permittee becomes aware that he failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the ~~Director~~ **Secretary**, the Permittee shall promptly submit such facts or information.

E. Signatory Requirement. All reports or other information requested by the ~~Director~~ **Secretary**, shall be signed and certified as required by HWMR-2, Section 302.B.

F. Confidential Information. The Permittee may claim confidential any information required to be submitted by this permit in accordance with HWMR-2, Section 302.Q.

G. Documents to be Maintained at Facility Site. The Permittee shall maintain at the facility, until closure is completed and certified by an independent registered professional engineer, the following documents and amendments, revisions and modifications to these documents:

(1) Waste analysis plan required by HWMR-2, Section 206.B.3. and this permit;

(2) Personnel training documents and records required by HWMR-2, Section 206.B.6. and this permit;

(3) Contingency plan required by HWMR-2, Section 206.B.10. and this permit;

(4) Closure plan required by HWMR-2, Section 206.D.1.c. and this permit;

(5) Cost estimate for facility closure required by HWMR-2, Section 206.D.3.e(1) and this permit;

(6) Operating record required by HWMR-2, Section 203.C.2.c and this permit; and

(7) Inspection schedules required by HWMR-2, Section 206.B.5.b and this permit.

MODULE II - GENERAL FACILITY CONDITIONS

A. Design and Operation of Facility. The Permittee shall maintain and operate the facility to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

B. General Waste Analysis. The Permittee shall follow the procedures described in the waste analysis plan contained in Permit Attachment A.

The Permittee shall verify its waste analysis as part of its quality assurance program. The quality assurance program shall be in accordance with current accepted practices such as specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, ~~1982~~ **1986**, as revised, or equivalent methods approved by the ~~Director~~ **Secretary**; and at a minimum ensure that the Permittee maintains proper functional instruments, uses approved sampling and analytical methods, verifies the validity of sampling and analytical procedures, and performs correct calculations.

C. Security. The Permittee shall comply with the security provisions of HWMR-2, Section 206.B.4.b and by maintaining the electronic surveillance devices, barriers, and warning signs (in English and Spanish) described in Permit Attachment C (Section F.2.).

D. General Inspection Requirements. The Permittee shall follow the inspection schedules contained in Permit Attachment C (Tables F.1., F.2., and F.4). The Permittee shall remedy any deterioration or malfunction discovered by an inspection as required by HWMR-2, Section 206.B.5.d. Records of inspection shall be kept as required by HWMR-2, Section 206.B.5.e.

E. Personnel Training. The Permittee shall conduct personnel training as required by HWMR-2, Section 206.B.6. This training program shall generally follow the attached manuals, Permit Attachment D. The Permittee shall maintain training documents and records as required by HWMR-2, Sections 206.B.6.d. and e. The training manuals shall be updated, whenever necessary, so as to remain current and accurate.

F. General Requirements for Ignitable, Reactive, or Incompatible Waste. The Permittee shall comply with the requirements of HWMR-2, Section 206.B.7.a.

G. Preparedness and Prevention.

1. Required Equipment. At a minimum, the Permittee shall equip the facility with the equipment set forth in the contingency plan, Permit Attachment E, as required by HWMR-2, Section 206.B.9.c.

2. Testing and Maintenance of Equipment. The Permittee shall test and maintain the equipment specified in the previous permit condition as necessary to assure its proper operation in time of emergency.

3. Access to Communications or Alarm System. The Permittee shall maintain access to the communications or alarm system, as required by HWMR-2, Sections 206.B.9.e.and f.

4. Required Aisle Space. At a minimum, the Permittee shall maintain aisle space as required by HWMR-2, Section 206.B.9.g.

5. Arrangements with Local Authorities. The Permittee shall attempt to make arrangements with State and local authorities as required by HWMR-2, Section 206.B.9.h. 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.

H. Contingency Plan.

1. Implementation of Plan. The Permittee shall immediately carry out the provisions of the contingency plan, Permit Attachment E, and follow the emergency procedures described by HWMR-2, Section 206.B.10.m. whenever there is a fire, explosion, or release of hazardous waste or constituents which threatens or could threaten human health or the environment.

2. Copies of Plan. The Permittee shall comply with the requirements of HWMR-2, Section 206.B.10.j.

3. Amendments to Plan. The Permittee shall review and immediately amend, if necessary, the contingency plan, as required by HWMR-2, Section 206.B.10.k.

4. Emergency Coordinator. The Permittee shall comply with the requirements of HWMR-2, Section 206.B.10.1., concerning the emergency coordinator.

I. Record keeping and Reporting.

1. Operating Record. The Permittee shall maintain a written operating record at the facility in accordance with HWMR-2, Sections 203.C.2.(1), (2), (3), (4), (5), and (6).

2. Biennial Report. The Permittee shall comply with the biennial report requirements of HWMR-2, Section 203.C.3.a.

J. Closure.

1. Performance Standard. The Permittee shall close the facility as required by HWMR-2, Section 206.D.2.b. and in accordance with the closure plan, Permit Attachment F.

2. Amendment to Closure Plan. The Permittee shall amend the closure plan in accordance with HWMR-2, Section 206.D.2.c. (2) whenever necessary.

3. Notification of Closure. The Permittee shall notify the ~~Director~~ **Secretary** at least 180 days prior to the date he expects to begin closure.

4. Time Allowed for Closure. After receiving the final volume of hazardous waste, the Permittee shall treat or remove from site all hazardous waste in accordance with the schedule specified in the closure plan, Permit Attachment F. After receiving the final volume of hazardous waste, the Permittee shall complete closure activities in accordance with the schedules specified in the closure plan, Permit Attachment F.

5. Disposal or Decontamination of Equipment. The Permittee shall decontaminate all facility equipment as required by HWMR-2, Section 206.D.2.e and the closure plan, Permit Attachment F.

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 HWMR-2, Section 206.D.2.f.

K. Cost Estimate for Facility Closure.

1. The Permittee must adjust the closure cost estimate for inflation within 30 days after each anniversary of the date on which the first closure cost estimate was prepared, as required by HWMR-2, Section 206.D.3.c. (2).

2. The Permittee must revise the closure cost estimate whenever there is a change in the facility's closure plan as required by HWMR-2, Section 206.D.3.c. (3).

3. The Permittee must keep at the facility the latest closure cost estimate as required by HWMR-2, Section 206.D.3.c. (4).

L. Financial Assurance for Facility Closure. The Permittee shall demonstrate continuous compliance with HWMR-2, Section 206.D.3.d., by providing documentation of financial assurance, as required by HWMR-2, Section 206.D.3.j., in at least the amount of the cost estimates required by permit condition II.K. Changes in the financial assurance mechanism must be approved by the ~~Director~~ **Secretary**.

M. Liability Requirements. The Permittee shall demonstrate continuous compliance with the requirements of HWMR-2, Section 206.D.3.h. and the documentation requirements of HWMR-2, Section 206.D.3.j., including the requirements to have and maintain liability coverage for sudden and accidental occurrences in the amount of at least $1 million per occurrence, with an annual aggregate of at least $2 million, exclusive of legal defense costs.

N. Incapacity of Owners or Operators, Guarantors, or Financial Institutions. The Permittee shall comply with HWMR-2, Section 206.D.3.i., whenever necessary.

MODULE III - STORAGE IN CONTAINERS

A. Waste Identification. The Permittee may store the following wastes in containers at the facility, subject to the terms of this permit:

EPA Hazardous Waste No.	Waste Description	Hazard Code
F003	The following spent non-halogenated solvents;propylene glycol methyl ether acetate, methanol, acetone, n-butyl acetate, xylene, ethyl lactate, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cycohexanone, methanol.and the still bottoms from the recovery of these solvents	(I)
D001	Ignitable Wastes	
D004	~~EP~~ **TCLP** Toxic Wastes - Arsenic	
D009	~~EP~~ **TCLP** Toxic Wastes - Mercury	

All storage of containers of liquid hazardous waste designated F003 and D001 shall be restricted to Flammable Storage #4 as indicated in Permit Attachment G (Section D.1) and shall be in previously unused or certified reconditioned DOT Specification 17E closed-head shipping containers, **or equivalent,** of a nominal capacity equal to 55 gallons. Storage of hazardous wastes containing no free liquids which are designated F003 and D001 shall be in previously unused or certified reconditioned DOT Specification 17H open-head shipping containers, **or equivalent,** of a nominal capacity equal to 55 gallons. **Solid waste may also be stored in cubic yard containers to minimize the use of 55-gallon containers.** The maximum inventory of 55 gallon containers in Flammable Storage #4 shall not exceed 36.

All storage of containers of hazardous waste designated D004 and D009 shall be restricted to Chemical Storage #2 as indicated in Permit Attachment G (Section D.1) and shall be in previously unused or certified reconditioned DOT Specification 17H open-head shipping containers, **or equivalent,** of a nominal capacity equal to 55 gallons. The maximum inventory of 55 gallon containers in Chemical Storage #2 shall not exceed 64.

UNIT INFORMATION SHEET

Unit:	**Chemical Storage #2 (CS2)**
Building:	**System Center**
Room:	**Chemical Storage #2**
Unit Description:	**Chemical storage #2 is a taped area within the Chemical Storage #2 room of the System Center and is used for container storage of hazardous waste.**
EPA Codes:	**D004, D009**
Waste Description:	**Solid waste contaminated with arsenic or mercury.**
Maximum Capacity:	**64 drums of 55-gallon capacity.**

UNIT INFORMATION SHEET

Unit:	**Flammable Storage #4 (FS4)**
Building:	**System Center**
Room:	**Flammable Storage #4**
Unit Description:	**Flammable storage #4 is a room within the System Center and is used for container storage of hazardous waste.**
EPA Codes:	**D001, F003**
Waste Description:	**Liquid waste solvent II and solid waste contaminated with waste solvent II.**
Maximum Capacity:	**36 drums of 55-gallon capacity.**
Secondary Containment Type:	**Coated concrete with drain to Tank #3.**

B. 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.

C. Compatibility of Waste with Containers. The Permittee shall assure that the ability of the container to contain any waste is not impaired as required by HWMR-2, Section 206.D.3.c

D. Management of Containers. The Permittee shall manage containers as required by HWMR-2, Section 206.D.3.c.

E. Containment. The Permittee shall maintain the containment system in accordance with the requirements of HWMR-2, Section 206.D.3.. as specified in the attached plans and specifications, Permit Attachment G.

F. Special Requirements for Ignitable or Reactive Waste. The Permittee shall not locate containers holding ignitable or reactive waste within 15 meters (50 feet) of the facility's property line.

G. Special Requirements for Incompatible Wastes.

1. The Permittee shall not place incompatible wastes or incompatible wastes and materials in the same container unless the requirements of HWMR-2, Section 206.B.7, have been complied with.

2. The Permittee shall not place hazardous waste in an unwashed container that previously held an incompatible waste or material.

3. The Permittee shall separate containers of incompatible wastes as indicated in Permit Attachment G (Section F.5).

MODULE IV - STORAGE IN TANKS

A. Waste Identification. The Permittee may store the following wastes in tanks at the facility, subject to the terms of this permit:

EPA Hazardous Waste No.	Waste Description	Hazard Code
F002	The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, chlorobenzene,1,1, 1-trichloroethane, dichloroethylene, 1, 1, 2-trichloro-1, 2, 2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane,1,1,2-trichloroethane, and the still bottoms from the recovery of these solvents	(T)
F003	The following spent non-halogenated solvents;propylene glycol methyl ether acetate, methanol, acetone, n-butyl acetate, xylene, ethyl lactate, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cycohexanone, methanol.and the still bottoms from the recovery of these solvents	(I)
D001	Ignitable Wastes	
D002	Corrosive Wastes	

All storage of hazardous waste designated F002, F003 and D001 shall be restricted to Tank #3 located in the lined concrete vault indicated in the permit application. The maximum volume of wastes in storage in Tank #3 shall not exceed 4700 gallons.

All storage of hazardous wastes designated D002 shall be restricted to Tank #4 and Tank #5 located in the lined concrete vaults indicated in the permit application. The maximum volume of wastes in storage in each tank shall not exceed 4700 gallons.

B. Design of Tanks. The Permittee shall maintain all tanks as required by HWMR-2, Section 206.D.5.a., as specified in Permit Attachment G. The Permittee shall maintain the minimum shell thickness specified below at all times to ensure sufficient shell strength.

UNIT INFORMATION SHEET

Unit:	**Tank #3**
Building:	**System Center**
Room:	**Wastewater Neutralization Area**
Unit Description:	**Tank #3 is a steel tank used for storage of liquid hazardous waste.**
EPA Codes:	**F002, F003, D001**
Waste Description:	**Liquid waste solvent I**
Maximum Capacity:	**5,000 gallons**
Secondary Containment Type:	**Coated concrete vault**

UNIT INFORMATION SHEET

Unit:	**Tank #4**
Building:	**System Center**
Room:	**Wastewater Neutralization Area**
Unit Description:	**Tank #4 is a fibergalss re-inforced plastic tank used for storage of liquid hazardous waste.**
EPA Codes:	**D002**
Waste Description:	**Liquid buffered oxide etch**
Maximum Capacity:	**5,000 gallons**
Secondary Containment Type:	**Coated concrete vault**

UNIT INFORMATION SHEET

Unit:	**Tank #5**
Building:	**System Center**
Room:	**Wastewater Neutralization Area**
Unit Description:	**Tank #5 is a fiberglass re-inforced plastic tank used for storage of liquid hazardous waste.**
EPA Codes:	**D002**
Waste Description:	**Liquid hydrofluoric acid**
Maximum Capacity:	**5,000 gallons**
Secondary Containment Type:	**Coated concrete vault**

Tank	Minimum Shell Thickness
Tank #3	0.125 inch (total shell thickness)
Tank #4	0.43 inch (total shell thickness)
Tank #5	0.43 inch (total shell thickness)

~~The Permittee must ensure that the thickness of the corrosion barrier veils in Tank #4 and Tank #5 do not decrease below a minimum of 0.118 inch.~~

In order to ensure that the minimum shell thickness is maintained, the Permittee must perform ultrasonic shell thickness testing on ~~each~~ Tank **#3** ~~storing hazardous waste~~ at least once every two years as specified in Permit Attachment C (Section F.2.b. (2)) and as a condition of this permit.

C. General Operating Requirements.

1. The Permittee shall protect tanks from accelerated corrosion, erosion or abrasion as required by HWMR-2, Section 206.D.5.c. (1), as specified in Permit Agreement G (Section D.2.).

2. The Permittee shall prevent overfilling of tanks, as required by HWMR-2, Section 206.D.5.c (2), by the methods specified in Permit Attachment G (Section D.2.b.).

D. Special Requirements for Ignitable or Reactive Waste.

1. The Permittee shall not place ignitable or reactive waste in a tank unless the procedures described in Permit Attachment C (Section F.5.) are followed as required by HWMR-2, Section 206.D.5.f.(1).

2. The Permittee shall document compliance with III.D.1. as required by HWMR-2, Section 206.B..7.c. and place this documentation in the operating record (condition II.1.).

3. The Permittee shall maintain buffer zones around covered tanks as specified in Permit Attachment C (Section F.5), as required by HMR-2, Section 206.D.5.f. (2).

E. Special Requirements for Incompatible Wastes.

1. The Permittee shall not place incompatible wastes in the same tank or place hazardous waste in a tank that previously held an incompatible waste or material.

2. The Permittee shall document compliance with IV.E.1. as required by HWMR-2, Section 206.B.7.c. and place this documentation in the operation record (condition II.1.).

PERMIT ATTACHMENT A

PERMIT APPLICATION
SECTION C

WASTE CHARACTERISTICS

C.1. Waste Description:

This section describes the chemical and physical nature of the hazardous wastes stored at the ~~Signetics~~ **Philips**-Albuquerque facility and the Waste Analysis Plan for sampling, testing, and evaluating the wastes to assure that sufficient information is available for their safe handling (HWMR 206.B.3).

The list of hazardous wastes generated at the plant is as follows **(Refer to Part A of the permit for the approximate quantity of wastes generated)**:

	Waste Name	Disposition	~~Approximate Quantity (1984)~~
a)	Waste Solvent I	5000-gl Tank Storage	~~40,000 gallons~~ solvent tank for liquids
b)	Waste Hydrofluoric Acid	5000-gl Tank Storage	~~50,000 gallons~~
c)	Waste Buffered Oxide Etch	5000-gl Tank Storage	~~30,000 gallons~~
d)	Arsenic Contaminated Wastes	55-gl Drum Storage	~~2 Drums~~
e)	Waste Solvent II	55-gl Drum Storage	~~15 Drums~~ solid waste
f)	Mercury-contaminated Wastes	55-gl Drum storage	~~2 Drum~~

a) Waste Solvent I (flash pt. ~~120~~ **95** degrees F **to >200 degrees F**) - These photolithographic cleaning wastes consist primarily of: Methanol ~~(flash pt. 54 degrees F)~~, Acetone ~~(flash pt. 15 degrees F), Ethylene Glycol (flash pt. 240.8 degrees F), Ethanolamine (flash pt. 195 degrees F), Diethylene Glycol Monobutyl Ether (flash pt. 230 degrees F),~~ **N-Methyl Pryolidone, Dimethylacetamide, Monoethanolamine, Isopropanol, Xylene, 2 (2-Aminoethoxy) ethanol,** and water~~—pH 11-12~~. **The pH of the solution is 7-12.** Due to the low flash points of several materials, it is assigned as category D001 and F003. ~~There may also be trace levels (less than 1%) of 1,1,1 Trichloroethane.~~ **At times, the high concentration of water may make this waste non-ignitable.** ~~Efforts are under way to decrease water from draining into "Solvent" tank in order content to allow for cost effective reclamation. The maximum density of the solvent mixture should not exceed~~

~~1.5 g/ml (13.2 lbs. per gallon) and it is normally about 1.1 g/ml (9 lbs. per gallon).~~

b) Waste Hydrofluoric Acid is a product of silicon oxide etching and consists mainly of dilute (.1-15%) Hydrofluoric Acid (pH < 1). Due to the low pH, this waste is assigned a D002 label. The maximum expected density of this waste is 1.15 g/ml (10.1 lbs. per gallon).

c) Waste Buffered Oxide Etch is also a product of silicon etching and consists of Hydrofluoric Acid (0.1 - 15%) and Ammonium Fluoride (0.1 - 40%). ~~This waste is sometimes mixed with (b) for transport.~~ The waste is found to have a high concentration of fluorides and a pH of about 4. It has been assigned a D002 label. The maximum density anticipated for this waste is 1.2 g/ml (10.6 lbs/gallon).

d) Arsenic Contaminated Wastes: This group includes all materials that have been contaminated with ~~solid~~ arsenic like gloves, containers, and rags used in the handling of arsenic. ~~In addition, used vacuum pump oil obtained from selected equipment may be contaminated.~~ While all of these are assigned as D004, not all may meet the extractibility criteria; however, they are all viewed as potentially toxic and are disposed as such.

e) Waste Solvent II is ~~a~~ drummed mixtures of **liquid** proprietary vendor formulas of positive photoresists **and drummed solid wastes such as filters and clean-up material** which **may** include ~~propylene glycol esthers (flash pt. 116 degrees F), resins, glycol esthers (flash pt. 240 degrees F), and acetone (flash pt. 15 degrees F).~~ **propylene glycol methyl ether acetate, methanol, acetone, n-butyl acetate, xylene, ethyl lactate, and ethyl acetate.** This **waste has a flash point of 70 - 100 degrees F (except for the solid clean-up material which may not have a flash point) and** is classified as D001 and F003.

f) Mercury Waste: This group includes all materials that are contaminated with liquid mercury. This includes used mercury vapor lamps, broken mercury thermometers and any material used to clean up mercury spills. It is assigned D009.

~~Signetics~~ **Philips** has no reactive wastes at this facility and no reactive wastes are managed at this location.

This Section is part of the operating record at ~~Signetics' Chemistry~~ **Philips' Environmental** Lab.

C.2. Waste Analysis Plan (HWMR 206.B.3.b):

C.2.a Rationale for Hazardous Waste Designation (206.B.3.b.1):

Table C-1 shows the bases for hazard designation of these hazardous wastes. Exhibit C-1 includes laboratory analyses of the hazardous wastes.

TABLE C-1

~~SIGNETICS~~ **PHILIPS**-ALBUQUERQUE WASTES - HAZARDS & RATIONALE FOR SELECTION

WASTE	HAZARD	EPA WASTE #	RATIONALE FOR SELECTION
Solvent I	Ignitable **Spent Solvents**	D001, F003	Flashpoint < ~~120~~ **140** Deg. F **By Definition, 40 CFR Part 261.31**
Hydrofluoric Acid	Corrosive ~~Toxic~~	D002	pH < ~~1~~ **2**
Buffered Oxide Etch	Corrosive ~~Toxic~~	D002	~~It contains Hydrofluoric Acid. It also has large concentrations of fluorides.~~ **pH < 2**
Arsenic Contaminated Waste	~~EP~~ Toxic	D004	By definition, ~~HWMR 201.B.5~~ **40 CFR Part 261.24**
Solvent II*	Ignitable **Spent Solvents**	D001, D003	Flash Pt. < ~~120~~ **140** Deg. F **By Definition, 40 CFR Part 261.31**
Mercury Contaminated **Waste**	~~EP~~ Toxic	D009	By Definition, ~~HWMR 201.B.5~~ **40 CFR Part 261.24**

C.2.b. Hazardous Waste Parameters and Test Methods (HWMR 206.B.3.b.2):

Table C-2 shows the hazardous waste parameters, the test methods and references. These methods are done by in-house and/or commercial laboratories.

TABLE C-2

HAZARDOUS WASTE PARAMETERS AND THEIR TEST METHODS

HW Parameter	Test Method	Reference
Corrosivity: pH	~~Electrometric~~ Method 9040	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods U.S. EPA SW-846, ~~2nd~~ **3rd** Edition, **1986**
Corrosion Rate	NACE Test TM-01-69 Method 1110	Ibid
Flash Point	Pensky-Martens Closed Cup Tester Method 1010	Ibid
~~EP Toxicity~~	~~EP Extraction/Toxicity Method 1310~~	~~Ibid~~
Toxic	**Toxicity Characteristic Leaching Procedure Method 1311**	**Ibid**
Arsenic	Atomic Absorption Method 7061	Ibid
~~Acetone~~	~~GC/FID Method 8015 (Direct Injection)~~	~~Test Methods for Evaluating Solid Waste, Physical/Chemical Methods U.S. EPA SW-846, 2nd Edition~~
~~Methanol~~	~~GC/FID Method 8015~~	~~Ibid~~
~~Isopropanol~~	~~GC/FID Method 8015~~	~~Ibid~~
~~1,1,1 Trichloroethane (b)~~	~~GC/HSD Method 8010~~	~~Ibid~~
~~Ethanolamine~~	~~GC/FID Method 8015~~	~~Ibid~~
~~Diethylene Glycol Monobutyl Ether~~	~~GC/FID Method 8015~~	~~Ibid~~
~~Hydrofluoric Acid~~	~~Titration Method C2.STD.8~~	~~SEMI BOSS 1982 (a)~~
~~Ammonium Fluoride~~	~~Titration Method C2.STD.2~~	~~SEMI BOSS 1982 (a)~~
~~Fluorides~~	~~Colorimetric (SPADNS) Method 413C~~	~~Std. methods for Water & Waste Water 15th Ed.~~
~~Normality~~	~~Electrochemical Method 413B Titration~~	~~Ibid~~

TABLE C-2 (Continued)

HAZARDOUS WASTE PARAMETERS AND THEIR TEST METHODS

HW Parameter	Test Method	Reference
Mercury Contaminated Wastes	Atomic Absorption Method 7470, 7471	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods U.S. EPA SW-846, ~~2nd~~ **3rd** Edition, **1986**
Spent Solvents	**GC, GC/MS Methods 8015, 8240, 8260**	**Ibid**

~~(a) Book of Semi Standards 1988 Volume 1, Chemicals~~
~~(b) This test is done by outside laboratories only.~~

C.2.c Sampling Methods (HWMR 206.B.3.b.(3)):

Table C-3 lists the hazardous wastes stored at the facility and the methods used to sample each. These wastes are sampled by in-house ~~Chemistry~~ **Environmental** Lab personnel. Sampling is controlled by ~~Signetics~~ **Philips-Albuquerque** specification #861-1096.

TABLE C-3

METHODS USED TO SAMPLE HAZARDOUS WASTES

HAZARDOUS WASTE	SAMPLING METHOD	DESCRIPTION OF SAMPLING	REFERENCE
Solvent I	Sampling of Solid Wastes, Composite Liquid Waste Sampler p.7.	Composite sample using a "Safety Sampler" - American Scientific Products #H37802 or a Manning Sampler	Note 1
Solvent II	Coliwasa	Coliwasa Composite.	Ibid
Hydrofluoric Acid	"Safety Sampler"	"Safety Sampler" Composite from top, middle, and bottom of tank.	Ibid
Buffered Oxide Etch	"Safety Sampler"	"Safety Sampler" Composite from top, middle, and bottom of tank.	Ibid
Arsenic-Contaminated Wastes	Sampling of Solid Wastes, Thief-P.12 Trier-P. 12-14	Representative composite sample from 3 grab samples at top, middle, and bottom of drum using a Trier type scoop (laboratory scoop).	Ibid
Mercury-Contaminated Wastes	Sampling of Solid Wastes, Thief-P.12 Trier-P. 12-14	Representative composite sample from 3 grab samples at top, middle, and bottom of drum using a Trier type scoop (laboratory scoop).	Ibid

Note 1 Test Methods for ~~the~~ Evaluating ~~of~~ Solid Waste, Physical/**Chemical** methods EPA-SW-846, ~~Second~~ **Third** Edition ~~1982~~ **1986**.

C.2.d. Analysis Criteria and Frequency:

The analyses criteria and sampling frequencies are listed in Table C-4. This analysis plan will be revised annually. Additional analyses will be performed and tables revised if a process change could affect the hazardous characteristics of a waste. These analyses are sufficient to meet HWMR-2 206.B.3.b.

TABLE C-4
ANALYSIS CRITERIA AND FREQUENCY

WASTE	PARAMETERS	FREQUENCY
Solvent I	~~Corrosion rate or pH,~~ Flash Point, **Spent Solvents**, ~~Methanol, Acetone, Isopropanol, Ethanol Amine, and Diethylene Glycol Monobutyl ether.~~	Bi-annually
Solvent II	~~Corrosion rate or pH,~~ Flash Point, **Spent Solvents**	As needed for disposal - at least every 2500 gallons
Hydrofluoric Acid	Corrosion rate or pH, ~~Hydrofluoric Acid, Fluoride, Normality.~~	Bi-annually
Buffered Oxide Etch	Corrosion rate or pH, ~~Hydrofluoric Acid, Fluoride, Normality.~~	Bi-annually
Arsenic Contaminated Wastes	~~EP Toxicity~~ **TCLP** (Arsenic)	Annually
Mercury Contaminated Wastes	~~EP Toxicity~~ **TCLP** (Mercury)	Annually

C.2.e Additional Requirements for Waste Generated Offsite:

This facility only handles onsite generated wastes; therefore, requirements for wastes received from offsite generators do not apply.

PERMIT ATTACHMENT B

MANIFESTING, REPORTING, AND TREATMENT, STORAGE, AND DISPOSAL CONDITIONS

PERMIT ATTACHMENT B

RECEIVED

FEB 0 8 1985

HAZARDOUS WASTE SECTION

February 6, 1985

Signetics
a subsidiary of U.S. Philips Corporation

Signetics Corporation
9201 Pan American Freeway NE
P.O. Box 10272
Albuquerque, New Mexico 87184

Ms. Denise Fort
Director
Environmental Improvement Divison
State of New Mexico
Crown Building
725 St. Michael's Drive
P. O. Box 968
Santa Fe, NM 87504-0968

Dear Ms. Fort:

Signetics agrees that the following conditions of the Solid Waste Disposal Act, P. L. 96-482, as amended by the Hazardous and Solid Waste Amendments of 1984, P. L. 98-616, be made a condition of Signetics' final permit. On the effective date(s) of the permit conditions, Signetics Corporation will comply with said conditions and any regulations pertaining to those conditions which may be promulgated by the U. S. Environmental Protection Agency or the New Mexico Environmental Improvement Board.

Condition 1.

On September 1, 1985, Signetics agrees that any manifest required by the New Mexico Hazardous Waste Act and Regulations, shall contain a certification by the generator that:

(a) the generator of the hazardous waste has a program in place to reduce the volume or quantity and toxicity of such waste to the degree determined by the generator to be economically practicable; and

(b) the proposed method of treatment, storage, or disposal is that practicable method currently available to the generator which minimizes the present and future threat to human health and the environment.

Condition 2.

Signetics shall submit reports to the Director at least once every two years, setting out:

(a) the quantities and nature of hazardous waste identified or listed under the New Mexico Hazardous Waste Act and Regulations that we have generated during the year;

(b) the disposition of all hazardous waste reported under the preceding paragraph;

Signetics Corporation
9201 Pan American Freeway, NE
P.O. Box 10070
Albuquerque, New Mexico 87184

(c) the efforts undertaken during the year to reduce the volume and toxicity of waste generated; and

(d) the changes in volume and toxicity of waste actually achieved during the year in comparison with previous years, to the extent such information is available for years prior to enactment of the Hazardous and Solid Waste Amendments of 1984.

Condition 3.

Effective September 1, 1985, if Signetics treats, stores, or disposes of hazardous waste on the premises where such waste is generated, we shall certify, no less often than annually, that:

(a) we have, in place, a program to reduce the volume or quantity and toxicity of such wastes to the degree determined by the generator to be economically practicable; and

(b) the proposed method of treatment, storage, of disposal is that practicable method currently available to the generator which minimizes the present and future threat to human health and the environment.

If you have any questions or comments, please contact us. The contact person and party responsible for the hazardous waste management activities at Signetics Albuquerque facility is:

Gary M. Mavrakis
Chemical Support Section Head
(505) 822-7188

Sincerely,

J.R. McGerigle

John R. McGerigle
Plant Manager

fm

cc: Bob Smith - ABQ
Trent Thomas - EID
Jim Davison - SV

PERMIT ATTACHMENT C

PERMIT APPLICATION
SECTION F

PROCEDURES TO PREVENT HAZARDS

The information provided in this section is submitted in accordance with the requirements of HWMR 302.A.4.b.(d), (e), (f), (h), (i). Other regulations addressed to complete this section include HWMR 206.B.4, 206.B.5, 206.B.7, 206.D.4.e, and 206.D.5.d.

F.1. Security:

F.1.a. Security Procedures and Equipment:

F.1.a(1). 24-Hour Surveillance System:

Security at ~~Signetics~~ **Philips**-Albuquerque is provided by the ~~Safety and~~ Security Department whose primary task is to monitor entry and exit from the facility, provide security measures for the facility as a whole, and assist in safety measures. Additional guards are subcontracted by ~~Signetics~~ **Philips**. In the Security Control Center by the lobby entrance, the guards are able to monitor the facility and outside fence by the use of a modular command unit. This unit monitors all outside doors, smoke detectors, duct detectors, the fire system for the plant, and access to the gate into the Shipping/Receiving area. If any alarms are set off, guards are dispatched to that area to investigate. The Security Control Center is manned by two guards 24 hours a day, 7 days a week.

During plant shutdowns, the guards conduct a walk-through every hour. During the hours of 6:00 p.m. and 6:00 a.m., the guards patrol all areas every two hours. The guards normally work 12-hour shifts.

The guards carry hand-held, two-way radios to report any problems immediately. ~~In addition to the radios, a base station for the speaker system is located in the Control Center.~~ An internal phone system is also available for use by the guards.

Emergency alarm pull stations are also located throughout the facility. All hazardous waste personnel are equipped with pagers ~~and two-way radios~~ so that security personnel can communicate with them.

A television monitor system is installed which has cameras located in the fences shipping/receiving area with the video screen in the Security Control Center.

F.1.a(2). Barrier and Means to Control Entry:

F.1.a(2)(a). Barrier:

The entire area, where the hazardous waste storage is ~~enclosed within a 10 foot high chain link fence~~ **located is inside the chemical storage building. The building is surrounded on three sides by a 10 foot high chain link fence. Entrances through the fence are controlled and monitored by the Security Department.** ~~The only entrance is through the Shipping/Receiving gate which is controlled remotely through shipping. The gate is monitored by Security every time the gate is opened. The hazardous waste containers are located inside the fence and behind locked doors.~~

F.1.a(2) (b). Means to Control Entry:

Access to the facility is controlled by the guards at the plant entrance. All employees are required to show identification badges when reporting to work, and visitors and contractors entering the facility must sign a log sheet and obtain visitor badges. Access to the hazardous waste storage areas is limited to Chemical Support and Facility personnel only. All doors are locked. Other persons requiring access to the rooms must obtain permission from the Chemical Support Section Head and be escorted by an employee of the Chemical Support Department. The hazardous waste tank storage area ~~is located outdoors with~~ **consists of** tanks ~~underground~~ in protective vaults with ~~metal~~ covers. Access to the vaults is limited to trained personnel who are properly suited with safety equipment.

F.1.a(3). Warning Signs:

Signs which are legible from a distance of 25 feet are posted at the fence gate and on all doors leading into storage areas. The signs are in English and Spanish and bear the legend "Danger - All Unauthorized Personnel Keep Out/Peligro - Personal Autorizado 'Solamente." Also, "Danger - No Smoking" signs have been posted in those areas holding ignitable material.

F.1.b. Waiver:

The ~~Signetics~~ **Philips**-Albuquerque facility does not request a waiver of the requirements stated in HWMR 206.B.4.a, regarding injury to intruders and violations by intruders.

F.2. Inspection Schedule:

F.2.a General Inspection Requirements:

The personnel at ~~Signetics~~ **Philips**-Albuquerque conduct regular inspections of the facility for structural deterioration, operator errors, equipment malfunctions, and discharges that could cause or lead to the release of hazardous waste constituents and adversely affect the environment or threaten human health. Facility security personnel conduct inspections of all plant areas for general health, security, fire, and structural problems. The hazardous waste container and hazardous waste tank storage areas are inspected daily by Chemical Support personnel. The "two man rule" exists when all waste storage areas are being used or inspected. If no other Chemical Support personnel are available at the time of entry, the guard desk will be notified and a guard will accompany the person. There must be a Chemical Support or Facilities employee present whenever entry to the rooms is necessary.

Table F-1 shows the inspection schedule used at ~~Signetics~~ **Philips**-Albuquerque. The items listed in the Exhibit are considered important because of their role in preventing, detecting, or responding to environmental or human health hazards. Provided on the schedule is a list of problems normally encountered and a designation of the facility department that will conduct the inspection.

F.2.a(1). Types of Problems:

The types of potential problems that are identified during the inspection are also listed in Table F-1.

F.2.a(2). Frequency of Inspection:

The frequency of inspection as well as the facility department that will conduct the inspections are also listed in Table F-1.

F.2.b. Specific Process Inspection Requirements:

F.2.b(1). Container Inspection:

Inspections of the container storage area will be conducted by the Chemical Support Department per the inspection schedule labeled "Inspection Schedule for Drummed Hazardous Waste Storage" (See Tables F-2 ~~and F-3~~). The Inspection Schedule attached to the Inspection Log notes the items to be inspected and the frequency of that inspection. Typical problems encountered with each item of the inspection are provided on the inspection schedule to serve as a reminder to the inspector and to ensure a complete inspection. The inspector is required to check the status of each item and indicate whether its condition is acceptable or unacceptable. If the status of a particular item is unacceptable, appropriate and complete information is recorded, including date and nature of repairs and remedial action.

The inspection sheets are filed in a 3-ring binder in the Chemical Support Office. (A description of the container storage area is detailed in Section D.1.d).

F.2.b(2). Tank Inspection:

Inspections of the tank storage area will be conducted by the Chemical Support Department per the inspection schedule labeled "Inspection Schedule for HW Storage Tanks" ~~(See Tables F-4 and F-5)~~. Upon completion of the inspection logs, the sheets will be maintained in a 3-ring binder in the Chemical Support Office (a description of the storage tank area is detailed in Section D.2).

Visual inspections will be completed daily or weekly as follows: the inspector will ~~enter~~ **observe** the vault area through the vault cover; the inspector will examine the tank, vault walls, lighting system, and waste feedlines for cracks, leaks, corrosion or erosion of surface; the inspector will also examine whether there has been any accumulation of spills or precipitation in the bottom of the vault. This inspection will be completed from the top of the tank using the vault lighting system and flashlights. Any discrepancies will be recorded on the log and reported to Environmental Affairs.

The overfilling control equipment is the secondary containment vault in which each storage tank is contained. Normally, trucks are scheduled in advance for tank emptying. If the tank overfilled, the waste will collect into the vault. The production process areas will be immediately shut

down through verbal communication from Chemical Support personnel and a licensed hazardous waste transporter will be contracted to drain the vault and the tank. The vaults are designed to contain any spill-over that may occur (See Section D.2.c).

The mechanism for waste feed cut-off is by verbal notification to the Production Manager who will halt production at the affected drains. After notification of cut-off, the waste levels in the tanks will be monitored every half hour until the problem is resolved, the waste is removed, and clean-up is completed. Waste feed cut-off systems are not used for safety measures. The wastes would back up into the production equipment and emergency showers causing a health and clean-up hazard. The vaults provide a means where there is minimal exposure of hazardous wastes to employees should there be a tank spill or overflow.

At least once every 2 years, during production shutdown, the vault covers will be removed and a complete inspection of the tank and vault will be made. A ladder will be lowered into the vault so that all areas of the tank and vault are examined. The storage tanks will be emptied by the use of a waste disposer, and inspections will be made of the interior of the tank. Those items inspected will be corrosion, cracking, and bulging of the tank. The inspector will be fully clothed in safety protective gear with air packs. Care will be taken to ensure the avoidance of spills, avoidance of hazardous conditions (reaction, ignition, or toxic exposure), proper cleaning procedures, proper ventilation, adequate lighting and standby and safety equipment are available. An outside ~~lab~~ **firm** will be contracted to perform the following:

a) Interior inspection of the solid-steel tanks:
   1) Roof and Structural Supports
      a) Loss of metal thickness by ultrasonic examination
      b) Cracks and leaks around or at weld joints
      c) Cracks and leaks at all nozzle connections
      d) Visual examination for corrosion

   2) Tank Shell
      a) Cracking of plate joints
      b) Loss of metal thickness by ultrasonic examination
      c) Cracks or splitting at seams
      d) Visual examination for corrosion

   3) Tank Bottom
      a) Unevenness of the bottom
      b) Visual examination for corrosion, pitting

c) Cracks or splitting at seams
d) Hammer testing for weak spots
e) Metal thickness

b) Interior inspection of fiberglass-reinforced plastic tanks:
1) Visual examination for bulging, cracking, exposed fibers, splitting or discoloration
2) Cracks at nozzle connections
3) Hardness test
4) Air bubble detection by translucency

F.2.c. Remedial Action:

If inspections reveal that non-emergency maintenance is needed, they will be completed as soon as possible to preclude further damage and reduce the need for emergency repairs. If the hazard is imminent or has already occurred during the course of an inspection or any time between inspections, remedial action will be taken immediately. ~~Signetics~~ **Philips** personnel will notify the appropriate authorities per the Contingency Plan (See Section G.4) and initiate remedial actions. In the event of an emergency involving the release of hazardous constituents to the environment, efforts will be directed towards containing the hazard, removing it, and subsequently decontaminating the affected area. Refer to the Contingency Plan for further details (Section G.4).

F.2.d. Inspection Log:

An inspection log for each area is maintained as part of the Facility Hazardous Waste Operations Record for each calendar year in separate 3-ring binders. These logs will be maintained for the life of the facility.

F.3. Waiver of Preparedness and Prevention Requirements:

The applicant does not wish to request a waiver of the preparedness and prevention requirements under HWMR 206.B.9.

F.4. Preventative Procedures, Structures, and Equipment:

Sufficient aisle space is maintained for personnel and equipment access. The aisle spacing is also inspected daily. (See Exhibit D-3).

F.4.a. Loading/Unloading Operations:

Loading/unloading operations in the facility involve the transfer of material to the container storage areas ~~as described in Section D.1.b~~. When the containers are

prepared for shipment, there is ample space to move the containers by fork lift. The container area is indoors with easy access to all containers. The containers, four per pallet are moved to the loading dock by use of an "EE" fork lift (explosion-proof, non-sparking motor). The containers are then loaded onto the transporter trucks.

Tanks:

When the tank contents reach 4700 gallons, a permitted hazardous waste transporter is contacted to ship the solvent waste to a TSD facility.

The tanks are drained by connecting a drain hose from the truck to the tank. The truck uses a vacuum system to pull the waste into the tanker trailer. Levels of the tank are checked constantly while filling by manually dipping the tanks. The Techs and drivers presently use all safety equipment including goggles, hard hats, rubber suits, acid/solvent gloves, and rubber boots. Located just east of the loading area is a safety eyewash/shower with easy access. When the waste pickup has been completed, the Tech completes the proper paperwork, makes certain the truck displays the appropriate placards, and examines the surrounding area for any spills which are cleaned up immediately.

F.4.b. Runoff:

Runoff from storage areas is described in Section D.1.d. Section B describes the flood plain runoff.

F.4.c. Water Supplies:

Ground water contamination is prevented by eliminating the discharge of hazardous materials onto the unprotected ground. The containment structures used are detailed in Section D.2.c.

F.4.d. Equipment and Power Failure:

In the event of a brief power interruption, emergency generators will be started to maintain process operations, and the emergency lighting system will activate automatically supplying lighting to all facility buildings and property. If there is a prolonged power outage, process equipment will not be operating, and thus wastes will not be generated.

F.4.e. Personnel Protection Equipment:

General information concerning the major chemical components of the wastes in the containers and tanks is provided in Section C - Analysis Plan. Section C

presents information regarding various waste streams' toxicity, fire and explosion hazards, and corrosivity. Available protective equipment is presented under Emergency Equipment and Provisions of the Contingency Plan (see Section G.5). Use of protective equipment is covered in the initial and annual Personnel Training Programs (see Section H.1.b), which satisfies the Occupational Safety and Health Standards of 29 CFR Part 1910 Subpart I Personal Protective Equipment.

F.5. Prevention of Reaction of Ignitable, Reactive, or Incompatible Wastes:

F.5.a. Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Wastes:

Flammable Storage #4 (ignitable waste) and the solvent storage tank are the only areas on the facility property where ignitable wastes are stored. The containers and tanks, as discussed in Section D.1, are compatible with the contained wastes; therefore, the only source of ignition is external to the containers. To prevent a possible source of external ignition, no sparking equipment or flames are allowed in either area. The "Solvent" tank is covered and sealed. Signs are on the areas with legends: "Danger - No Smoking" and "Danger - All Unauthorized Personnel Keep Out".

F.5.b. General Precaution for Handling Ignitable Wastes or Accidentally Mixing Incompatible Wastes:

General precautions for handling ignitable or reactive wastes were discussed above. Job specifications prohibit the mixing of "new, non-routine," or incompatible wastes. The storage areas for corrosive and ignitable wastes are in separate rooms as described in Section D.1.d.

F.5.c. Management of Ignitable or Reactive Waste in Containers:

Precautions taken in the container storage area to prevent accidental fire and explosion include the proper storage of containers (e.g., stacking, labeling, and sealing of containers), sloped drains, and appropriate warning signs. Prior to storage, each container is sealed and labeled. This prevents moisture from entering the drum and identifies the contents of the container and the date wastes are accumulated. Containers are stored on pallets to minimize contact with leaks or spills, and are not stacked. The area just outside the container area is kept clear of all obstruction in order to allow a non-sparking forklift easy access to all drums. The area incorporates a fire sprinkler system which activates at 286 degrees F.

The flammable container storage area is located 600 feet from the closest company property line (see Exhibit B-2) which is in compliance with the National

Fire Code Standards for outdoor storage of containers holding ignitable or reactive wastes.

F.5.d Management of Incompatible Wastes in Containers:

The container filling and storage areas for corrosive and solvent wastes are located in different rooms as described in Section D.1.d. Since the areas are physically separated and all 5-gallon carboys brought to these areas are labeled for contents, the possibility of mixing these incompatible wastes are minimized. Once filled and labeled, the waste storage drums are not moved from their original storage area until they are shipped out for disposal. The area incorporates a fire sprinkler system which activates at 286 degrees F. Steel drum storage of Ignitable Wastes are recommended by the chemical suppliers.

F.5.d Management of Ignitable or Reactive Wastes in Tanks

Only one of the 5,000 gallon tanks contains a flammable (ignitable) mixture. This flammable waste mixture is gravity fed through a piped system from its point of generation in the production area. Since it is an enclosed system, there is no possibility of mixing this waste stream with an incompatible waste.

The location of the waste storage tanks complies with the siting requirements for flammable liquids contained in the National Fire Protection Association's "Flammable and Combustible Liquid Code". ~~Signetics~~ **Philips**-Albuquerque's waste storage tanks are 850' from property line, 40' from an "important building', and 40' from load-bearing foundations.

Regular inspections, as discussed in Section F.2.b(2) will be conducted to ensure safe operations. Venting of the tank is described in Section D.2.b.

F.5.f Management of Incompatible Waste in Tanks:

As described in Section D.2.c, each tank is separated from the other and is a separate unit. The waste mixtures are drained through a closed system from its point of generation in the production area. Since it is an enclosed system, there is no possibility of mixing the wastes with each other.

TABLE F-1

INSPECTION SCHEDULE

Area Equipment (Responsible Group)	Items to be Inspected	Types of Problems	Frequency
Safety/Emergency Equipment (Chemical Support)	- Industrial Absorbents	- Out of stock.	Daily
	- Air Purifying Respirator and cartridges.	- Clean, new cartridges	Monthly
	- Shovels, garden hose.	- Broken or worn.	Monthly
	- Gloves, safety goggles, safety suits, boots.	- Out of stock, worn out, clean, broken	Monthly
Tank Storage Area (Chemical Support)	- Vault	- Cracks, deterioration, uneven settling	Weekly
	- Pipes, fittings, valves	- Leaks, corrosion, damage	Weekly
	- Warning signs	- Damaged, missing	Weekly
	- Tank shell	- Corrosion, discoloration, cracks, leakage	Every 2 years
	- Chemical feed lines	- Cracks, deterioration, corrosion, leakage	Weekly
	- Presence of odors	- Leakage	Daily
	- Level of wastes	- High level	Daily
Tank-internal (Facilities)	- Tank Shell	- Corrosion, cracking, bulging	Every 2 years

TABLE F-1 (continued)

INSPECTION SCHEDULE

(NFPA - National Fire Protection Association)

Area Equipment (Responsible Group)	Items to be inspected	Types of Problems	Frequency
Container Storage Area (Chemical Support)	- Drums	-Corrosion, in proper section, leaks, spills, open lids	Daily
	-Labeling on drums	-Improper ID, date missing	Daily
	-Personal Protective Equipment	-All items present and clean	Daily
	-Structural	-Floors, doors, roof, intact	Daily
	-Spills	-No visible chemcial spills	Daily
	-Signs	-All signs undamaged	Daily
	-Doors	-Unlocked	Daily
	-Drains	-Plugged, corrosion	Weekly
	-Aisle space	-Items piled up in front of storage	Daily
	-Forklift	-Non-functional	Daily

TABLE F-1 (continued)

INSPECTION SCHEDULE
(NFPA - National Fire Protection Association)

Area Equipment (Responsible Group)	Items to be inspected	Types of Problems	Frequency
Security Devices (Security Department)	- Radio Communication	-All units operational	Upon Failure
	- Telephone	-All lines operational	Upon Failure
	- Emergency Paging System	-All lines operational	Monthly
	- Emergency shower/eyewash	-Water pressure, leaking, upkeep	Monthly
	- Airpacks	- Air pressure, hose and mask condition	Monthly
	- Fire Extinguishers	- Needs charging	Monthly
	- Fire alarm system	- Power failure	Per NFPA
	- Emergency lighting system	- Lights	Per NFPA
	- Property Line Fence	- Corrosion, damage to fence	Daily
	- First Aid equipment and supplies	- Items out of stock or inoperative	As used
	- Security cameras	- All units operational	Upon failure
	- Sprinkler system	- Sprinkler pressures	Twice a year

TABLE F-2

INSPECTION SCHEDULE FOR DRUMMED HAZARDOUS WASTE STORAGE

ITEM	DAILY	WEEKLY	MONTHLY
Visual inspection of area for containers in proper section (by classification)	X		
Visual inspection of waste containers for leaking or deterioration	X		
Inspection for proper container marking as per ~~Signetics~~ **Philips'** Specification #854-5004	X		
Inspection for proper segregation of waste as per ~~Signetics~~ **Philips'** Specification #854-5004	X		
Check height of drum stacking (no stacking allowed)	X		
Visual inspection of walls, floors, and ceiling for discoloration and stains	X		
Check for locked doors to storage areas		X	
Inspect slotted drains in storage areas		X	
Check emergency showers			X
Check warning signs on exterior of containment rooms	X		
Check for aisle space needed for drum movement	X		
Check that drums are elevated on pallets	X		
Check inventory of industrial absorbents used to contain spills or leaks per inventory list	X		
Check forklift for corrosion, malfunction	X		

The above inspections are performed by Chemical Support Technicians.

~~TABLE F-3~~
~~INSPECTION LOG FOR DRUMMED HAZARDOUS WASTE STORAGE~~

~~Item~~	~~Frequency~~	~~Record Inspection Satisfactory~~	~~Record Inspection Unsatisfactory~~
~~Visual inspection of area for containers in proper section~~	~~Daily~~		
~~Visual inspection of waste containers for leaking or discoloration~~	~~Daily~~		
~~Inspection for proper container marking/per Philip's Specification #854-5004~~	~~Daily~~		
~~Inspection for proper segregation of waste per Philip's Specification #854-5004~~	~~Daily~~		
~~Check height of drum stacking (no stacking allowed)~~	~~Daily~~		
~~Visual inspection of walls, floors and ceiling for discoloration and stains~~	~~Daily~~		
~~Check for locked doors~~	~~Daily~~		
~~Inspect slotted drains~~	~~Weekly~~		
~~Check emergency showers~~	~~Monthly~~		
~~Check warning signs on exterior of containment rooms~~	~~Daily~~		

~~TABLE F-3(continued)~~

~~INSPECTION LOG FOR DRUMMED HAZARDOUS WASTE STORAGE~~

~~Item~~	~~Frequency~~	~~Record Inspection Satisfactory~~	~~Record Inspection Unsatisfactory~~
~~Check for aisle space needed for drum movement 20"~~	~~Daily~~		
~~Check that drums are elevated on pallets~~	~~Daily~~		
~~Check inventory of chemical absorbents used to contain spills or leaks per Inventory List~~	~~Daily~~		
~~Check forklift for corrosion, malfunction~~	~~Daily~~		

~~TABLE F-3 (Continued)~~

~~INSPECTION LOG FOR DRUMMED HAZARDOUS WASTE STORAGE~~

~~Necessary Action:~~
~~Environmental Affairs notified of discrepancy by:~~
~~Date:~~
~~Inspected by: Shift: Date: Time: am/pm~~
~~Action was completed by:~~
~~This record will be retained at Chemical Support for the life of the Facility.~~

~~TABLE F-4~~

~~INSPECTION SCHEDULE FOR HAZARDOUS WASTE STORAGE TANKS~~

~~ITEM~~	~~DAILY~~	~~WEEKLY~~
~~Visual inspection of vault cover and ladder:~~		
~~corroding parts~~		~~X~~
~~Loose rivets or bolts~~		~~X~~
~~Worn or broken parts~~		~~X~~
~~Visual inspection of waste tanks:~~		
~~Discoloration of paint~~		~~X~~
~~Cracks at connections, seams~~		~~X~~
~~Buckles, bulges~~		~~X~~
~~Water collection on tank top~~		~~X~~
~~Vents are clear~~		~~X~~
~~Electrical:~~		~~X~~
~~Light bulb on~~		~~X~~
~~Corrosion on conduit~~		~~X~~
~~Defective switches for lights~~		
~~Vent fan on~~	~~X~~	
~~Visual inspection of vault:~~		~~X~~
~~Rust spots~~		~~X~~
~~Blisters, film lifting~~		~~X~~
~~Cracks or spalled concrete~~		~~X~~
~~Low spots where liquids can collect~~		~~X~~
~~Anchor bolt distortion~~		~~X~~
~~Presence of odors~~	~~X~~	

~~The above inspections are performed by Chemical Support Technicians.~~

~~TABLE F-4(continued)~~

~~INSPECTION SCHEDULE FOR HAZARDOUS WASTE STORAGE TANKS~~

~~ITEM~~	~~DAILY~~	~~WEEKLY~~
~~Visual inspection of piping:~~		
~~- Cracks and distortion~~		~~X~~
~~- Bulging~~		~~X~~
~~- Corrosion~~		~~X~~
~~- Leaks~~	~~X~~	
~~- Flange seal leaks~~	~~X~~	
~~- Loose or corroded bolts~~		~~X~~
~~- Inspect trench for liquids~~		~~X~~
~~Check tank levels:~~		
~~- Waste hydrofluoric acid~~	~~X~~	
~~- Waste BOE~~	~~X~~	
~~- Waste solvent~~	~~X~~	

~~The above inspections are performed by Chemical Support Technicians.~~

~~TABLE F-5~~

~~INSPECTION LOG FOR HAZARDOUS WASTE STORAGE TANKS~~

~~Item~~	~~Frequency~~	~~Record Inspection Satisfactory~~	~~Record Inspection Unsatisfactory~~
~~Visual inspection of vault cover and ladder:~~			
~~corroding parts~~	~~Weekly~~		
~~Loose rivets or bolts~~	~~Weekly~~		
~~Visual inspection of waste tanks:~~			
~~Discoloration of paint~~	~~Weekly~~		
~~Cracks at connections, seams~~	~~Weekly~~		
~~Buckles, bulges~~	~~Weekly~~		
~~Water collection on tank top~~	~~Weekly~~		
~~Vents are clear~~	~~Weekly~~		
~~Electrical:~~			
~~Light bulb on~~	~~Weekly~~		
~~Corrosion on conduit~~	~~Weekly~~		
~~Defective switches for lights~~	~~Weekly~~		
~~Vent fan on~~	~~Daily~~		
~~Visual inspection of vault:~~			
~~Rust spots~~	~~Weekly~~		
~~Blisters, film lifting~~	~~Weekly~~		
~~Cracks or spalled concrete~~	~~Weekly~~		
~~Low spots where liquids can collect~~	~~Weekly~~		
~~Anchor bolt distortion~~	~~Weekly~~		
~~Presence of odors~~	~~Daily~~		

~~TABLE F-5(continued)~~

~~INSPECTION LOG FOR HAZARDOUS WASTE STORAGE TANKS~~

~~Item~~	~~Frequency~~	~~Record of Inspection Satisfactory~~	~~Record of Inspection Unsatisfactory~~
~~Visual Inpsection of piping:~~			
~~Cracks and distortion~~	~~Weekly~~		~~X~~
~~Bulging~~	~~Weekly~~		~~X~~
~~Corrosion~~	~~Weekly~~		~~X~~
~~Leaks~~	~~Daily~~		~~X~~
~~Flange seal leaks~~	~~Daily~~		
~~Loose or corroded bolts~~	~~Weekly~~		~~X~~
~~Inspect trench for liquids~~	~~Weekly~~		
			~~X~~
~~Check tank levels:~~			
~~Waste hydrofluoric acid~~	~~Daily~~	~~FT~~	~~IN~~
~~Waste BOE~~	~~Daily~~	~~FT~~	~~IN~~
~~Waste Solvent~~	~~Daily~~	~~FT~~	~~IN~~

~~The above inspections are performed by Chemical SupportTechniians.~~

~~TABLE F-5~~

~~INSPECTION LOG FOR HAZARDOUS WASTE STORAGE TANKS~~

~~Necessary Action:~~
~~Environmental Affairs notified if discrepancy:~~
~~Inspected by: Shift: Date: Time: am/pm~~
~~Action was completed by:~~
~~This record will be retained at Chemical Support for the life of the Facility.~~

(Note: Replace the following section in its entirety. This section has not been highlighted in the strikeout/bold format.)

PERMIT ATTACHMENT D

PERMIT APPLICATION
SECTION H

PERSONNEL TRAINING

H.1 Outline of Training Program (HWMR 206.B.6):

Philips Semiconductor personnel directly involved in the handling or management of hazardous waste, must successfully complete a combination of classroom and on-the-job training. The training shall be conducted in a fashion that teaches personnel involved in hazardous waste handling and management to perform their duties in a manner that ensures the facility's compliance with all applicable hazardous waste regulations.

H.1a Job Titles and Duties (HWMR 206.B.6.d.(1),(2)):

Table H-1 shows the organization of personnel at the facility. Those positions responsible for and involved in the handling of hazardous waste and hazardous waste management are denoted by an asterisk next to the title. The written descriptions for each job title and the names of the personnel filling the position follow Table H-1.

H.1.b Training Content, Frequency, and Technique (HWMR 206.b.6(3):

The program developed at Philips Albuquerque for training hazardous waste employees consists of the following:

1) Hazardous Waste Handling and Management (3 hour initial, 1 hour annual review).
2) OSHA 1910.120 HAZWOPR (24 hour initial, 8 hour annual review).
3) Appropriate on-the-job training (OJT).

Outside courses or seminars are also used, where applicable, for further training of supervisors. The program is directed by a person trained in hazardous waste management procedures.

A brief description of each course follows:

1) Hazardous Waste Handling Course

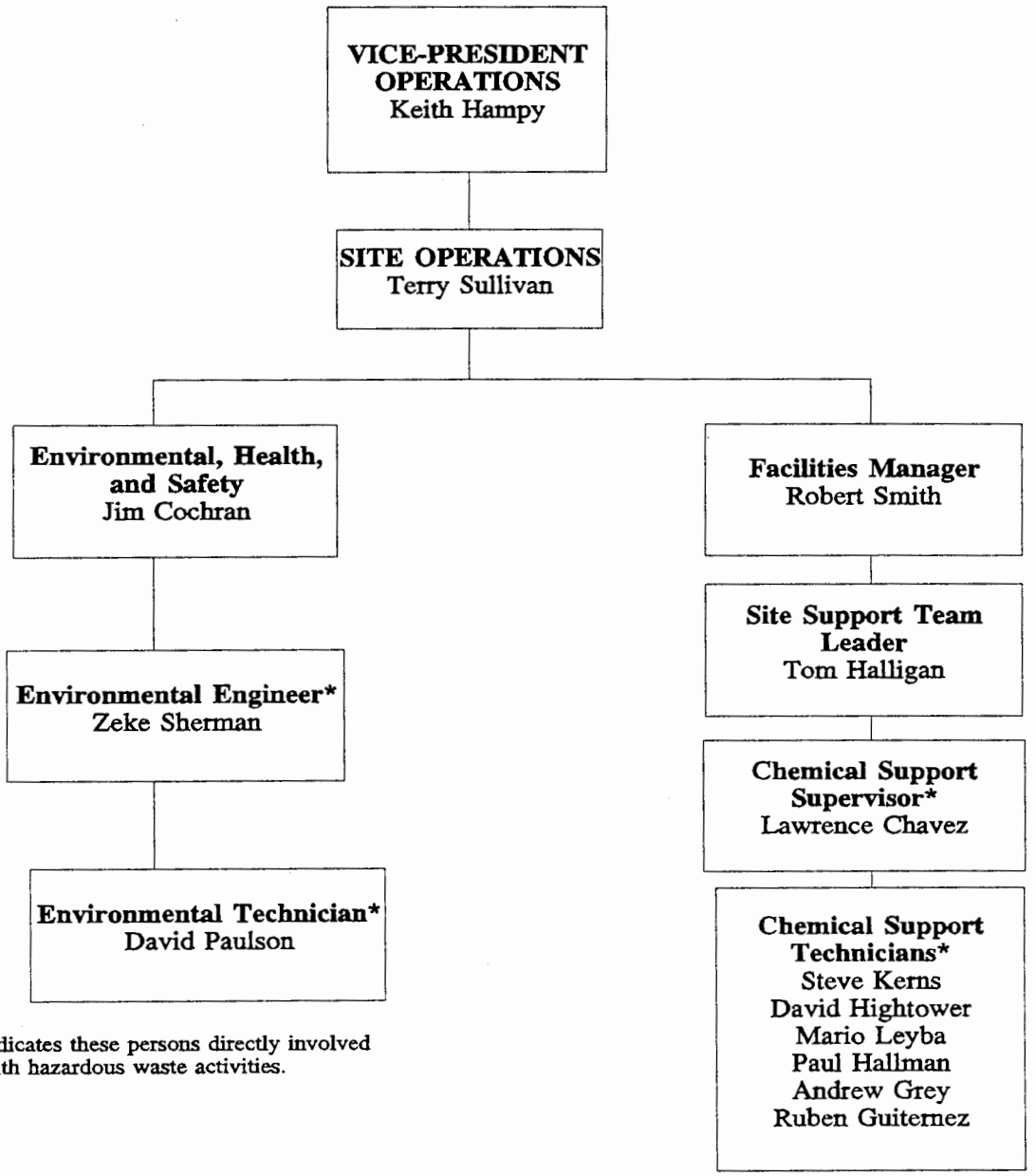
This is a classroom course combined with OJT to familiarize personnel with: (1) the responsibilities of a hazardous waste generator, storer, and shipper; (2) the proper identification, storage, and handling of hazardous wastes; (3) the inspection of hazardous waste storage areas; and (4) the preparation and manifesting of hazardous waste for shipping. Personnel are also trained in implementation of the contingency plan, emergency procedures, equipment, and systems. This includes specific training concerning emergency communications and alarms.

2) OSHA 1910.120 Hazardous Waste Operations and Emergency Response (HASWOPR)

This is a classroom course which satisfies the initial and ongoing training requirements for OSHA 1910.120 (p) (7). The course familiarizes personnel with health hazards and hazardous substances associated with TSD activities. The course also trains personnel in general emergency response procedures.

Table H-1

ORGANIZATION OF PERSONNEL INVOLVED IN HAZARDOUS WASTE ACTIVITIES



* indicates these persons directly involved with hazardous waste activities.

H.1.c Personnel Resumes

The following resumes are for personnel directly involved with hazardous waste management:

Position Title: Environmental, Health, and Safety Manager Position

Responsibilities and Duties:

- Performs Hazardous Waste Management program audits to insure regulatory compliance with permit conditions.
- Monitors the progress towards fulfilling the objectives of the Environmental Affairs Roadmap in regards to the Hazardous Waste Management program.
- Provides program information to executive level management, makes recommendations, and advises other division managers concerning hazardous waste activities and regulatory affairs.
- Performs emergency notification as the designated Contingency Plan Emergency Coordinator in the facility's RCRA Part B permit.
- Is the designated regulatory liaison and contact person for the site.
- Retains consultants and contractors in connection with the Hazardous Waste Management program.

Experience and Qualifications:

Minimum:

Bachelor's degree in Science or Engineering plus 10 years of environmental affairs experience with a minimum of 4 years of program management experience and a minimum of 4 years of hazardous waste management experience.

Position Title: Environmental Engineer

Position Responsibilities and Duties:

- Designs and coordinates the training of plant personnel in the handling of hazardous wastes.
- Responsible for all reporting, documenting, and record keeping for the plant's hazardous waste management program.
- Responsible for auditing, evaluating, and revising the plants hazardous waste management program.
- Is the facilities primary contact for "customer service" in regards to the environmental compliance program.
- Responsible for plant compliance with air, water, and solid waste regulations.
- Obtains environmental permits, licenses and/or modifications of such from local, state, and federal regulatory agencies.
- Notifies proper authorities in emergency situations in conjunction with primary emergency coordinator.
- Maintains operating log, monitoring records, maintenance, inspection, personnel training and all other required records.

Experience and Qualifications:

Minimum:

Bachelor's degree in Science or Engineering plus 4 years chemical related work experience, supervisor experience necessary, a minimum of 2 years experience in hazardous waste management.

Position Title: Environmental Specialist

Position Responsibilities and Duties:

- Conduct facility hazardous waste inspections on a bi-weekly basis.
- Make final hazardous waste checks on all shipments of materials leaving the plant.
- Follow-up and correct all regulatory deficiencies as noted, in a timely manner.
- Conduct hazardous waste training for employees as necessary.
- Monitor production processes to ensure compliance with state and federal hazardous waste disposal regulations.
- Collect and report all data required by law.
- Assure proper handling, labeling, storage, and disposal of all plant hazardous waste.
- Assist in the remediation of plant emergencies and clean-up of small spills.

Experience and Qualifications:

Minimum:

Associates degree or equivalent plus 0-2 years of environmental or semi-conductor experience as an operator or technician.

Position Title: Chemical Support Supervisor

Position Responsibilities and Duties:

- Training of plant personnel in the handling of hazardous waste.
- Notifies proper authorities in emergency situations in conjunction with primary emergency coordinator.
- Designs training programs.
- Purchases raw chemicals.
- Reports to Site Support Team Leader.
- Overall operation and maintenance of the hazardous waste storage facility.
- Supervises Chemical Technicians who handle virgin and waste chemicals.
- Maintains operating log, monitoring records, maintenance, inspection, personnel training, and all other required records.
- Prepares hazardous wastes for shipment.
- Schedules all maintenance and repairs to structures and equipment for hazardous waste facility.
- Provides on-the-job (OJT) training with regard to material handling, leaks, and spills.
- Oversees mechanic/electrician doing both scheduled and unscheduled maintenance and repair work to be sure he is not releasing hazardous wastes to the environment or contaminating himself.
- Coordinates and implements logistics in chemical handling.
- Plans material requirements and disposal.

Experience and Qualifications:

Minimum:

High school diploma plus 4 years chemical related work experience, supervisor experience necessary, a minimum of 2 years experience in hazardous waste management.

Position Title: Chemical Tech

Position Responsibilities and Duties:

- Reports to Chemical Support Supervisor.
- Operates chemical handling equipment.
- Transfers all wastes generated in the plant to waste storage areas.
- Reviews all incoming wastes and assigns and stores wastes at proper storage location.
- Inspects tanks, drums, and other storage equipment, and any gauges, dials, and recorders as required for proper operation and structural integrity.
- Inspects drum storage area for evidence of leaks and spills and inappropriately placed drums.
- Inspects emergency equipment on a regular basis.
- Assists in training of new chemical technicians and mechanics to handle hazardous waste spills and leaks safely and in such a way as to avoid exposures.
- Makes appropriate entries into operating log, monitoring records, inspection records, and maintenance records, and files them according to established system.
- Takes emergency action on own authority in accordance with established procedures.
- Notifies supervisor and other plant authorities as necessary in emergency situations.
- Assists in preparing for hazardous waste shipments.

Experience and Qualifications:

High school diploma plus 2-3 years experience as plant Tech with chemical-related activities.

H.1.c Training for Emergency Response (HWMR 206.B.6.a.(3)):

The above training courses are designed to ensure that personnel working with hazardous wastes can properly respond to emergency situations in their area.

Training elements addressing non-routine and emergency situations (unscheduled shutdowns related to storms, power outages, fires, explosions, spills, releases, etc.) include:

- Procedures for locating, inspecting, and using emergency equipment,
- Emergency communication procedures and alarm systems,
- Responses to fires and explosions,
- Response procedures for containing, controlling and mitigating spills to prevent ground water contamination,
- Power failure procedures,
- Evacuation procedures, and
- Shutdown of operations.

In addition, plant-wide Emergency Response Teams (ERT) are organized to respond to health and property damage emergencies. ERT members receive training in Chemical Handling, Self-Contained Breathing Apparatus usage, Fire Control, First Aid, Cardio-Pulmonary Resuscitation and Evacuation Procedures. The ERT program is administered by the Safety Engineer.

H.2 Implementation of Training Program (HWMR 206.B.6.b):

All new personnel will complete their required classroom training within 6 months of assignment to the hazardous waste management position or within 6 months of their date of employment, whichever is later. Prior to training, the chemical technician will not work unsupervised.

The Environmental Engineer will also review the training programs annually to ensure that they are up-to-date, particularly in the following areas:

1) The types and volumes of waste materials generated.

2) The status of storage and operating conditions and procedures (especially potential problem areas).

3) The permit requirements contained in the facility's hazardous waste permit. In particular, the changes that have occurred during the past year, especially noting areas where compliance was a problem, and the development of effective solutions to those problems.

4) Incidents that have occurred in the past year that warranted use of contingency plans and/or emergency action. This review focuses on the causes of the incident and the identification of steps to be taken to prevent or to ensure better handling of such incidents in the future (e.g., revisions to Plant's Contingency Plan).

Records documenting the job title for each position, job descriptions, names of employees, and completed training programs (both introductory and review) will be kept on-site in the Hazardous Waste Management Training File of Philips-Albuquerque. These records will be kept until closure of the facility. In addition, training records are kept on an Employee Profile Database for the life of the facility.

H.3 Documents and Records

The following documents must be maintained and updated within 30 days whenever any changes occur to ensure compliance with the permit requirements. The Hazardous and Radioactive Bureau and any other appropriate agency must be notified by certified mail.

- A written job description, including the "job title" and the "name" of the person filling the job for each position related to hazardous waste handling or management.

- A written description of the type and amount of introductory and continuing training that will be given to each person involved in hazardous waste handling or management.

- A record of the training given to and successfully completed by each person involved in hazardous waste handling or management.

(Note: Replace the following section in its entirety. This section has not been highlighted in the strikeout/bold format.)

PERMIT ATTACHMENT E

PERMIT APPLICATION
SECTION G

CONTINGENCY PLAN

This Contingency Plan is 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 constituents to air, soil, or surface water. The provisions of the plan will be carried out immediately whenever there is a fire, explosion, spill or release of hazardous waste constituents which could threaten human health or the environment. The plan is submitted in compliance with New Mexico Hazardous Waste Management Regulations 1984 Part 206.B.10.

G.1 General Information:

Name:	Philips Semiconductors (NMD 000709782)
Location:	9201 Pan American Freeway, N.E. Albuquerque, NM 87113
Phone:	(505) 822-7000, *22-7188
Operation:	Generator and Storer Metal-oxide Semiconductor Integrated Circuits Manufacturing (SIC 3674)
Site Plan:	See Exhibit G-1
Description of Activities:	1 x 5000 gal. waste Hydrofluoric Acid storage tank. 1 x 5000 gal. waste Buffered Oxide Etch storage tank. 1 x 5000 gal. waste "Solvent" storage. 100 x 55 gal. drummed hazardous waste storage. Exhibit G-4 includes a maximum inventory of virgin chemicals, should contingencies arise.

G.1.a. Waste Description:

This section describes the chemical and physical nature of the Hazardous Wastes stored at the Philips-Albuquerque facility:

	Waste Name	Disposition
a)	Waste Solvent I	5000/gl Tank Storage
b)	Waste Hydrofluoric Acid	5000/gl Tank Storage
c)	Waste Buffered Oxide Etch	5000/gl Tank Storage
d)	Arsenic Contaminated Wastes	55/gl Drum Storage
e)	Waste Solvent II	55/gl Drum Storage
f)	Mercury-contaminated Wastes	55/gl Drum Storage

Quantity column

a) Waste Solvent I (flash pt. 95 degrees F to >200 degrees F) - These photolithographic cleaning wastes consist primarily of: Methanol, Acetone N-Methyl Pryolidone, Dimethylacetamide, Monoethanolamine, Isopropanol, Xylene, 2 (2-Aminoethoxy) ethanol, and water. The pH of the solution is 7-12. Due to the low flash points of several materials, it is assigned as category D001 and F003. At times, the high concentration of water may make this waste non-ignitable.

b) Waste Hydrofluoric Acid is a product of silicon oxide etching and consists mainly of dilute (.1-15%) Hydrofluoric Acid (pH < 1). Due to the low pH, this waste is assigned a D002 label. The maximum expected density of this waste is 1.15 g/ml (10.1 lbs. per gallon).

c) Waste Buffered Oxide Etch is also a product of silicon etching and consists of Hydrofluoric Acid (0.1 - 15%) and Ammonium Fluoride (0.1 - 40%). The waste is found to have a high concentration of fluorides and a pH of about 4. It has been assigned a D002 label. The maximum density anticipated for this waste is 1.2 g/ml (10.6 lbs/gallon).

d) Arsenic Contaminated Wastes: This group includes all materials that have been contaminated with arsenic like gloves, containers, and rags used in the handling of arsenic. While all of these are assigned as D004, not all may meet the extractibility criteria; however, they are all viewed as potentially toxic and are disposed as such.

e) Waste Solvent II is drummed mixtures of liquid proprietary vendor formulas of positive photoresists and drummed solid wastes such as filters and clean-up material which may include propylene glycol methyl ether acetate, methanol, acetone, n-butyl acetate, xylene, ethyl lactate, and ethyl acetate. This waste has a flash point of 70 - 100 degrees F (except for the solid clean-up material which may not have a flash point) and is classified as D001 and F003.

f) Mercury Waste: This group includes all materials that are contaminated with liquid mercury. This includes used mercury vapor lamps, broken mercury thermometers and any material used to clean up mercury spills. It is assigned D009.

Wastes designated for 5,000/gl tank storage are drained through plumbing connected to the manufacturing area. All plumbing is accessible to routine visual inspection, except the drain lines in the HW storage areas and FS4.

Some drummed wastes are accumulated in the work area and removed as soon as the drum is full (within 72 hours) to the proper hazardous waste storage area. Other drums are situated in the storage area and small quantities are brought to the area and accumulated. A decision is made at this time as to whether the material is a hazardous waste.

G.2. Emergency Coordination:

In the event of an emergency involving hazardous chemical release or discharge, the Emergency Coordinators have the responsibility of determining the extent of the hazard and the authority to initiate emergency response. The Emergency Coordinators are accessible by telephone (hand and/or cellular) and/or pager (see below).

The Emergency Coordinators are familiar with all aspects of the facility Contingency Plan and the locations and characteristics of wastes handled. Secondary and backup Coordinators are also familiar with the above Hazardous Waste Management Contingency Plan. In addition, the Emergency Coordinators have the authority to commit the resources needed to carry out the Contingency Plan. Secondary and Backup coordinators are also familiar with above Hazardous Waste Management activities and plans and also, in the absence of Primary Emergency Coordinators, are authorized to carry out coordination responsibilities and actions.

Emergency Coordinators:

Primary:	**Backup**
Security Manager	ES&H Manager
Bob Sanders - Ext 7115	James Cochran - Ext 7678
Pager #53	Pager # 857-8835
Cellular: (505) 263-4452	Cellular: (505) 259-7495
Home: 5113 Noreen, N.E.	Home: 6101 Osuna Road NE
Albuquerque, NM 87111	Albuquerque, NM 87109
Phone: (505) 294-4226	Phone: (505) 884-4494

Secondary:

Industrial Hygienist	Environmental Engineer
Steve Szmyd - Ext 7644	Zeke Sherman - Ext 7648
Pager # 857-2583	Pager # 857-9024
Cellular: (505) 263-3720	Cellular: (505) 263-2778
Home: 1401 Narcisco Street	Home: 9929 Greene, N.W.
Albuquerque, NM 87112	Albuquerque, NM 87114
Phone: (505) 291-8342	Phone: (505) 898-8694

Note: The contingency plan must be amended any time the list of emergency coordinators changes!

G.3 Implementation of the Contingency Plan:

The decision to implement the Contingency Plan depends upon whether or not an imminent or actual incident could threaten human health or the environment. The purpose of this section is to provide guidance to the emergency coordinator in making this decision by providing decision-making situations in those areas where HW is stored:

1. Fire and/or Explosion that could affect the HW storage areas:

   a. A fire causes the release of toxic aerosols, vapors, or gases.

   b. The fire spreads and could possibly ignite materials at other locations onsite or could cause heat-induced explosions.

   c. The fire could possibly spread to offsite areas.

   d. Use of water or water and chemical fire suppressant could result in contaminated runoff.

   e. An imminent danger exists that an explosion could occur, causing a safety hazard because of flying fragments or shock waves.

   f. An imminent danger exists that an explosion could ignite other hazardous waste at the facility.

   g. An imminent danger exists that an explosion could result in release of toxic material.

   h. An explosion has occurred.

2. Spills or material release:

a. The spill could result in release of flammable liquids or vapors, thus causing a fire or gas explosion hazard.

b. The spill could cause the release of toxic liquids, vapors, or gases.

c. The spill could contaminate soil or water on site.

d. The spill cannot be contained onsite, resulting in offsite soil contamination and/or ground or surface water pollution.

G.4 Emergency Response Procedures: (HWMR 206.B.10.m):

G.4.a Notification:

Whenever there is an imminent or actual emergency situation, the Emergency Coordinator, or his designee when the emergency coordinator is not on call or the on-scene personnel if the emergency coordinator is in route, must immediately:

(1) Activate the ERT (Emergency Response Team) and internal facilities alarm or communication systems, where applicable, to notify all facility personnel; and

(2) Notify appropriate state or local agencies with designated response roles if their help is needed.

G.4.b Identification:

Whenever there is a release, fire, or explosion from the HW storage areas, the Emergency Coordinator will immediately identify the character, exact source, amount, and real extent of any released materials. He may do this by observation or review of facility records or manifests and, if necessary, by chemical analysis.

G.4.c Assessment:

Concurrently, the emergency coordinator assesses possible hazards to human health and/or the environment that may result from the release, fire, or explosion. This assessment considers 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 chemical agents used to control fire and heat-induced explosions). If needed, the National Response Center will be called (800-424-8802).

If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten health, or the environment, outside the facility, he will report his findings as follows:

(1) If his assessment indicates that evacuation of local areas may be advisable, he will immediately notify appropriate authorities. He is available to help appropriate officials decide whether local areas should be evacuated; and

(2) He will immediately notify either the government officials designated as the on-scene coordinator for that geographical area (in the applicable regional contingency plan), or the National Response Center (using their 24-hour toll-free number (800) 424-8802) and the New Mexico Environment Department (505) 827-9329).

The report includes:

a. Name and telephone number of reporter;
b. Name and address of facility;
c. Time and type incident (e.g., release, fire);
d. Name and quantity of material(s) involved to the extent known;
e. The extent of injuries, if any; and
f. The possible hazards to human health, or the environment, outside the facility.

G.4.d Control Procedures:

Potential accidents fall under three general classifications: (1) fire and/or explosions, (2) spills or material release, (3) floods. Natural disasters such as earthquakes or tornadoes are assumed to fall into one of these three classifications.

Fire and/or Explosion:

The drum and tank storage areas can be easily accessed by fire-fighting and other emergency vehicles and equipment. Paved blacktop within these areas is kept clear at all times.

During times of power failure or severe weather, Security personnel will be assigned to protect personnel and property. If a fire should break out, concentration will be placed on preventing the fire from spreading to nearby areas.

The following actions will be taken in the areas affected by the fire or explosion:

1. The incident will be reported to the Security Command Center which will, in turn, actuate the ERT and notify the Emergency Coordinator.

2. Fire doors in buildings will be closed.

3. Hazardous work in all areas will be shut down immediately.

4. All additional equipment and ignition sources will be shut down, as necessary and practical.

5. The area will be cleared of all personnel not actively involved in fighting the fire. These persons are to report to the designated rally points for accountability.

6. Traffic will be blocked off.

7. All injured persons will be removed, and medical treatment will be administered by qualified personnel.

8. Philips-Albuquerque's ERT personnel will respond with extinguishers.

The Security Command Center will not be called unless absolutely necessary so that Security Officers remain free to handle only emergency calls.

Area or plant evacuation will be necessary in case of major fire or explosion. Specifics are outlined under general evacuation procedures (see Exhibit G-2). All general evacuation procedures (see exhibit G-2). All personnel have been trained in evacuation procedures and means of exit from their respective work areas. Until evacuation is signaled, personnel who are not in an affected area will stay in their respective work areas. Contract personnel and visitors will be cleared from the area and instructed to report to a security area or office area. An "all clear" signal will be given when the fire has been extinguished and the safety of personnel is no longer endangered. All emergency equipment used in the emergency must be cleaned and fit for use prior to resumption of plant operation in the affected areas.

Spills or material release:

In the event of a major emergency involving a chemical spill, the following general procedures will be used for rapid and safe response and control of the situation:

If an employee discovers a chemical spill or process upset resulting in a vapor release, he or she will immediately report it to the area supervisor and contact the Security Center. Security will then activate the ERT and contact the Emergency Coordinator or their designee. When contacted, the Emergency Coordinator will obtain information pertaining to the following:

1. The material spilled or released.

2. Location of the release or spillage of hazardous material.

3. An estimate of quantity released and the rate at which it is being released.

4. The direction in which the spill or vapor or smoke release is heading. Any injuries involved.

5. Fire and/or explosion or possibility of these events.

6. The area and materials involved and the intensity of the fire or explosion.

This information will help the Emergency Coordinator to assess the magnitude and potential seriousness of the spill or release. If the accident is determined to lie within the company's emergency response capabilities, the Emergency Coordinator will utilize the necessary inplant personnel. If the accident is beyond plant capabilities, the Emergency Coordinator will contact the appropriate agencies.

In the event of a leak or spill from drums in Flammable Storage #4, the released material will be contained due to the structure of the room and drain to the solvent tank. The level of the solvent tank will be checked by Chemical Support.

The initial response to any emergency will be to protect human health and safety, and then the environment. Identification, containment, treatment, and disposal assessment will be the secondary response.

In the event of a large leak or spill in the tank area, production involving solvents will be halted. The vault surrounding the tank storage area has the capacity to hold the largest tank and any rainfall. Immediately after the spill is detected, a transporter will be summoned to remove any standing liquids and ship the spilled material to a TSD facility.

If, for some reason, a chemical spill is not contained within the vault, an area of isolation will be established around the spill. The size of the area will generally depend on the size of the spill and the materials involved. If the spill is large and involves a tank or a pipeline rupture, initial isolation of at least 100 feet from the nearest sewer drain will be used. Small spills or leaks from a tank or pipe will require evacuation of at least 50 feet in all directions to allow cleanup and repair and to prevent exposure. When any spill occurs, only those persons involved in overseeing or performing emergency operations will be allowed within the designated hazard area. If possible, the area will be roped or otherwise blocked off.

If the spill results in the formation of a toxic vapor cloud (by reaction with surrounding materials or by outbreak of fire) and its release (due to high vapor pressures under ambient conditions), further evacuation will be enforced. Where necessary, an area at lease 500 feet wide and 1000 feet long will be evacuated downwind if volatile materials are spilled.

If a large quantity of spilled material ignites, neighboring residents and industries will be notified. Because winds in the areas tend to vary, the quickest and most accurate assessment of meteorological conditions is accomplished by calling the National Weather Service at (505) 243-1371 or 243-1453.

If the control and clean-up of a spill, release, or fire is within the capabilities of company personnel and local response teams, the New Mexico Environment Department, the National Response Center, or the City of Albuquerque Water Department will not be notified unless one of the following occurs:

- A spill discharges to the sewer or storm drains and the quantity of hazardous material spilled is equal to or greater than the reportable quantity specified under 40 CFR Part 117.

- The spill involves other hazardous materials not listed in CFR but used at the plant if they pose an actual or potential hazard to life or property.

G.4.e Prevention of Recurrence of Spread of Fires, Explosions, or Releases:

During the emergency, the Emergency Coordinator takes all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other material or hazardous waste at the facility. These measures include, where applicable, stopping processes and operations, collecting and containing released waste, and removal and/or isolation of containers. If the facility stops operations in response to a fire, explosion or release, the Emergency Coordinator will monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

G.4.f Storage and Treatment of Released Material:

Immediately after an emergency, the Emergency Coordinator directs the treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other materials that results from release, fire, or explosion at the facility. (This will be carried out in accordance with all Hazardous Waste regulations.)

G.4.g Incompatible Wastes:

The Emergency Coordinator ensures that in the affected area(s) of the facility no waste that may be incompatible with the released material is treated, stored, or disposed of until clean-up procedures are completed.

G.4.h Post-Emergency Equipment Maintenance:

After an emergency event, all emergency equipment listed in Section G.5 will be cleaned so that it is fit for use or it will be replaced. Before operations are resumed, an inspection of all safety equipment will be conducted as discussed in Section F.2. The level of the solvent tank will be checked by Chemical Support to determine if any material was released from Flammable Storage #4. The contents will then be pumped out for proper hazardous waste disposal. The Regional Administrator, state, and local authorities will be notified that post-emergency equipment maintenance has been performed and operations will be resumed.

G.4.i Container Spills and Leakage:

The only containers that may spill are those containing Ignitable Wastes. The Arsenic- and Mercury-Contaminated Wastes are in solid state. The Ignitables are stored in a room with floors

that slope towards a drain that leads to the "Solvent" Waste Tank. Any residuals will be absorbed with absorbents like Solusorb and disposed of appropriately. Should the wastes ignite, fire extinguishers or the sprinkler systems will be activated. The City Fire Department will be called for aid. All water will drain towards "Solvent" tank, and will subsequently be removed by hazardous waste transporters to Treatment, Storage, Disposal facilities.

G.4.j Tank Spills and Leakage:

Any tank spills or leakage will be contained in the vaults. Commercial hazardous waste vendors will be called for an emergency pick-up. The tank will be repaired or replaced. The vault will be inspected for integrity or coatings and cracks.

Should the "Solvent" tank contents ignite, the vault cover will be left on to deplete air. Drain valves leading to the tank will also be closed. After cooling, the lid will be raised and halon or chemicals will be used to extinguish any flames. Should the tank ignite while the vault cover is off, fire extinguishers will be used. Attempts will be made to extinguish the flame and the City Fire Department will be called upon. The water should be contained in the vault which will be disposed of by a commercial hazardous waste facility.

G.5 Emergency Equipment (HWMR 206.B.10.h):

The following equipment items are located in the vicinity of the hazardous waste storage areas:

a) Portable fire extinguishers
b) Self-contained breathing apparatus
c) First Aid Equipment Stations
d) Emergency eye wash and showers
e) Spill control and clean up equipment
f) Protective clothing and equipment
g) Communication and alarm equipment
h) Water sprinklers
i) Telephones and extensions
j) Atmospheric chemical contamination detectors
k) Oxygen deficiency detector

G.5.a Portable Fire Extinguishers

Portable fire extinguishers are available for fire control The extinguishers are ABC type. Type A is capable of extinguishing fires involving ordinary combustible materials such as wood, cloth, paper, rubber, and many plastics; Type B is capable of extinguishing fires involving flammable liquids, oils, greases, tars, oil base paints, lacquers, and flammable gases; and Type C is capable of extinguishing fires involving energized electrical equipment. All extinguishers comply with National Fire Code standards for portable fire extinguishers, and they are inspected after each

use of at least monthly. Records of these inspections are noted on the fire extinguishers by Security. These are located in the hallways outside the HW storage rooms.

G.5.b Self-Contained Breathing Apparatus:

Self-contained breathing apparati (30-minute capacity) are located in the hallway outside the waste water treatment area, at the basement ERT staging area, and at the Fab 23 ERT staging area. The equipment is inspected monthly by Facilities which maintains complete documentation of inspections. If any discrepancies are found, the air pack is serviced. There are spare cylinders on hand.

G.5.c First Aid Equipment Stations:

First Aid Supplies include: bandages, slings, first aid ointments, and disinfectants. These are located in ERT cabinets and in Health Services. Stretchers located in Health Services and Fab 22 ERT cabinet.

G.5.d Emergency Eye Wash and Shower:

Emergency eyewash and showers are located in each corrosive storage area, in the waste water treatment area, and also outdoors by the bulk chemical loading pad. Each unit consists of a drench showerhead and eyewash. A sign reading "EMERGENCY SHOWER AND EYEWASH FOUNTAIN" is posted at each unit.

G.5.e Spill Control and Clean-Up Equipment:

Equipment for use in containing and cleaning up spilled hazardous wastes are stored in the respective corrosive or flammable storage areas. These include:

Hydrofluoric Acid pretreatment	Dust Pan
Acid-neutralizing absorbent	Brush
Alkali-neutralizing absorbent	Shovel
Solvent absorbing material	Empty DOT Drums
Vermiculite	

G.5.f Protective Clothing and Equipment:

Protective clothing and equipment are provided for employees during normal and emergency operations. Hard hats, protective eye wear, steel-toed boots or close-toed shows, air-purifying respirators, hooded chemical-resistant suits, and chemical-resistant gloves are minimum protective clothing required.

Other clothing and equipment available at ERT storage cabinets include:

Plastic aprons and gauntlets
Chemical-resistant Boots (steel toe)
Chemical-resistant gloves
Chemical resistant suits (levels A, B, C, and D)
Face Shield

G.5.q Communication and Alarm Equipment:

General purpose plant-wide emergency equipment include:

1 modular command evacuation alarm system (Plant-wide)
1 portable two-way radio
1 Motorola pager system
1 modular command security supervisor system (Plant-wide)
1 emergency vehicle
Emergency exits tied into modular command
~~1 Public address system~~
1 Security base station radio

The above equipment is located in Security Control Center. Telephone switchboard in Security Control Center.

G.5.h Water Sprinklers:

The sprinkler head spacing in the hazardous waste storage area is 144 sq. feet. The sprinkler system is designed such that the water flow from one head will trigger an alarm in Security. The system is inspected on a twice yearly basis.

G.5.i Telephones and Extensions:

The telephones and their extensions are located by the hazardous waste storage areas. Ext. 7171 is an emergency number and will reach Security.

G.5.j Atmospheric Chemical Contamination Detectors:

These "Draeger" tubes are used to detect a variety of gases or vapors in the corrosive, flammable, and poison groups. These are available in the Safety Department and the Fab 22 ERT storage cabinet.

G.5.k Oxygen Deficiency Detector:

This is equipment used to detect less than 19.5% oxygen content in the atmosphere. This equipment is stored in Chemical Support area.

G.6. Coordination Agreements (HWMR 206.B.10.j):

Philips-Albuquerque has made the following arrangements to assist in response to emergency situations:

1. Commercial disposal companies with emergency response capabilities will provide 48-hour response for waste pickups. Commercial disposal companies will also provide 10-hour response to aid in emergency response services.

2. Copies of the Contingency Plan have been given to the local police and fire departments, the hospital, and the state and local Emergency Response Teams. These agencies have received a copy of the plan (acknowledgments of receipt are in Exhibit G-3).

Albuquerque Fire Dept.
724 Silver S.W.
Albuquerque, NM 87102
(505) 242-1441

St. Joseph Northeast Heights
Emergency Room
4701 Montgomery N.E.
Albuquerque, NM 87109
(505) 888-7803

Hazardous and Radioactive
Materials Bureau
P. O. Box 26110
525 Camino de los Marquez
Santa Fe, NM 87503
(505) 827-4308

Albuquerque Police Dept.
9500 Montgomery N.E.
Albuquerque, NM 87111
(505) 766-4680

Bernalillo County
Local Emergency Planning Committee
Office of Emergency Preparedness
724 Silver S.W.
Albuquerque, NM 87102
(505) 764-6300

G.7 Evacuation Plan (HWMR 206.B.10.i):

The facility personnel will be evacuated if the Emergency Coordinator decides that their personal safety is in danger. The evacuation is initiated by the Emergency Coordinator and is carried out with the assistance of the Safety and Security Department and the ERTs. His directions will be given verbally to the Security Command Center which will initiate the evacuation by activating evacuation horns. The safety rules and evacuation procedures are attached (Exhibit G-3). Evacuation routes from the Hazardous Waste Management facility are indicated by the arrows. The Hazardous Waste Management area is outside, so any direction away from the building is a recommended route. Hazardous Waste Management personnel will go to the

evacuation holding area in the west parking lot and remain there awaiting further instructions from the Emergency Coordinator.

G.8 Required Reports (HWMR 206.B.10.m (10)):

In the event of an environmental incident, the owner or operator must notify the State Environment Department's Emergency Response Office at (505) 827-9329. The secondary Emergency Coordinator will call the New Mexico Environment Department Emergency Number and report the incident.

After an environmental incident, the Emergency Coordinator will ensure that:

a) No waste that may be incompatible with the released material is treated, stored, or disposed of until clean-up procedures are completed; and

b) All emergency equipment listed in the Contingency Plan is cleaned and fit for its intended use before operations are resumed.

Operations may only be resumed when the facility is in compliance and clean-up procedures are completed.

The Emergency Coordinator notes in the operating record the time, date, and details of any incident that requires implementing the contingency Plan. Within 15 days after the incident, he will submit a written report of the incident to the Secretary. The report must include:

a) Name, address, and telephone number of the owner or operator;
b) Name, address, and telephone number of the facility;
c) Date, time, and type of incident (e.g., fire, explosion);
d) Name and quantity of material(s) involved;
e) The extent of injuries, if any;
f) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
g) Estimated quantity and disposition of recovered material that resulted from the incident.

G.9. Plan Update Procedures (HWMR 206.B.10.j):

The Emergency Coordinator will revise this Contingency Plan in accordance with the experience acquired during each emergency situation and will send copies of the revisions to each holder of the original plan.

1. Albuquerque Fire Department
2. Albuquerque Police Department
3. St. Joseph Northeast Heights
4. Bob Sanders (Security Manager)

5. Director, Water and Waste Management Division, NM Environment Department
6. Local Emergency Planning Committee

The Contingency Plan will be amended by the Emergency Coordinator if: facility permit is revised, facility changes substantially in design, construction, etc., list of emergency coordinators or equipment changes, and if the plan fails in an emergency. The plan will be reviewed for completeness at a minimum of once every two years.

PERMIT ATTACHMENT F

PERMIT APPLICATION
SECTION I

CLOSURE PLAN, POST-CLOSURE PLAN, AND
FINANCIAL REQUIREMENTS

This section is submitted in accordance with the requirements of HWMR 2206.D.2. This plan identifies all steps that will be necessary to partially close the facility at any point during its intended operating life and to completely close the facility at the end of its intended operating life. A post-closure plan is not required because this is not a disposal facility and all wastes will be removed at closure.

~~Signetics~~ **Philips-Albuquerque** will maintain an onsite copy of the approved closure plan and all revisions to the plan until the certification of closure completeness has been submitted and accepted by the ~~Director of EID~~ **Secretary of the New Mexico Environment Department.** ~~Signetics~~ **Philips-Albuquerque** will notify the ~~Director~~ **Secretary** at least 180 days prior to beginning final closure. The closure date for the entire facility will be AD 2050. Upon completion of closure, we will submit to the ~~EID~~ **Environment Department** a certification by both ~~Signetics~~ **Philips-Albuquerque** and by Professional Engineer that the facility has been closed in accordance with the specifications in the approved closure plan.

I.1. Closure Plan:

I.1.a. Closure Performance Standard (HWMR 206.D.2.b.):

This Closure Plan is a controlled maintenance system designed to minimize or eliminate threats to human health and discharge of hazardous waste into the environment. The facility stores wastes generated solely from its manufacturing operations. If there is evidence of any spills or leaks, samples will be taken and analyzed to determine the extend of contamination in the soil and, if necessary, in ground water. Any contaminated soil will be excavated, removed, and disposed of at a proper disposal facility. Any contaminated ground water will be remediated. The following sections discuss in detail efforts to be made at ~~Signetics~~ **Philips-Albuquerque** to satisfy the closure performance standard

I.1.b. Partial and Final Closure Activities (HWMR 206.D.2.c.(a)):

At the time of this writing, no partial closures are planned. However, the clean-up procedures are outlined by area so that the appropriate sections of the final closure plan may be used for partial closure. In the event of a partial closure, the closure plan will be rewritten to reflect the change. At a maximum, we expect the operation to consist of storage of 100 drums and 3 x 5,000 gallon tanks during the life of the facility. The closure date for the entire facility is scheduled to be AD 2050.

I.1.c. Maximum Waste Inventory (HWMR 206.D.2.C.(b)):

The following table shows the maximum inventory of wastes in storage at any given time during the operating life of ~~Signetics~~ **Philips-Albuquerque.**

1 x 5,000 gl	Waste Hydrofluoric Acid
1 x 5,000 gl	Waste Buffered Oxide Etch (Hydrofluoric Acid/Ammonium Fluoride)
1 x 5,000 gl	Waste "Solvent I"
36 x 55 gl	Waste "Solvent II"
64 x 55 gl	Arsenic or Mercury-Contaminated Waste

I.1.d. General Closure Procedures:

A) ~~Signetics~~ **Philips-Albuquerque** will utilize its employees and outside contractors for final closure of the facility. The activities involved are:

1) Removal of hazardous waste inventory
2) Decontamination of hazardous waste drain pipes
3) Disposal of tank contents
4) Decontamination of tanks
5) Decontamination of containment vaults
6) Disposal of tanks
7) Disposal of drum inventory
8) Clean up drum storage area

The work involved in decontamination will be supervised and performed by qualified ~~Signetics~~ **Philips-Albuquerque** personnel, except where stated otherwise. Safety precautions will be taken during decontamination procedures to prevent personal injury. Personnel will be equipped with the necessary safety equipment such as goggles, gloves, boots, respirators and coverall clothing.

No open flames, sparking tools, or smoking will be allowed near the Ignitable Storage Area. A combustible gas detector capable of measuring lower explosion limits (LEL) will be available to the workers to assess any hazards posed by ignitable vapors. Fire extinguishers will be made available.

The appropriate absorbent and neutralizing materials will be available in case of a spill during clean-up procedures (i.e., Solusorb for organic solvents, Neutrasorb for acids, and Neutracit for bases). Should any spill-control materials be employed, the resulting waste will be placed in a 55-gallon drum available at the clean-up site. This drum will be disposed of with the other drummed wastes generated during clean-up.

Before leaving the work area, members of the clean-up team will rinse off their boots, and other contaminated clothing, and wash areas of exposed skin. They will be inspected for cleanliness by a supervisor before leaving the site.

Equipment used in the clean-up (pumps, safety gear, scrub brushes, steam-cleaning equipment, etc.) will be washed with water, or steam cleaned if necessary, to ensure it is clean after its final use. A visual inspection or lab analysis of each article will be made before it is declared decontaminated and can be stored or returned.

The inspections of equipment cleanliness and personnel will be made by the clean-up team supervisor. Visual inspections made by clean-up personnel to assure decontamination will be recorded by the supervisor.

The soil is not expected to be contaminated by waste storage at ~~Signetics~~ **Philips-Albuquerque**. Soil contamination is avoided because the wastes are stored in tanks situated within coated concrete vaults to provide primary and secondary containment. Any spills in the past will have been decontaminated at the time, as specified in the Container Management Plan and "Contingency Plan". This closure plan will be revised should contamination or leaks be detected during the operating life of the facility.

The following is a suggested list of clean-up materials:

1 long-handled squeegee
1 long-handled broom
1-2 brooms
Dust pan
3 mil thick plastic bags
40 55-gl drums
5 sets of clean-up clothing
Sampling bottles and equipment
Steam cleaner
Scrub brushes
Pump (hand or electric)
Neutralizing and Absorbent materials
Portable combustible gas detector
Fire extinguisher
Garden hose and water
pH paper

I.1.e. <u>Decontamination and Closure of Drum Storage:</u>

The last of the hazardous waste-containing drums will be properly labeled, marked, manifested and shipped by a permitted transporter to a disposal facility (e.g., IT Corporation, Chemical Waste Management). If spills or leaks remain, the storage area will be cleaned by scraping or

absorbing with Neutrasorb. The residuals will be drummed and analyzed (if necessary) and shipped to a TSDF as above. Analysis of residual material will depend on the location where they are obtained from, either Chemical Storage #2 or Flammable Storage #4. For material collected in Chemical Storage #2, analysis will determine the level of mercury and/or arsenic in the residue. Material obtained from Flammable Storage #4 will be tested to determine if it should be considered as an ignitable material.

I.1.f. Decontamination and Closure of Tank Storage:

After manufacturing shutdown, the drain lines leading to the hazardous waste storage tanks will be rinsed copiously with water. The pH of the rinsate will be tested to be greater than 5 at the last clean-out trap. The two acid storage tanks will be rinsed with water and the rinsate removed by a commercial vendor or, where appropriate, pumped into waste water neutralization. The procedures will be repeated until the pH of the rinsate is greater than 5.

The solvent-containing tank will be rinsed and filled with 5,000 gallons of water and pumped out for hazardous waste disposal. It will then be visually inspected for sludge. If there is sludge in the tank, a sample will be collected and analyzed for ignitability and TCLP toxicity.

Sludge which is non-hazardous will be left alone. Sludge with hazardous characteristics will be removed from the tanks by scraping the tank bottom with long-handled shovels and squeegees from outside the tank through the 24-inch manhole. The sludge will be collected in a 55-gallon drum and then stored with the other wastes generated during clean-up until the final waste pick-up. It is anticipated that less than one drum of waste sludge will be collected.

Many of the solvents stored in this tank have flash points below 100 degrees C and the residue of these solvents may result in a sludge that is ignitable. The solvent waste stream does not include any ~~EP~~ **TCLP** toxic material; however, as many solvents are used for cleaning purposes, it is possible that over the life of the tank insoluble ~~EP~~ **TCLP** toxic materials may be partitioned and concentrate as a sludge on the bottom of the tank.

A steam-cleaning unit will be rented to decontaminate the tanks. Steam (a typical unit operated at 700 psi and 220 degrees F) will be injected into the tank.

The resulting wash water will be sampled for total organic carbon (TOC), and be pumped into 55-gallon drums to be stored until the final waste pick-up. Waste water discharge which will meet the POTW waste water discharge requirements will be directed into the waste water treatment system.

The solvent tank collects both routine, large-volume, process solvents and the small volume special purpose solvents. The mixture of these solvents is complex and the use of TOC measurements will give an accurate indication of when all solvents or oily residue have been removed from the surfaces of the tank.

The decontaminated tanks will be disconnected from the pipes and the tie-down straps and then be removed from the concrete vault by crane. The tanks will either be sold for scrap or transferred to another ~~Signetics~~ **Philips** site. All hazardous waste pipes will be dismantled and collected for disposal at Class I facilities.

Residual liquids remaining in vaults as a result of decontamination will be pumped into waste water neutralization or drums. Surfaces will be washed down. It is estimated that a maximum of 1,000 gallons or 20 drums of liquids will be generated from the above procedures. The drums will be disposed of as hazardous wastes.

I.1.g. Schedule for Closure (HWMR 206.D.2.d.):

Exhibit I-1 is the anticipated closure schedule. The ~~Director~~ **Secretary** will be notified 180 days before beginning closure. Final closure will be supervised and certified by an independent Professional Engineer in addition to ~~Signetics'~~ **Philips'** personnel.

I.1.h. Extension for Closure Time:

At this time, we do not require an extension for closure time.

I.2. Post-Closure Plans:

Post-closure care will not be needed for this facility because this is not a disposal facility.

I.3. Notice in Deed and Notice to Local Land Authority:

Because ~~Signetics~~ **Philips-Albuquerque** is only a hazardous waste storage facility and not a disposal facility, notation is not necessary in the deed informing potential purchasers of restrictions associated with a disposal site, as required by HWMR 206.D.2.i.j.

I.4 Closure Cost Estimate (HWMR 206.D.3.c.):

An estimated $80,000 (June 1985 cost estimate) will be needed to close the ~~Signetics~~ **Philips-Albuquerque** hazardous waste storage facilities. The closure costs are presented by activity in Table I-1. Activities include removal of waste inventory, decontamination, disposal of rinsates, removal of tanks, lab analyses, and closure certification.

This closure cost estimate will be kept on file at the ~~Signetics~~ **Philips** facility. It will be revised whenever a change in the closure plan affects the cost of closure. It will be adjusted annually (from the date of its original development) to reflect changes in closure cost brought about by inflation. The Department of Commerce's Annual Implicit Price Deflator for Gross National Produce* will be used to make this adjustment.

* Department of Commerce, Survey of Current Business.

1.5 Financial Assurance Mechanism for Closure (HWMR 206.D.3.d.):

1.5.a. Financial Test and Corporate Guarantee for Closure (HWMR 206.D.3.d.(5)):

Per the document in Exhibit I-2, ~~Signetics~~ **Philips-Albuquerque** has elected to utilize the Financial Test as a mechanism for assuring closure funds. This document will be updated within 90 days after the close of each succeeding fiscal year.

1.6. Post-Closure Cost Estimate (HWMR 206.D.3.e.):

Since all wastes will be disposed of off-site, there will be no post-closure activities or costs.

1.7. Financial Assurance Mechanism for Post-Closure (HWMR 206.D.e.f.):

Since all wastes will be disposed of off-site, there will be no post-closure activities or costs.

TABLE I-1
COST OF CLOSURE ESTIMATE

A.	Tanks		
	a)	Chemicals for neutralization of rinsate	$ 1,000
	b)	Disposal Cost of 20,000 gallons of contents and rinsates	26,000
	c)	Disposal Cost of 20 drums of contaminated liquids from vaults @ $100/drum	2,000
	d)	Disposal of contaminated scraps, plumbing	5,000
	e)	Crane rental - 8 hours @ $100/hour	800
	f)	Steam cleaner rental 2 days @ $100/day	200
	g)	Laboratory analyses of sludges and residuals	2,000
	h)	Plant labor 96 hours @ $10/hour	960
	i)	supervision 50 hours @ $30/hour	1,500
		Sub-total	$ 39,460
B.	Other Containers		
	a)	Disposal cost of 100 drums @ $100/drum	$ 10,000
	b)	Plant labor 16 hours at $10/hour	160
	c)	Lab analyses of various drums	5,000
		Sub-total	$ 15,160
C.	General		
	a)	Safety clothing and equipment @ $100/worker	$ 500
	b)	Certification	
		1) ~~Signetics~~ **Philips-Albuquerque** supervisor-24 hours @ $30/hour	720
		2) New Mexico Professional Engineer-60 hours @ $60/hour	3,600
	c)	Solid wastes left from clean-up-10 drums @ $100/drum	1,000
		Sub-total	$ 5,820
D.	Total of Sub-totals		
	a)	Tanks	$ 39,460
	b)	Other Containers	15,160
	c)	General	5,820
		Sub-total	$ 60,440
E.	Peripheral		
	a)	15% Administrative	$ 9,426
	b)	15% Contingencies	9,426
		Total Closure Cost (1985 Dollars)	$ 79,292

I.8. Liability Insurance (HWMR 206.D.3.h.):

~~Signetics~~ **Philips-Albuquerque** has obtained liability insurance for sudden and accidental occurrences in the amount of $4 million per occurrence with an annual aggregate of $8 million exclusive of legal defense costs. A copy of the signed certificate has been sent to the ~~Director~~ **Secretary** by certified mail. The certificate is worded as specified in HWMR 206.D.3.j.(10) (see Exhibit I-3).

I..8.b. Nonsudden Insurance (HWMR 206.D.3.h.(2)):

~~Signetics~~ **Philips-Albuquerque** is a storage facility; there fore, no liability insurance is required for a nonsudden accidental occurrence.

I.8.c. Financial Test (HWMR 206.D.3.h.(6)):

~~Signetics~~ **Philips-Albuquerque** has an insurance policy for sudden and accidental occurrences; therefore, the financial test is not necessary.

I.8.d. Variance Procedures (HWMR 206.D.3.h.(3)):

~~Signetics~~ **Philips-Albuquerque** will not request the ~~Director~~ **Secretary** for a reduction of liability amounts.

I.8.e. Adjustment Procedures (HWMR 206.D.3.h.(4)):

If the ~~Director~~ **Secretary** increases the amounts of liability coverage or elects to improve nonsudden liability coverage requirements, ~~Signetics~~ **Philips-Albuquerque** will immediately seek an adjustment to the insurance policy discussed above.

PERMIT ATTACHMENT G

PERMIT APPLICATION
SECTION D

PROCESS INFORMATION

This section discusses specific process information for the storage of containers and tanks (HWMR 206.D.4).

D.1. Containers:

D.1.a. Description of Containers:

The primary containment devices are 55-gallon metal drums. The two types of drums used at ~~Signetics~~ **Philips-Albuquerque** are reconditioned DOT 17H and reconditioned DOT 17E containers, **or equivelant.** ~~Signetics~~ **Philips-Albuquerque** buys all drums needed for waste disposal. The DOT 17H drums are open-head, 18 gauge body/bottom, with 14 gauge heads. The DOT 17E drums are bung type, 18 gauge body/bottom/head (see Exhibit D-2). **Solid waste may also be stored in cubic yard containers to minimize the use of 55-gallon drums.**

The DOT 17H drums **or cubic yard containers** are used for contaminated solid Toxic wastes while the DOT 17E drums are used for Ignitable Wastes. Steel drums for the Ignitable Wastes are recommended by the manufacturers of the virgin chemicals.

D.1.b. Container Management Practices:

All drums are stored indoors ~~between 60-80 degrees F~~. For liquid wastes, the drums are filled from smaller containers in the storage areas. The transferred wastes are brought by personnel to the storage areas in 5-gallon Nalgene carboys. For solid wastes, these are bagged and brought to the drum storage and transferred into the drums **or cubic yard containers**. The wastes include used Photoresist Acetone Mixture and Arsenic- or Mercury-contaminated solid materials. These wastes are accompanied by ~~chemical manifests~~ **hazardous waste labels identifying date, time, place of generation, generator's name, and description of waste** during transit ~~(see Exhibit D-1)~~.

In the storage areas (Chemical Storage #2 and Flammable Storage #4) (Exhibit D-3), the recipient drums are placed on pallets, four drums/pallet. Before any drums are used, an EPA hazardous waste label is attached to the recipient drums and a drum number assigned. Each label is filled out with the following information: Proper DOT shipping name, UN number, Generator name, address, city, state, zip, EPA identification number, EPA waste number, and the accumulation start date. Labels required by the DOT are applied to the drums prior to shipment. The age of the drums is tracked by the date on the EPA label. The drums are stored on pallets to elevate them from contact with standing liquids. All drums are single stacked.

A drum will be opened to add wastes approximately 10-20 times before it is filled. The only tool used for opening and closing drums is a bung wrench. To transfer liquid wastes, the Chemical Tech pours the waste through a spigot carefully to avoid spillage. The two-inch bung caps are replaced each time waste chemicals are poured into the drums. To transfer contaminated solid materials, the Chemical Tech places the Hazardous Waste plastic bag into the drum and replaces the top head and bolt ring to the drum **or places the waste into the cubic yard container and replaces the top of the container**. This procedure is followed for every addition to the drum. When additions are made to either drum, the Chemical Tech fills out on a Hazardous Waste Drum Log (see Exhibit D-9) the date the addition was made, type of waste added, chemical manifest reference number, and the Tech's initials. These logs are filled out for each drum used and are placed in same area as drums. After the drums are full, the drum logs are maintained in a permanent file by drum number.

The drums are placed by the Chemical Tech in the designated area as outlined by yellow-striped warning tape.

The Ignitable Wastes and Arsenic-Contaminated Solid Wastes are stored in separate areas due to possible incompatibility. No smoking or open flames are allowed in the vicinity of the storage areas.

The storage areas are inspected daily to assure that the drums are in good condition and that the base remains impervious and is in good condition. Inspection logs are completed and kept on file in Chemical Support for the life of the facility.

D.1.c. Location of Waste Storage:

The two areas where the wastes are stored are:

1) Chemical Storage #2 (solid waste contaminated with mercury or arsenic) and

2) Flammable Storage #4 (Ignitable Waste). Both areas have signs designating them as DANGER areas with only authorized personnel allowed to enter. (Signs are in both English and Spanish.)

Flammable Storage #4 has total capacity of 36 drums single stack, while Chemical Storage #2 has a potential total capacity of 64 drums double stacked whose maximum height does not exceed 8'. When necessary, the two storage areas can be expanded with more floor space allocated for hazardous wastes.

D1.d. Description of Container Storage Area:

There are two container storage areas located inside the facility. The area where the Arsenic- or Mercury-Contaminated Waste is located is within Chemical Storage #2. The Ignitable Waste is stored in Flammable Storage #4 (see Exhibit D-3).

Flammable Storage #4 - has inside dimensions of 22' by 26' with ~~572~~ **550** square feet of floor space. The floor is an 1" concrete slab and the walls are 8" concrete masonry units. (All walls are one-hour fire-rated.) The room is also equipped with make-up and exhaust air. The room has 6' double doors on the west, north, and east walls. There is a 3' door in the southeast section of the room. The doors on the north and east walls are fire-rated for one hour. The doors on the west and southeast are strictly for occupancy separation. The floor-to-ceiling height slopes from north to south (16-1/4' to 25-1/2').

The roof has a 4' x 4' x 1/4" explosion vent which will open when the internal pressure of the room exceeds 600 pounds per square inch. The roof is metal beam with a 10.5" concrete waffle slab covered with a 4" concrete topping over a waterproof membrane.

The floor is at a slope which drops four inches from each wall to the center. The floor has a 4" floor drain which is attached to a drain line running to the "Solvent" Waste Tank. The tank has a 5,000 gallon capacity which is sufficient to contain 10% (200 gallons) of the stored drums. Spills or leaks will be cleaned up by applying commercial flammable absorbing agents and disposed of properly.

Chemical Storage #2 - has 2611 square feet of floor space (see Exhibit D-3 for dimensions of the room). The floor is an 8" concrete slab with walls which are 8" masonry units. The container storage area is located in the southwest corner of the room and is bound by yellow strip tape with 172 square feet of available storage space. The room has 10' wide electric roll-up gates on the north and south walls. The room also has 3' doors on the north and south walls. The floor-to-ceiling height slopes from north to south (26-1/4' to 25-1/2').

The roof is metal beam with two layers of 1-5/8" rigid fiberglass insulation covered with a 4" concrete topping over a waterproof membrane.

The floor has a 3" drain line that runs north into the piping trench. Here the line is attached to a 6" acid waste drain which is connected to the waste water treatment system. The piping trench is equipped with a sump, air pump, and level controls in case of a spill. As the level rises, the float turns on the air pump. The discharge enters the waste water treatment system. Since the hazardous wastes stored in this room are in solid state, no drainage of hazardous waste will occur. Run-on into both storage areas is controlled by the asphalt drive on south side of each area being sloped away from the storage areas.

D.1.e. Test for Free Liquids:

~~Elemental~~ Arsenic is purchased as a ~~solid~~ **gas** and used in the manufacturing process as a ~~solid~~ **gas**. It does not come into contact with liquids. The only wastes are the rags and gloves used to ~~transfer the material~~ **clean equipment**. These wastes are collected from the glove box, bagged, labeled, and accumulated in drums. From knowledge of the process, there are no liquids in the arsenic waste drums. ~~The same applies to the mercury containing lamps.~~

D.2. Tanks (HWMR 206.D.5):

D.2.a. Description of Tanks:

There are three tanks in use at this facility for storage of hazardous wastes. These tanks were purchased as new during June 1982. The location of the three tanks is shown in Exhibit D-3. Tank 5 is a 5,000 gallon tank holding Hydrofluoric Acid Waste. Tank 4 is a 5,000 gallon tank containing Buffered Oxide Etch Waste. Tank 3 is a 5,000 gallon tank containing mixed Ignitable Solvent Waste. The waste in these three tanks is picked up by a waste transporter and taken to a TSD facility.

All three tanks are supported vertically, underground in covered vaults. These vaults are concrete and coated with chemically-resistant resins. The tanks are UL labeled. (See Exhibit D-4). Tanks 4 and 5 are flat bottom with flat tops. The tanks are fiberglass with reinforced plastic filament and supported by 5/16" nominal diameter Siemen-Martin grade steel PVC (ASTM-A-475) extended jackets. They are made by the reinforced plastic filament winding process providing a smooth inner surface, an interior layout from 20-30% by weight of noncontinuous glass strands having fiber lengths from 0.5 to 2.0 inches and an exterior layer of continuous roving interspersed with chopped strand glass reinforcement. The ultimate stress is 120,000 psi. The tanks are 10' in diameter and 8'6" high. The tanks were built in 1982 and conform to PS 15-69 (Voluntary Product Standard) and ASTM D3299-74 tank design criteria. The seams were constructed using the Centrifugal Molding Process. The tanks are synthetic veiled (corrosion barrier veil resistant) with a thickness of 7/32-11/32". They are corrosion resistant to 10R HF @ 150 degrees F or to 30% HF @ 100 degrees F. Other pertinent characteristics:

- Wind Load — 25 psf (87 mph)
- Wind Stress — safety 3 to 1
- Resin to glass ratio — 75/25-30
- Minimum 300 lbs live load with safety factor
- 3" vent with polypropylene screen
- Seismic load = 0.1 Zone III

Tank 3 is flat bottom with a flat top. The tank is constructed of mild steel with a wall thickness of 3/16". The tank is 10' in diameter and 8'6" in height. The tank was constructed in 1982 and conforms to UL58-76 (steel underground tank for flammable and combustible liquids) and

ASTM A36 tank design criteria. The seams are double welded butt, API 12F. The tank has a corrosion allowance o <0.002" per year.

Each tank is equipped with a 3" fill line which attaches to the main drain system from the process area. The piping material used to carry the waste from the generation point to the waste tanks is as follows:

1. From generation points to main drain line:
   - HF & BOE Lines — 2" SCH 80 DWV Pipe
   - Solvent Line — 2" SCH 40 Mild Steel Pipe

2. From main drain line to waste storage tanks:
   - HF & BOE Lines — 4" SCH 80 PVC Pipe
   - Solvent Line — 4" SCh 40 Mild Steel Pipe

3. Welding Method:

   - DWV Line — Fuse Seal
   - PVC Line — Glue
   - Mild Steel Line — Jointed by Threaded Steel Fittings

The tanks are attached to the bottom of each vault by four tank tie-down lugs. Each lug has two anchor 3/4" stainless steel bolts for attachment. Tanks 4 and 5 use viton gaskets with the bolts and tank 3 uses a teflon gasket. The tanks are designed to contain the highest specific gravity chemical used at Philips-Albuquerque.

Each tank is equipped with 24" standard manways, suction line, one feed line, level sensor, and two 3" blind flanges. Tanks 4 and 5 are equipped with goose-neck vents while Tank 3 has a 3" vent line which runs through the trench system and attaches to the outside of the building and vents to the atmosphere. The tanks are normally closed. None of the tanks has an inner liner. Due to the nature of the design and construction of the tanks, outer coatings are not required. All the tanks have 3" hose connections on the manhole covers for ease of unloading onto tank trucks. (See Exhibit D-4).

D.2.b. Tank Management Practices:

The waste tanks collect liquids through gravity feed from the sinks in the manufacturing process. The segregated wastes drain through pipes in the manufacturing area service aisles. The pipes penetrate the floor to the basement which then follow the service trench for 270 feet until connection with each tank. The pipes are accessible for visual inspections (see Exhibit D-5). The levels of the tanks are monitored daily by reading the Wesmar DLM 12 Digital Level Monitor. This information is recorded daily onto the Hazardous Waste Storage Tank Log. The tanks are equipped with level monitors which have visual alarms that light up when the levels

of each tank reach 5'9" and again when level reaches 7'6". (Full tank height is 8'). The daily level monitoring ensures that the Chemical Tech is aware of the level of each tank.

When the total storage of each tank reaches 4,700 gallons, the waste is transported to a TSD facility. When the storage of Tanks #4 and #5 reach a combined total of 4,700 gallons, the waste is transported to a TSD facility. Since Tank #3 is the 200 gallon containment "sump" for FS #4, the waste is transported to a TSD facility when the level reaches 4,000 gallons. So that the "sump" condition is maintained at all times, waste solvent generation is stopped when the level in the tank reaches ~~4,800~~ **4,700** gallons.

The tanks are vented to atmosphere so there exists no pressure buildup in the tanks and the tanks are operated outside at ambient temperatures. Since no off-site wastes are collected, the tank wastes are "predictable" due to permanent drain hookups in manufacturing.

On a daily basis, an inspection log (See Section F) for the tanks is completed. The items checked are: visual inspection of tanks, visual inspection of vault, waste chemical feed systems, and the presence of odors. Every month the trench area is inspected. The visual inspection program allows for identification of potential problems and expedites preventative maintenance and good housekeeping procedures for the plant. During the inspection, the Chemical Tech checks for leaking pipes and pumps, tank corrosion, puddles, deterioration of support or foundations, stains on walls, stains along drainage areas, and all forms of deterioration in containment facilities. Construction plans specify that none or minimal buried or concealed drain lines be installed in order to facilitate inspection and easy detection of problems.

A complete record of the inspection logs and preventative maintenance actions is kept at the facility.

D.2.c. Description of Secondary Containment:

Secondary containment for the underground storage tanks is provided by a concrete vault for each tank. (See Exhibit D-6.) The overall inside dimensions for each vault is 11' wide by 11' long and 13'10" deep. Each vault has a one-foot blockout used for ventilation of the areas. Usable containment dimensions are 11' wide by 11' long and 10'8" deep. Vault #3 is coated on the base and walls with Ceilcote Ceilcrete 6650 B (see Exhibit D-7a). Vaults #4 and #5 are coated with Ceilcote Flakeline 232 (see Exhibit D-7b) on the base and the walls.

There exists no drains in the secondary containment vaults. The usable containment capacity for each vault is 9,600 gallons which represents 192% of the 5,000 gallon tank capacity.

The concrete walls and base are 8" thick and reinforced with rebar. The rebar is 3/4" running vertically while being crosshatched with 1/2" rebar.

Each vault is covered with a 1/4" thick checker plate vault cover whose dimensions are 11'7-3/4"a x 11'7-3/4". Each cover has a continuous neoprene gasket glued to the edge so that

water seepage is minimal. Each cover has a 25-5/8" x 25-5/8" manhole with hinged cover for access to vault. Two 12" x 12" handholds with hinged covers are also attached for access to the suction line and the open vault (see Exhibit D-8).

D.3. Waste Piles and Surface Impoundment:

There are no waste piles, surface impoundments, or incinerators or land treatment at this site.

Revised Part A

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GSA No. 0248-EPA-OT

For EPA Regional Use Only

Date Received
Month Day Year

EPA
United States Environmental Protection Agency
Washington, DC 20460

Hazardous Waste Permit Application Part A

(Read the Instructions before starting)

I. Installation's EPA ID Number *(Mark 'X' in the appropriate box)*

[ ] A. First Part A Submission

[X] B. Part A Amendment #_____

C. Installation's EPA ID Number: NMD000709782

D. Secondary ID Number *(If applicable)*:

II. Name of Facility

PHILIPS SEMICONDUCTOR

III. Facility Location *(Physical address not P.O. Box or Route Number)*

A. Street: 9201 PAN AMERICAN FRWY. NE

Street *(Continued)*:

City or Town: ALBUQUERQUE

State: NM

Zip Code: 87113 –

County Code *(If known)*:

County Name: BERNILILLO

B. Land Type (Enter code):

C. Geographic Location
LATITUDE *(Degrees, Minutes, & Seconds)*: 35 05 02 0
LONGITUDE *(Degrees, Minutes & Seconds)*: 106 39 01 5

D. Facility Existence Date
Month Day Year: 11 15 1980

IV. Facility Mailing Address

Street or P.O. Box: SAME

City or Town:

State:

Zip Code: –

V. Facility Contact *(Person to be contacted regarding waste activities at facility)*

Name *(Last)*: COCHRAN

(First): JAMES

Job Title: ES&H MANAGER

Phone Number *(Area Code and Number)*: 505 – 822 – 7678

VI. Facility Contact Address *(See instructions)*

A. Contact Address
Location [X] Mailing [ ] Other [ ]

B. Street or P.O. Box:

City or Town:

State:

Zip Code: –

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EPA I.D. Number *(Enter from page 1)*	Secondary ID Number *(Enter from page 1)*
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VII. Operator Information *(See instructions)*

Name of Operator: PHILIPS SEMICONDUCTOR

Street or P.O. Box: 9201 PAN AMERICAN FRWY. NE

City or Town: ALBUQUERQUE | State: NM | ZIP Code: 87113 —

Phone Number *(Area Code and Number)*: 505 — 822 — 7000

B. Operator Type: P

C. Change of Operator Indicator: Yes [ ] No [ ] Date Changed: Month Day Year

VIII. Facility Owner *(See Instructions)*

A. Name of Facility's Legal Owner: PHILIPS ELECTRONICS NA INC.

Street or P.O. Box: 100 EAST 42ND STREET

City or Town: NEW YORK | State: NY | ZIP Code: 10017 — 5569

Phone Number *(Area Code and Number)*: 212 — 850 — 5000

B. Owner Type: P

C. Change of Owner Indicator: Yes [ ] No [ ] Date Changed: Month Day Year

IX. SIC Codes *(4-digit, in order of significance)*

Primary		Secondary	
3674	*(Description)* Integrated Circuits Manufacturer		*(Description)*
Secondary		**Secondary**	
	(Description)		*(Description)*

X. Other Environmental Permits *(See instructions)*

A. Permit Type *(Enter code)*	B. Permit Number	C. Description
P	166	AIR QUALITY
N	NMR00A198	NPDES-STORM WATER
E	2023A-5	WASTEWATER DISCHARGE

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EPA I.D. Number *(Enter from page 1)*	Secondary ID Number *(Enter from page 1)*
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XI. Nature of Business *(Provide a brief description)*

The Company is an integrated circuit manufacturer. The fabrication process consists of a series of chemical processes. The consist of masking, etching, cleaning, oxidation, metalization, and doping.

XII. Process Codes and Design Capacities

A. PROCESS CODE - *Enter the code from the list of process codes below that best describes each process to be used at the facility. Thirteen lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), describe the process (including its design capacity) in the space provided in item XIII.*

B. PROCESS DESIGN CAPACITY - *For each code entered in column A, enter the capacity of the process.*
1. AMOUNT - *Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.*
2. UNIT OF MEASURE - *For each amount entered in column B(1), enter the code from the list of unit measure codes below that describes the unit of measure used. Only the units of measure that are listed below should be used.*

C. PROCESS TOTAL NUMBER OF UNITS - *Enter the total number of units used with the corresponding process code.*

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
	Disposal:	
D79	Underground Injection	Gallons; Liters; Gallons Per Day; or Liters Per Day
D80	Landfill	Acre-feet or Hectare-meter
D81	Land Treatment	Acres or Hectares
D82	Ocean Disposal	Gallons Per Day r Liters Per Day
D83	Surface Impoundment	Gallons or Liters
D99	Other Disposal	Any Unit of Measure Listed Below
	Storage:	
S01	Container (Barrel, Drum, Etc.)	Gallons or Liters
S02	Tank	Gallons or Liters
S03	Waste Pile	Cubic Yards or Cubic Meters
S04	Surface Impoundment	Gallons or Liters
S05	Drip Pad	Gallons or Liters
S06	Containment Building-Storage	Cubic Yards or Cubic Meters
S99	Other Storage	Any Unit of Measure Listed Below
	Treatment:	
T01	Tank	Gallons Per Day or Liters Per Day
T02	Surface Impoundment	Gallons Per Day or Liters Per Day
T03	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; or Btu's Per Hour
T04	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
T80	Boiler	Gallons or Liters
T81	Cement Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
T82	Lime Kiln	
T83	Aggregate Kiln	
T84	Phosphate Kiln	
T85	Coke Oven	
T86	Blast Furnace	
T87	Smelting, Melting, Or Refining Furnace	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
T88	Titanium Dioxide Chloride Process Oxidation Reactor	
T89	Methane Reforming Furnace	
T90	Pulping Liquor Recovery Furnace	
T91	Combustion Device Used In The Recovery Of Sulfur Values From Spent Sulfuric Acid	
T92	Halogen Acid Furnaces	
T93	Other Industrial Furnaces Listed in 40 CFR §260.10	
T94	Containment Building-Treatment	Cubic Yards or Cubic Meters
	Miscellaneous (Subpart X):	
X01	Open Burning/Open Detonation	Any Unit of Measure Listed Below
X02	Mechanical Processing	Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; or Kilograms Per Hour
X03	Thermal Unit	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
X04	Geologic Repository	Cubic Yards or Cubic Meters
X99	Other Subpart X	Any Unit of Measure Listed Below

UNIT OF MEASURE	UNIT OF MEASURE CODE
Gallons	G
Gallons Per Hour	E
Gallons Per Day	U
Liters	L
Liters Per Hour	H
Liters Per Day	V
Short Tons Per Hour	D
Metric Tons Per Hour	W
Short Tons Per Day	N
Metric Tons Per Day	S
Pounds Per Hour	J
Kilograms Per Hour	R
Cubic Yards	Y
Cubic Meters	C
Acres	B
Acre-feet	A
Hectares	Q
Hectare-meter	F
Btu's Per Hour	I

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XII. Process Codes and Design Capabilities *(Continued)*

EXAMPLE FOR COMPLETING ITEM XII (Shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number		A. Process Code (From list above)	B. PROCESS DESIGN CAPACITY 1. Amount (Specify)	B. 2. Unit Of Measure (Enter code)	C. Process Total Number Of Units	For Official Use Only
X	1	S 0 2	5 3 3 . 7 8 8	G	0 0 1	
	1	S 0 2	1 5.0 0 0	G	0 0 3	
	2	S 0 1	5.5 0 0	G	0 0 2	
	3		.			
	4		.			
	5		.			
	6		.			
	7		.			
	8		.			
	9		.			
1	0		.			
1	1		.			
1	2		.			
1	3		.			

NOTE: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" processes (i.e., D99, S99, T04 and X99) in item XIII.

XIII. Other Processes *(Follow instructions from item XII for D99, S99, T04 and X99 process codes)*

Line Number (Enter #s in seq w/XII)		A. Process Code (From list above)	B. PROCESS DESIGN CAPACITY 1. Amount (Specify)	B. 2. Unit Of Measure (Enter code)	C. Process Total Number Of Units	D. Description Of Process
X	1	T 0 4	.			In-situ Vitrification
	1		.			
	2		.			
	3		.			
	4		.			

EPA I.D. Number *(Enter from page 1)*: N M D 0 0 0 7 0 9 7 8 2

Secondary ID Number *(Enter from page 1)*:

XIV. Description of Hazardous Wastes

A. **EPA HAZARDOUS WASTE NUMBER** - *Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR, Part 261 Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.*

B. **ESTIMATED ANNUAL QUANTITY** - *For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.*

C **UNIT OF MEASURE** - *For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:*

ENGLISH UNIT OF MEASURE	CODE	METRIC UNIT OF MEASURE	CODE
POUNDS	P	KILOGRAMS	K
TONS	T	METRIC TONS	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. **PROCESSES**

1. **PROCESS CODES:**

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in item XII A. on page 3 to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in item XII A. on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

1. *Enter the first two as described above.*
2. *Enter "000" in the extreme right box of item XIV-D(1).*
3. *Enter in the space provided on page 7, Item XIV-E, the line number and the additional code(s).*

2. **PROCESS DESCRIPTION:** *If a code is not listed for a process that will be used, describe the process in the space provided on the form (D.(2)).*

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER - Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

1. *Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.*
2. *In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "Included with above" and make no other entries on that line.*
3. *Repeat step 2 for each EPA Hazardous Waste Number that can be used to describe the hazardous waste.*

EXAMPLE FOR COMPLETING ITEM XIV (shown in line numbers X-1, X-2, X-3, and X-4 below) - A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

Line Number		A. EPA HAZARD WASTE NO. (Enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESS (1) PROCESS CODES (Enter code)									D. PROCESS (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
X	1	K	0	5	4	900	p	T	0	3	D	8	0				
X	2	D	0	0	2	400	P	T	0	3	D	8	0				
X	3	D	0	0	1	100	P	T	0	3	D	8	0				
X	4	D	0	0	2												Included With Above

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Secondary ID Number *(Enter from page 1)*:

XIV. Description of Hazardous Wastes *(Continued)*

Line Number	A. EPA HAZARDOUS WASTE NO. (Enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESSES (1) PROCESS CODES (Enter code)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1	D001	140	T	S02	Waste Water Solvent I
2	F003			S02	Included with Above
3	F002	2	TT	S02	Waste Solvent I
4	D002	50	T	S02	HF Acid
5	D002	55	T	S02	BOE
6	D004	3	T	S01	Arsenic Contaminated Waste
7	D009	140	P	S01	Mercury Contaminated Waste
8	D001	21	T	S01	Waste Solvent II
9	F003	8	T	S01	Waste Solvent II
10					
11					
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Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved, OMB No. 2050-0034 Expires 9-30-96
GSA No. 0248-EPA-OT

EPA I.D. Number *(Enter from page 1)*	Secondary ID Number *(Enter from page 1)*
N M D 0 0 0 7 0 9 7 8 2	

XV. Map

Attach to this application a topographic map, or other equivalent map, of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in this map area. See instructions for precise requirements.

XVI. Facility Drawing

All existing facilities must include a scale drawing of the facility (see instructions for more detail).

XVII. Photographs

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

XVIII. Certification(s)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Owner Signature	Date Signed
Name and Official Title (Type or print)	
Owner Signature	Date Signed
Name and Official Title (Type or print)	
Operator Signature	Date Signed
Name and Official Title (Type or print) Keith Hampe, Vice President Albuquerque Operations	
Operator Signature	Date Signed 12/6/94
Name and Official Title (Type or print)	

XIX. Comments

Note: Mail completed form to the appropriate EPA Regional or State Office. (Refer to instructions for more information)