

To: Distribution

From: F. G. Jeanson
Date: January 4, 1989

Subject: RELEASE AND SPILL REPORTING

VISTA

teroffice
communication

One of the requirements of the Emergency Planning and Community Right-to-Know Act of 1986, commonly referred to as SARA, is the reporting of releases of certain substances to the environment (Section 304). The report is to be made to the emergency coordinator of the local emergency planning committee and to the Mississippi Emergency Response Commission. This reporting requirement is in addition to the Superfund or CERCLA section 302(a) reporting to the National Response Center which we have been doing for some time. Naturally, the substances and conditions requiring notification are not the same for each of the reports.

Table I lists the substances used in the plant that require SARA release reporting. Table II lists the substances used in the plant that require CERCLA section 302(a) release reporting. The tables also show the reportable quantity for each of the substances. The regulations concerning when reporting is required are complex; therefore, the Environmental Coordinator should be contacted immediately in case of a spill or release to help determine if it requires reporting. In general, a spill or release of any substances in excess of the reportable quantity except for federally permitted discharges (most vinyl chloride emissions are federally permitted) must be reported.

Any non-permitted release of a gaseous material in excess of the reportable quantity will require reporting for both SARA and CERCLA 302(a). If greater than the reportable quantity of a liquid or solid is spilled on concrete and totally contained before it reaches any soil, the spill does not need to be reported by either SARA or CERCLA 302(a). If greater than a reportable quantity of a liquid or solid is spilled on the ground but the spill does not leave the plant boundary, it needs to be reported to CERCLA 302(a) only. If greater than the reportable quantity leaves the plant boundary, the spill will also need to be reported under SARA.

Attached is a form listing the questions usually asked when a release is reported to the National Response Center [CERCLA 302(a) list]. This form should be filled out by the operating personnel in the area where the release occurs prior to the phone call. Also attached is the Mississippi Emergency Management Agency Hazardous Material Release Report form. When notifying the emergency coordinator of the local emergency planning committee and the Mississippi Emergency Response Commission of a SARA release, the information in boxes 1 through 9 must be provided.

In addition to the verbal report of a SARA release, a written followup emergency notice is also required setting forth and updating the information required to be reported in the verbal report and to include additional information with respect to:

1. Actions taken to respond to and contain the release.
2. Any known or anticipated acute or chronic health risks associated with the release, and
3. Where appropriate, advice regarding medical attention necessary for exposed individuals.

This written report is to be sent to the emergency coordinator of the local emergency planning committee and to W. E. Austin, Special Projects Officer, SARA Title III, Mississippi Emergency Response Commission, P. O. Box 4501, Fondron Station, Jackson, MS 39216-0501. The written report is to be submitted as soon as practicable after the release. The written report should be submitted within ten days as a maximum.

F. G. Jeanson

F. G. Jeanson
Environmental Coordinator

rah

attachment

TABLE ISARA REPORTING MATERIALS

- Report to:
1. Jerome Huskey
Emergency Coordinator, Local Planning Committee
Work Phone: 601-369-6439
Home Phone: 601-369-6439
 2. Mississippi Emergency Response Commission
1-800-222-6362 In State (24-Hour Number)
1-601-352-9100 Out of State (24-Hour Number)
1-960-9000 Regular Hours

<u>Material</u>	<u>CAS Number</u>	<u>Reportable Quantity Pounds</u>
Ammonia (EHS)	7664-41-7	100
Chlorine (EHS)	7782-50-5	10
Hydrazine (EHS)	302-01-2	1
Hydroquinone (EHS)	123-31-9	1
Sulfuric Acid (EHS)	7664-95-9	1000

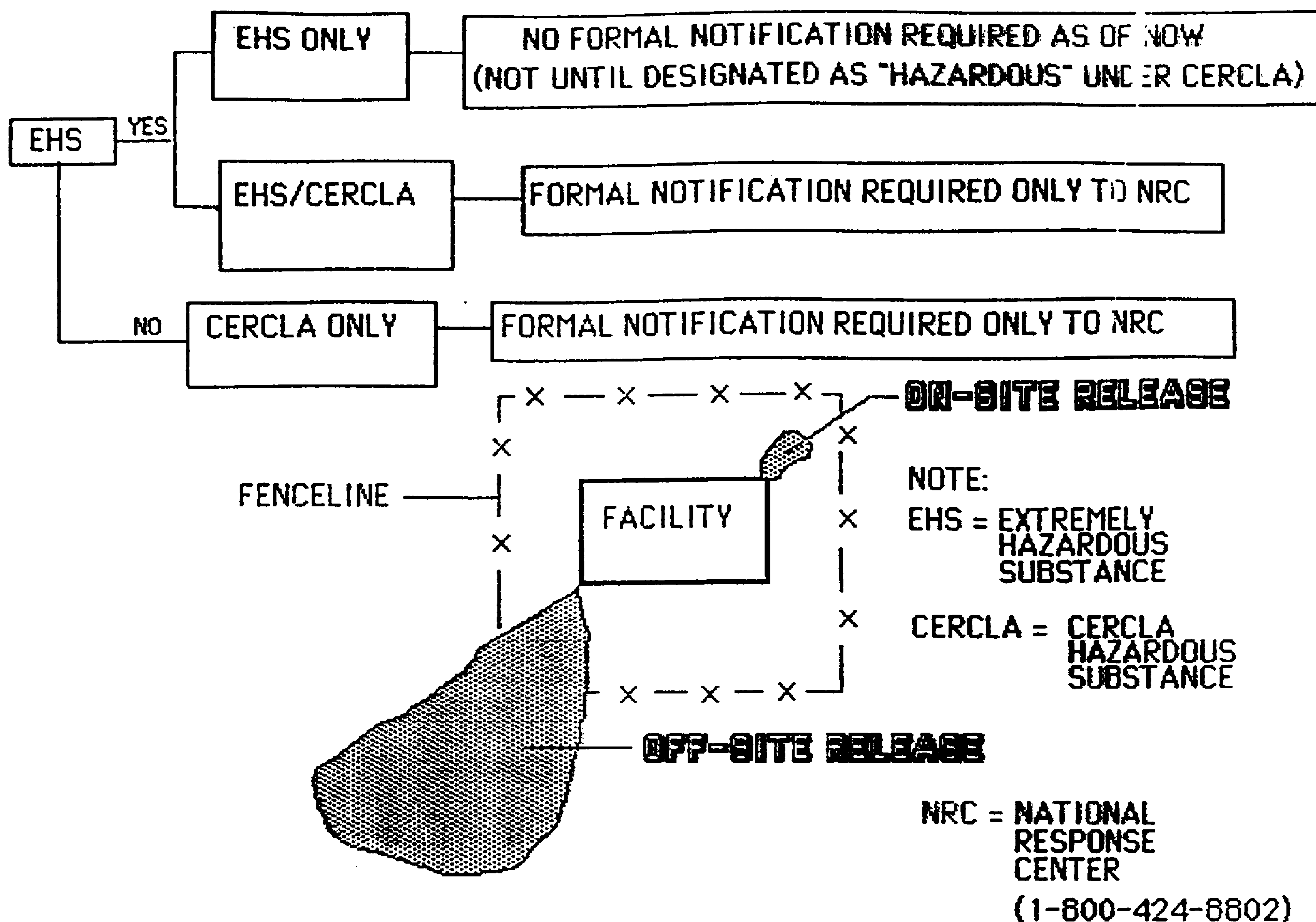
TABLE 11CERCLA 302(a) MATERIALS

Report to: National Response Center
1-800-424-8802

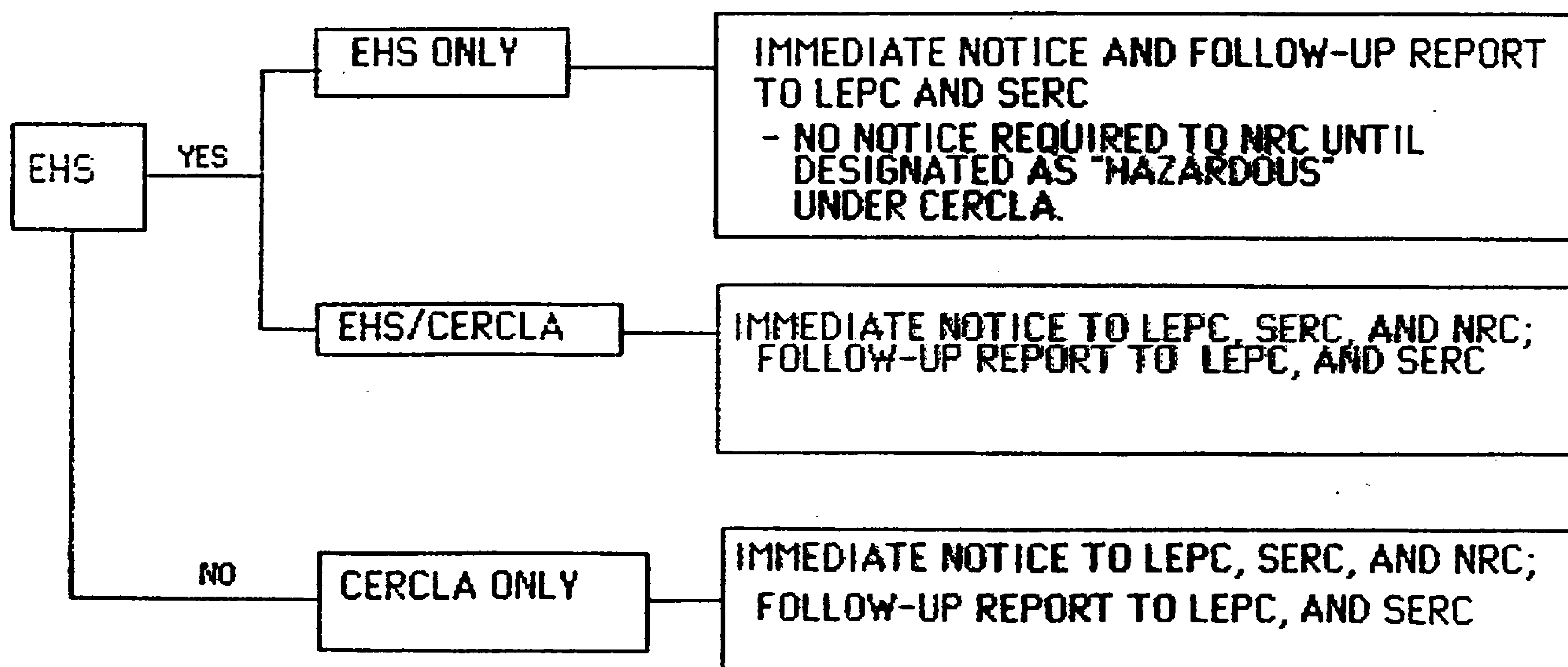
<u>Material</u>	<u>Reportable Quantity Pounds</u>
Ammonia	100
Antimony Trioxide	1000
Asbestos (Friable forms only)	1
Chlorine	10
Di-n-octyl Phthalate	5000
Hydrazine	1
Lead Stearate	5000
Lead Sulfate	100
Mercury	1
Methanol	5000
Phthalic Anhydride	5000
PCB's	10
Sodium Hydroxide	1000
Sulfuric Acid	1000
Vinyl Chloride	1
<u>Unlisted Hazardous Wastes:</u>	
Characteristic of Corrosivity	100
Characteristics of Toxicity	
Arsenic D004	1
Barium D005	1000
Cadmium D006	10
Lead D008	1
Characteristic of Ignitability	100
Characteristic of Reactivity	100

EMERGENCY RELEASE NOTIFICATION FLOWCHART: CERCLA AND TITLE III COMBINED REQUIREMENTS

1. ON-SITE RELEASE:



2. OFF-SITE RELEASE:



ATTACHMENT A

A

Superfund Reporting Checklist

Report?

I. Below RQ

II. Above RQ

1.0 Air

A. NESHAPS

1. VCM

- a) In VCM service
 - i) Process Vent
 - 1. Less than 10 ppm VCM for 3 hr. TWA No
 - 2. Exceeds 10 ppm std by less than RQ No
 - 3. Exceeds 10ppm std by more than RQ Yes
 - ii) RV/RD release Yes
 - iii) RV/RD leak No
 - iv) Other leaks No
 - v) Incinerator by-pass Yes
- b) Not in VCM service
 - i) Process Vent Yes
 - ii) RV/RD release Yes
 - iii) RV/RD leak Yes
 - iv) Other leaks No
- c) Massive Release Yes

May also be OSHA reportable within 24 hours if there is exposure

2. BENZENE

- a) In benzene service
 - i) Process vent
 - 1. In compliance with std No
 - 2. Above standard by less than RQ No
 - 3. Above standard by more than RQ Yes
 - ii) RV/RD release Yes
 - iii) RV/RD leak No
 - iv) Other leak No

- b) Not in benzene service
 - i) Process vent Yes
 - ii) RV/RD release Yes
 - iii) RV/RD leak Yes
 - iv) Leak No
- c) Massive release Yes
 May be OSHA reportable also

B. SIP

- 1. Release from specifically regulated point
 - a) In compliance with regulation No
 - b) Above regulation by less than RQ No
 - c) Above regulation by more than RQ Yes
- 2. Fugitive leak if SIP has fugitive control requirements No

C. OTHER

- 1. Continuous or routine releases No
- 2. Significant increase in continuous or routine release Yes

2.0 WATER

A. NPDES regulated discharge

- 1. Permit exceedance caused by spill of hazardous substance Yes
- 2. No permit exceedance No
- 3. Permit application identifies substance and amount (concentration) No
- 4. Stormwater outfall Yes

B. SPILLS

1. Ground

- a) Inside Plant
 - i) Volatile Yes
 - ii) Nonvolatile, nonporous surface No
 - iii) Nonvolatile, porous surface Yes
 - iv) Sewer (See NPDES)

(i) "Bulk resin" means a resin which is produced by a polymerization process in which no water is used.

(j) "Inprocess wastewater" means any water which, during manufacturing or processing, comes into direct contact with vinyl chloride or polyvinyl chloride or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product containing vinyl chloride or polyvinyl chloride but which has not been discharged to a wastewater treatment process or discharged untreated as wastewater. Gas-holder seal water is not inprocess wastewater until it is removed from the gasholder.

(k) "Wastewater treatment process" includes any process which modifies characteristics such as BOD, COD, TSS, and pH, usually for the purpose of meeting effluent guidelines and standards; it does not include any process the purpose of which is to remove vinyl chloride from water to meet requirements of this subpart.

(l) "In vinyl chloride service" means that a piece of equipment either contains or contacts a liquid that is at least 10 percent vinyl chloride by weight or a gas that is at least 10 percent by volume vinyl chloride as determined according to the provisions of § 61.67(h). The provisions of § 61.67(h) also specify how to determine that a piece of equipment is not in vinyl chloride service. For the purposes of this subpart, this definition must be used in place of the definition of "in VHAP service" in Subpart V of this part.

(m) "Standard operating procedure" means a formal written procedure officially adopted by the plant owner or operator and available on a routine basis to those persons responsible for carrying out the procedure.

(n) "Run" means the net period of time during which an emission sample is collected.

(o) "Ethylene dichloride purification" includes any part of the process of ethylene dichloride production which follows ethylene dichloride formation, excluding product storage following the final finishing column.

(p) "Vinyl chloride purification" includes any part of the process of vinyl

chloride production which follows vinyl chloride formation.

(q) "Reactor" includes any vessel in which vinyl chloride is partially or totally polymerized into polyvinyl chloride.

(r) "Reactor opening loss" means the emissions of vinyl chloride occurring when a reactor is vented to the atmosphere for any purpose other than an emergency relief discharge as defined in § 61.65(a).

(s) "Stripper" includes any vessel in which residual vinyl chloride is removed from polyvinyl chloride resin, except bulk resin, in the slurry form by the use of heat and/or vacuum. In the case of bulk resin, stripper includes any vessel which is used to remove residual vinyl chloride from polyvinyl chloride resin immediately following the polymerization step in the plant process flow.

(t) "Standard temperature" means a temperature of 20° C (69° F).

(u) "Standard pressure" means a pressure of 760 mm of Hg (29.92 in. of Hg).

(v) "Relief valve" means each pressure relief device including pressure relief valves, rupture disks and other pressure relief systems used to protect process components from overpressure conditions. "Relief valve" does not include polymerization shortstop systems, refrigerated water systems or control valves or other devices used to control flow to an incinerator or other air pollution control device.

(w) "Leak" means any of several events that indicate interruption of confinement of vinyl chloride within process equipment. Leaks include events regulated under Subpart V of this part such as:

(1) An instrument reading of 10,000 ppm or greater measure according to Method 21 (see Appendix A of 40 CFR Part 60);

(2) Indications of liquid dripping;

(3) A sensor detection of failure of a seal system, failure of a barrier fluid system, or both; and

(4) Detectable emissions as indicated by an instrument reading of greater than 500 ppm above background for equipment designated for no detectable emissions measured according to Test Method 21 (see Appendix A of 40



MISSISSIPPI EMERGENCY MANAGEMENT AGENCY

NOTIFY MEMA IN THE EVENT OF:

- HAZARDOUS MATERIAL SPILLS
- SEVERE WEATHER DAMAGE
(tornado, thunderstorms, etc.)
- RADIOLOGICAL INCIDENTS
- MISSING/OVERDUE AIRCRAFT
- MAJOR FIRE or EXPLOSION
- FLOODING
- MAJOR TRANSPORTATION
ACCIDENTS (Highway, Air, Rail,
Marine, Pipeline)
- EVACUATIONS
- SEARCH and RESCUE
- REQUEST FOR NATIONAL
GUARD SUPPORT
- ANY EMERGENCY WHICH MAY REQUIRE STATE SUPPORT

EMERGENCY NOTIFICATION
1-800-222-6362

(24-HOUR IN STATE TOLL FREE)
OUT OF STATE (601) 352-9100

**MEMA WILL NOTIFY THESE STATE AGENCIES IN
THE EVENT OF AN EMERGENCY:**

- DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
- STATE DEPARTMENT OF HEALTH
Division of Radiological Health
- STATE HIGHWAY DEPARTMENT
- PUBLIC SERVICE COMMISSION
- HIGHWAY PATROL
- NATIONAL GUARD
- DEPARTMENT OF WILDLIFE
CONSERVATION
- OIL AND GAS BOARD

— POST THIS NOTICE FOR EMERGENCY REFERENCE —

VAB.0001150667
07/87

**MISSISSIPPI EMERGENCY MANAGEMENT AGENCY
HAZARDOUS MATERIAL RELEASE REPORT**

1. Release Location

2. Date

____/____/____

3. Time

5. Contact for further information:

Name: _____

Title: _____

Address: _____

City: _____

State: _____ **Zip:** _____

Phone: _____

4. Company Name

6. Release Information

a) Name of substance: _____

b) NA/UN: _____ **CAS:** _____ **c) Est. Quantity:** _____

d) Date of Release: _____ **e) Time of Release:** _____

f) Duration of Release: _____

g) Release occurred into ☐ **Air** ☐ **Water** ☐ **Ground**

h) Substance is extremely hazardous ☐ **YES** ☐ **NO**

(per list in 40 CFR 355)

7. Recommended precautions

8. Anticipated Health Risks

9. Person reporting release:

Name: _____

Title: _____

Address: _____

City: _____

State: _____ **Zip:** _____

Phone: _____

10. Notified:

☐ **Pollution Control**

☐ **Radioecological Health**

Name: _____

Date: _____ **Time:** _____

11. Emergency Action Required:

☐ **None** ☐ **State** ☐ **Local**

12. Person taking report:

NATIONAL RESPONSE CENTER

TYPICAL QUESTIONS

800-424-8802

-
1. Name of person reporting the spill and/or release:
-
2. Company represented:
- Vista Polymers Inc.
3. Mailing address and phone number:
- P. O. Box 91, Aberdeen, Mississippi 39730 (601) 369-8111
4. Plant location:
- Highway 25 South
5. County:
- Monroe
6. Site of spill:
-
7. Material spilled:
-
8. Time and date of spill:
-
9. Wind direction, wind speed, barometric pressure:
-
10. Did spill enter a waterway: ☐ Yes ☐ No
11. Water body affected:
-
12. Source of spill:
-
13. Cause of spill:
-
-

NATIONAL RESPONSE CENTER
TYPICAL QUESTIONS
Page 2

A

14. Was equipment in operation at the time: ☐ Yes ☐ No

15. Size of spill:

16. Was there any property damage from the spill: ☐ Yes ☐ No

17. Corrective action taken to stop spill:

18. Did company personnel conduct cleanup: ☐ Yes ☐ No

19. Has the affected equipment been repaired: ☐ Yes ☐ No

20. Was anyone hurt: ☐ Yes ☐ No

21. Was any evacuation needed: ☐ Yes ☐ No

22. Have any other agencies been notified of the spill: ☐ Yes ☐ No

23. Do we have any plans to notify any other agency: ☐ Yes ☐ No

=====

1. Time and date incident reported to National Response Center: _____

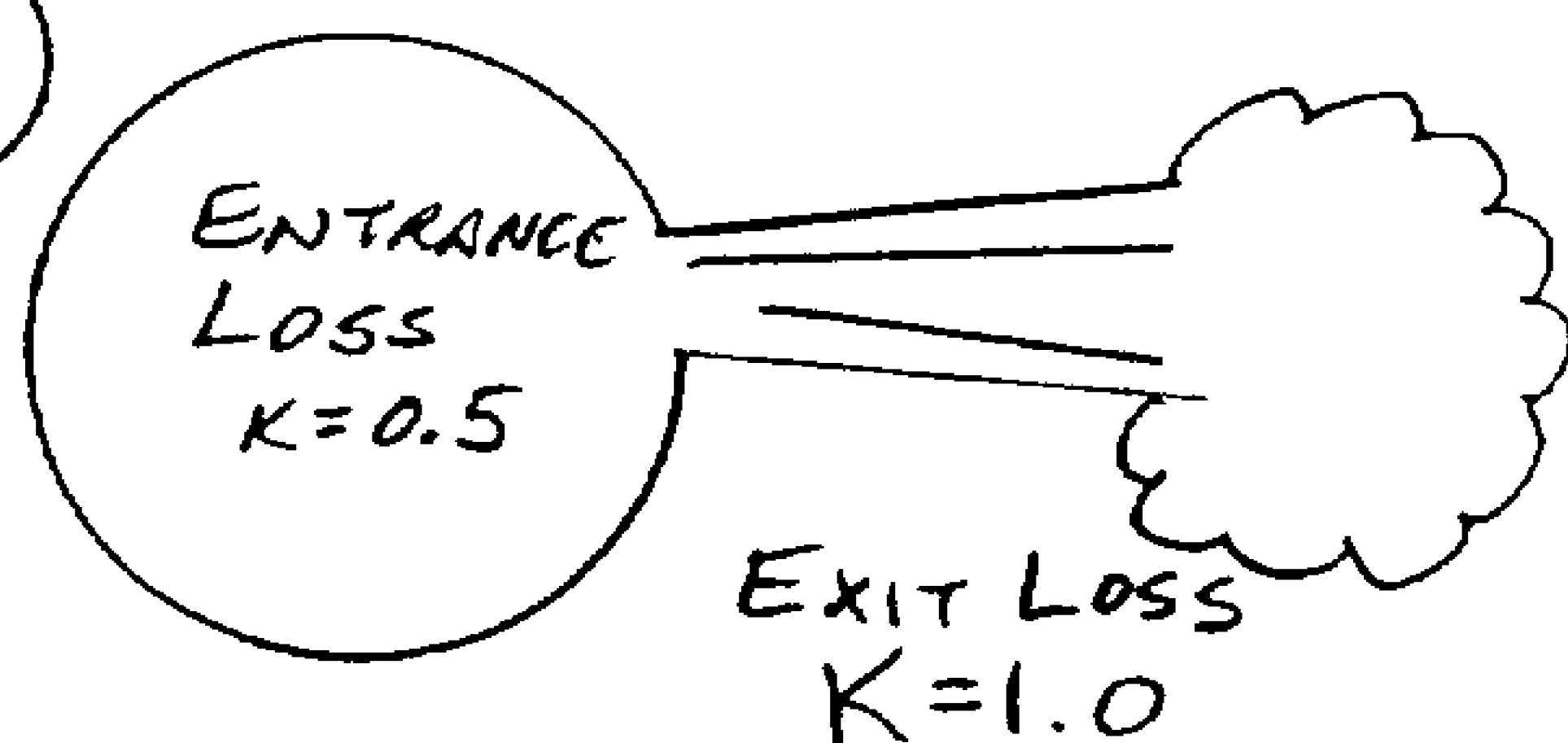
2. Name of person accepting report: _____

3. Other information requested: _____

4. Signed: _____

RELEASE CALCULATION PROCEDURES

#1



$K_T = 1.5$ ASSUMES ALL LOSS IS
EXIT + ENTRANCE (CONSERVATIVE,
MORE LOSS MEANS LESS RELEASE)

$$V = \sqrt{\frac{2Pg_c}{\rho K}}$$

ρ = DENSITY OF FLUID (lbm/ft^3) (SEE #2)

V = VELOCITY (ft/SEC)

P = PRESSURE OF LEAKING FLUID (psia)

$$g_c = 32.2 \text{ lbm ft} / \text{lb sec}^2$$

SUBSTITUTING FOR K, g_c :

$$V = 78.6 \text{ ft/sec} \sqrt{P/\rho}$$

MULTIPLY VELOCITY BY AREA OF LEAK (ft^2) AND DURATION
OF RELEASE (SECONDS) TO GET AMOUNT OF RELEASE (LBS)

#2

DENSITY (ρ)

$$PV = nRT \Rightarrow PV = \left(\frac{\dot{m}}{MW}\right)RT \Rightarrow \frac{\dot{m}}{V} = \frac{PMW}{RT} = \rho$$

$$\therefore \rho = \frac{PMW}{RT} = \frac{5.82P}{T}$$

MW OF VCM = 62.5

$$T = ^\circ\text{F} + 460$$

$$R = 10.73 \text{ PSIA FT}^3/\text{#MOLE } ^\circ\text{R}$$

$$P = \text{PSIA}$$

MW = MOLECULAR WEIGHT

USING IDEAL GAS LAW

$$\# \text{ VCM} = \frac{(MW)(P)(V)}{(R)(T)} = \frac{(62.5 \text{ #/MOLE})(\text{PSIA})(\text{ft}^3)}{(^{\circ}\text{R})(10.73 \frac{\text{PSIA FT}^3}{\text{#MOLE } ^\circ\text{R}})} = \frac{5.82 PV}{T}$$

Made By _____

Date _____

Page _____ of _____

Job No. _____

Title _____