



# PHILIPS

## Philips Components

### Signetics Company

a division of North American Philips Corporation

9201 Pan Am Fwy.  
P.O. Box 10272

Albuquerque, New Mexico 87184  
Telephone 505/822-7000

April 5, 1991

Mr. David Englert  
Hazardous Waste Program  
Environmental Improvement Division  
1190 St. Francis Dr.  
Santa Fe, NM 87503



Dear Mr. Englert:

Good Morning, David! Enclosed you will find our updated Contingency Plan per our annual inspection. Some items have changed on the Plan due to layoffs of personnel, changes to new equipment, and a change to safer solvents.

When we were changing the Contingency Plan, we also had to modify the Waste Analysis Plan, which is also enclosed, due to the changes in the make-up of waste streams, regulation changes in testing, and text.

I would like you to examine and make comments on the Contingency Plan before we issue to local agencies and hospitals. Do I need to send a copy to EPA Region VI? Also review the Waste Analysis Plan and let me know what happens due to the changes we made to the plan.

If you have any questions, please call me at (505) 822-7188.

Sincerely,

Gary M. Mavrakis  
Materiel/Environmental Manager  
Signetics-Albuquerque

## SECTION C

### WASTE CHARACTERISTICS

#### C.1 Waste Description:

This section describes the chemical and physical nature of the hazardous wastes stored at the Signetics 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 facility is as follows:

<u>Waste Name</u>	<u>Disposition</u>	<u>Approximate Quantity (1990)</u>
a) Waste Solvent I	5000-gl Tank Storage	20,000 Gallons
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	30 Drums
e) Waste Solvent II	55-gl Drum Storage	160 Drums
f) Mercury-contaminated Wastes	55-gl Drum Storage	1 Drums
a) Waste Solvent I (flash pt. 120 degrees F to >200 degrees F) - These photolithographic cleaning wastes consist primarily of: Methanol, Acetone, N-Methyl Pyrrolidone, Isopropanol, Xylene, 2(2-Aminoethoxy)ethanol, and water. The pH of the solution is 11-12. 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. Efforts are underway to decrease water content low to allow for cost effective reclamation.		
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. While all of these are assigned as D004, not all may meet the extractability 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 solid clean-up material which may include propylene glycol methyl ether acetate, methanol, acetone, organic resin, n-butyl acetate, xylene, ethyl lactate, ethyl acetate, aromatics, petroleum distillates, ink, adhesives, pigments, paints, and traces of trichlorotrifluoroethane. This waste has a flash point of 70-100 degrees F and is classified as D001, F002, and F003. In an effort to promote recycling, we have segregated our Freon wastes which may contain 1,1,2-trichloro-1,2,2-trifluoroethane and residual alcohols/oils. This waste has a flash point of >200 degrees F and is classified as F002/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 has no reactive wastes generated at this facility and no reactive wastes are managed at this location.

This Section is part of the operating record at Signetics' 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 ALBUQUERQUE WASTES - HAZARDS & RATIONALE FOR SELECTION**

**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 Mehtod 9040	Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods U.S. EPA SW-846, 2nd Edition
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
Arsenic	Atomic Absorption Method 7060	Ibid
TCLP		Federal Registrar March 29,1990

TABLE C-2 (Continued)

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-Trichloro- ethane (b)	GC/HSD Method 8010	Ibid
Xylene	GC/FID Method 8020	Ibid
N-methyl pyrrolidone	GC/FID Method 8015	Ibid
Hydrofluoric Acid	Titration Method C2.STD.8	SEMI BOSS 1988 (a)
Ammonium Fluoride	Titration Method C2.STD.2	SEMI BOSS 1988 (a)
Fluorides	Electrode Method 413B	Std. Methods for Water & Waste Water 16th Ed.
Normality	Titration Method C2.STD.2	SEMI BOSS 1988 (a)
Mercury-contami- nated Waste	Atomic Absorption Method 7470, 7471	Test Methods for Evaluating Solid Waste, Physical/ Chemical Methods U.S. EPA SW-846, 2nd Edition

TABLE C-2 (Continued)

2(2-aminoethoxy) ethanol	GC/FID Method 8015	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods U.S. EPA SW-846 2nd Edition
Propylene glycol methyl ether acetate	GC/FID Method 8015	Ibid
n-Butyl Acetate	GC/FID Method 8015	Ibid
Ethyl Lactate	GC/FID Method 8015	Ibid
Ethyl Acetate	GC/HSD Method 8015	Ibid
Aromatics	GC/FID Method 8020	Ibid
Petroleum distillates	GC/FID Method 8015	Ibid
Resins, inks, adhesives, pigments, paint	Knowledge of wastes and visual inspections.	

(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 Environmental Lab personnel.

TABLE C-3

METHODS USED TO SAMPLE HAZARDOUS WASTES

HAZARDOUS WASTE	SAMPLING METHOD	DESCRIPTION OF SAMPLING	REFERENCE
Solvent I	Sampling of Sol- id Wastes, Com- posite Liquid Waste Sampler, P.7	Composite sample using Dipper.	Note 1
Solvent II	Coliwasa	Coliwasa Composite.	Ibid
Hydrofluo- ric Acid	"Dipper Sampler"	Dipper Compo- site from top, middle and bottom of tank.	Ibid
Buffered Oxide Etch	"Dipper Sampler"	Dipper Compo- site from top, middle and bottom of tank.	Ibid
Arsenic Contamina- ted Waste	Sampling of Solid Wastes, Thief-P. 12 Trier-P. 12-14	Representative composite sample from 3 grab sam- ples at top, middle and bottom of drum using a Trier type scoop (labora- tory scoop).	Ibid
Mercury Contamina- ted Waste	Sampling of Sol- id 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 Evaluation of Solid Waste. Physical Methods EPA-SW-846, Second Edition 1982.

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 206.B.3.b.

TABLE C-4  
ANALYSIS CRITERIA AND FREQUENCY

WASTE	PARAMETERS	FREQUENCY
Solvent I	Corrosion rate or pH, Flash Point, Methanol, Acetone, Iso-propanol, N-methyl pyrrolidone, Xylene, 2(2-aminoethoxy) ethanol, and water.	Biannually
Solvent II	Corrosion rate or pH, Flash Point.	As needed for disposal
Hydrofluoric Acid	Corrosion rate or pH, Hydrofluoric Acid, Fluoride, Normality.	Biannually
Buffered Oxide Etch	Corrosion rate of pH, Hydrofluoric Acid, Fluoride, Normality.	Biannually
Arsenic Contaminated Waste	EP Toxicity, (Arsenic) TCLP	Annually
Mercury Contaminated Waste	EP Toxicity, (Mercury) TCLP	As needed for disposal

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

This facility only handles on-site generated wastes, therefore, requirements for wastes received from offsite generators do not apply.



## 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 nonsudden 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:	Signetics Company (NMD 000709782)
Location:	9201 Pan American Freeway, N.E. Albuquerque, NM 87113
Phone:	(505) 822-7000, 822-7188
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 Signetics Albuquerque facility:

<u>Waste Name</u>	<u>Disposition</u>
a) Waste Solvent I	5000/gal 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
- a) Waste Solvent I (flash pt. 120 degrees F to >200 degrees F) - These photolithographic cleaning wastes consist primarily of: Methanol, Acetone, N-Methyl Pyrrolidone, Isopropanol, Xylene, 2(2-Aminoethoxyethanol), and water. The pH of the solution is 11-12. 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. Efforts are underway to decrease water content low to allow for cost effective reclamation.
- b) Waste Hydrofluoric Acid is a product of silicon oxide etching and consisting mainly of .1-5% Hydrofluoric Acid (pH < 1). Due to the low pH, it is assigned D002.
- c) Waste Buffered Oxide Etch is also a product of silicon etching and includes Hydrofluoric Acid (0.1 - 5%) and Ammonium Fluoride (0.1 - 20%). The pH is 4. This waste is sometimes mixed with (c) for transport. It has also a high concentration of fluorides and is therefore segregated. It is assigned D002.
- 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. While all of these are assigned as D004, not all may meet the extractability criteria, however, they are all viewed as potentially toxic and are disposed as such.

c) sometimes mixed w/ (c)  
do they mean (b)?

why not directly  
mentioned?

how do they segregate (c)  
fluorides?  
to drums?

- e) Waste Solvent II is drummed mixtures of liquid proprietary vendor formulas of positive photoresists and solid clean-up material which may include propylene glycol methyl ether acetate, methanol, acetone, organic resin, n-butyl acetate, xylene, ethyl lactate, ethyl acetate, aromatics, petroleum distillates, ink, adhesives, pigments, paints, and traces of trichlorotrifluoroethane. This waste has a flash point of 70-100 degrees F and is classified as D001, F002, and F003. In an effort to promote recycling, we have segregated our Freon wastes which may contain 1,1,2-trichloro-1,2,2-trifluoroethane and residual alcohols/oils. This waste has a flash point of >200 degrees F and is classified as F002/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/gal tank storage are drained through plumbing connected to the manufacturing area. All plumbing are accessible to routine visual inspection, except the drain lines in the HW storage areas, CS2 and FS4.

Most 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 re situated in the storage area and small quantities are brought to the area and accumulated.

## 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**

Harry Hunsaker- Ext 7301 or Pager #13  
Safety and Health Services Manager  
Home: 8220 Leo Pl., N.E.  
Albuquerque, NM 87109  
Land Phone (505) 294-5303  
Cellular (505) 263-3720

Gary Mavrakis- Ext 7188 or Pager #63  
Materiel/Environmental Manager  
Home: 3028 El Marta Ct. N.E.  
Albuquerque, NM 87111  
Phone: (505) 275-7003

#### **Secondary**

Bob Sanders- Ext 7115 or Pager #53  
Security Manager  
Home: 5113 Noreen, N. E.  
Albuquerque, NM 87111  
Land Phone (505) 294-4226  
Cellular (505) 263-4452

Karl Giron- Ext 7342 or Pager #16  
Chemical Support Supervisor  
Home: 6609 Esther N.E.  
Albuquerque, NM 87109  
Phone: (505) 823-2071

### **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 Effect 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 a 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 Environmental Improvement Division (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 tornados 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. Signetics' ERT personnel will respond with extinguishers.

The Security Command Center will not be called unless absolutely necessary so that Security Officers remains 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 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 reading the digital level monitor located in the Chemical Support office.

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 least 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 cleanup of a spill, release, or fire is within the capabilities of company personnel and local response teams, the New Mexico Environmental Improvement Division, the National Response Center or the City of Albuquerque Water Dept. will not be notified unless one of the following occurs:

- o 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.
- o 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 cleanup procedures are completed.

**G.4.h Post-Emergency Equipment Maintenance:**

After an emergency event, all emergency equipment listed in Section G5 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 reading the digital level monitor 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 Dept. 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 of 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 Dept. 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 or 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 apparatus (30-minute capacity) are located in the hallway outside the wastewater 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 wastewater 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 eyewear, steel-toed boots or close-toed shoes, 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.g Communication and Alarm Equipment:**

General Purpose Plant-wide Emergency Equipment include:

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

The above equipment are 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 Chem Support area.

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

Signetics 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 (acknowledgement of receipt are in Exhibit G-3).

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

North Side Presbyterian  
Emergency Room  
501 Harper Dr. N.E.  
Albuquerque, NM 87113  
(505) 823-8080

Hazardous Waste Bureau  
Environmental Impr. Div.  
1190 St. Francis Dr.  
Harold Runnels Bldg.  
Santa Fe, NM 87503  
(505) 827-2850

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 SW  
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 Environmental Improvement Division's Emergency Response office at (505) 827-9329. The secondary Emergency Coordinator will call the New Mexico Environmental Improvement Division Emergency Number and report the incident.

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

- a. No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup 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 cleanup 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 Director. 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 to the original plan.

1. Albuquerque Fire Department
2. Albuquerque Police Department
3. North Side Presbyterian Hospital
4. Bob Sanders (Security Manager)
5. Director, Environmental Improvement Division
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.