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INTRODUCTION

INTRODUCTION

The purpose of this handbook is to provide instruction and direction to those persons administering environmental policy in the absence of the plant Environmental Coordinator. This may be used as a reference manual. Because policies and regulations are always changing, it will be important to revise this handbook quarterly. It is the responsibility of the Environmental Coordinator to keep this handbook current. The second page of this introduction will list the latest revisions and the dates of those revisions.

INTRODUCTION (continued)REVISIONDATE

First Issue

06/29/89

Second Issue

04/01/90

REGULATIONS

REGULATIONS

- CWA - CLEAN WATER ACT
- CAA - CLEAN AIR ACT
- NESHAP - NATIONAL EMISSION
STANDARDS FOR HAZARDOUS
AIR POLLUTANTS
- SARA - SUPERFUND AMENDMENTS
AND REAUTHORIZATION ACT
- RCRA - RESOURCE CONSERVATION
AND RECOVERY ACT
- CERCLA - COMPREHENSIVE
ENVIRONMENTAL RESPONSE,
COMPENSATION, AND LIABILITY
ACT
- TSCA - TOXIC SUBSTANCES CONTROL
ACT
- DOT REGULATIONS - DEPARTMENT OF
TRANSPORTATION

CLEAN WATER ACT - CWA

The Clean Water Act was passed by Congress in the 1970's. It set water quality standards for State and Local Water Quality Management Plans, effluent limitations for direct discharges and pretreatment standards, established the NPDES Permit System which regulates the discharge of pollutants into navigable waters and established rules regarding reporting, preventing and cleaning up spills of oil and hazardous substances.

CLEAN AIR ACT - CAA

The Clean Air Act Amendments passed by Congress in 1970 and 1977 to the Air Quality Act of 1967. It says that prevention and control of ambient and emission air quality standards is the responsibility of state and local governments supervised and approved by the EPA.

This act formed the following three programs which can be directly enforced by the EPA:

NAAQS	National Ambient Air Quality Standards sets maximum concentration levels for various pollutants to protect public health
NSPS	Established national emission standards for new sources (New Source Performance Standards)
NESHAP	National Emission Standards for Hazardous Air Pollutants includes 8 pollutants, one of which is Vinyl Chloride Monomer

NAAQS apply to six "criteria" pollutants presently. sulfur dioxide, particulate matter (dust), nitrogen dioxide, lead, carbon monoxide, and ozone. The EPA is responsible for reviewing and publishing these standards.

The NSPS provide nationally uniform standards to prevent individual states from lowering emission standards in order to attract industry. They are developed by category of industrial source and are based on the pollution control technology available to that category of source. A new source is a modified source that undergoes a physical change, or a change in method of operation, which results in new or increased emission of any pollutant. NSPS pertain to sulfur dioxide emissions from coal and oil-fired industrial steam generating units. Also particulate matter and nitrogen oxide emission limits were promulgated. VOC emissions from this facility come under NSPS.

NESHAP

To Vinyl and Support Department Employees

From R. W. Seymour

Date May 20, 1988

Interoffice
Communication

Subject ABERDEEN PLANT EARNS ENVIRONMENTAL AWARD

VISTA

Congratulations to the Vinyl Department employees and the employees in their support groups (maintenance, process and project engineering, laboratory, environmental, safety). Aberdeen Plant employees were awarded the Vinyl Institute (a division of The Society of The Plastics Industry, Inc.) Environmental Achievement Award in recognition of outstanding performance for 1987 in the PVC category. Vista Chemical Company's plant in Aberdeen received the first place award for 1987.

The award was presented to plant employees today by T. H. Huffman, General Manager, VCM and Polymers, in the vinyl control room.

This award was presented to Vista for having a performance index of 100 or a perfect score calculated by a formula developed by the Vinyl Institute. This perfect score means that during the entire year 1987 the Aberdeen plant had no:

- relief valve discharges
- rupture disk releases
- residual VCM exceedances on slurry
- reactor opening loss exceedances
- manual vents
- incinerator bypasses

This achievement is certainly a quality performance every day by all of those involved in preventing VCM releases and in operating equipment properly to ensure minimum emissions possible throughout the year. Congratulations! This is an award you can all be proud of and the achievement benefits our employees and the Aberdeen community.


R. W. Seymour
Plant Manager

rah

cc: THH, RDG, RRS

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS - NESHAP

NESHAPs are nationally uniform standards oriented toward particular pollutants at the point of emission. Vinyl chloride is in this category. It applies to new and modified sources that commenced construction after EPA proposed an applicable NESHAP.

As with NSPS applications for approval of construction or modification must be made and accepted prior to the date on which construction or modifications is commenced. The following pages outline the part of the Federal Register that pertains to NESHAPs.

NATIONAL EMISSION STANDARD FOR HAZARDOUS AIR POLLUTANTS (NESHAPS)

40 CFR PART 61

General Provisions Sub Part A

Definitions 61.02

1. Alternative method
- 2 Capital expenditure
3. Compliance schedule

State Delegation 61 04(b)

Bureau of Pollution Control

Department of Natural Resources

Jackson, MS

Prohibited Activities 61.05

Don't modify without written approval from the Administrator
(State)

Application for Approval to Construct 61.07

Notification of Start-up 61 09

Initial Report 61 10

Waiver of Compliance 61.11

Up to two years

Compliance with Standards 61 12

Determine by tests specified in rules -

Alternate methods

Emission tests 61.13

Within 90 days of start up

Notify Agency 30 days before test

Modification 61 15

A change, operational or physical, that increases emissions is a modification unless it is not a capital expenditure or is routine maintenance

Subpart F - VCM

Definitions 61.61

In vinyl chloride service

Relief valve

Leak

Exhaust gas

3 hour period

Emission Standards for PVC Plants 61.64 Reactors

10 ppm exhaust gas limit

ROL

Slurry

PVC and VCM plant emission standards 61.65

(a) RVD's

(b) Fugitives

1. Loading & Unloading
2. Slip gauges
3. Rotating pumps
- 4 Reciprocating pumps
5. Rotating Compressors
6. Reciprocating Compressors
- 7 Agitators
- 8 Leaks from RV's

- 9 Manual Venting
- 10 Opening Equipment
- 11. Samples
- 12 Leak Detection and Elimination - Approval required
 - i Fixed point monitoring
 - ii Definition of a leak
 - iii Subpart V - annual performance test

Submit results in next quarterly
- 13 In process wastewater

Emission Tests 61 67

Method 106

Alternate method

Method 107

Emission Monitoring 61 68

Reporting 61.70

Quarterly Reports

Exception reporting

Recordkeeping 61 71

3 years

Leaks

Emission measurements

Daily reactor operating record including T and P

EPA REGULATION

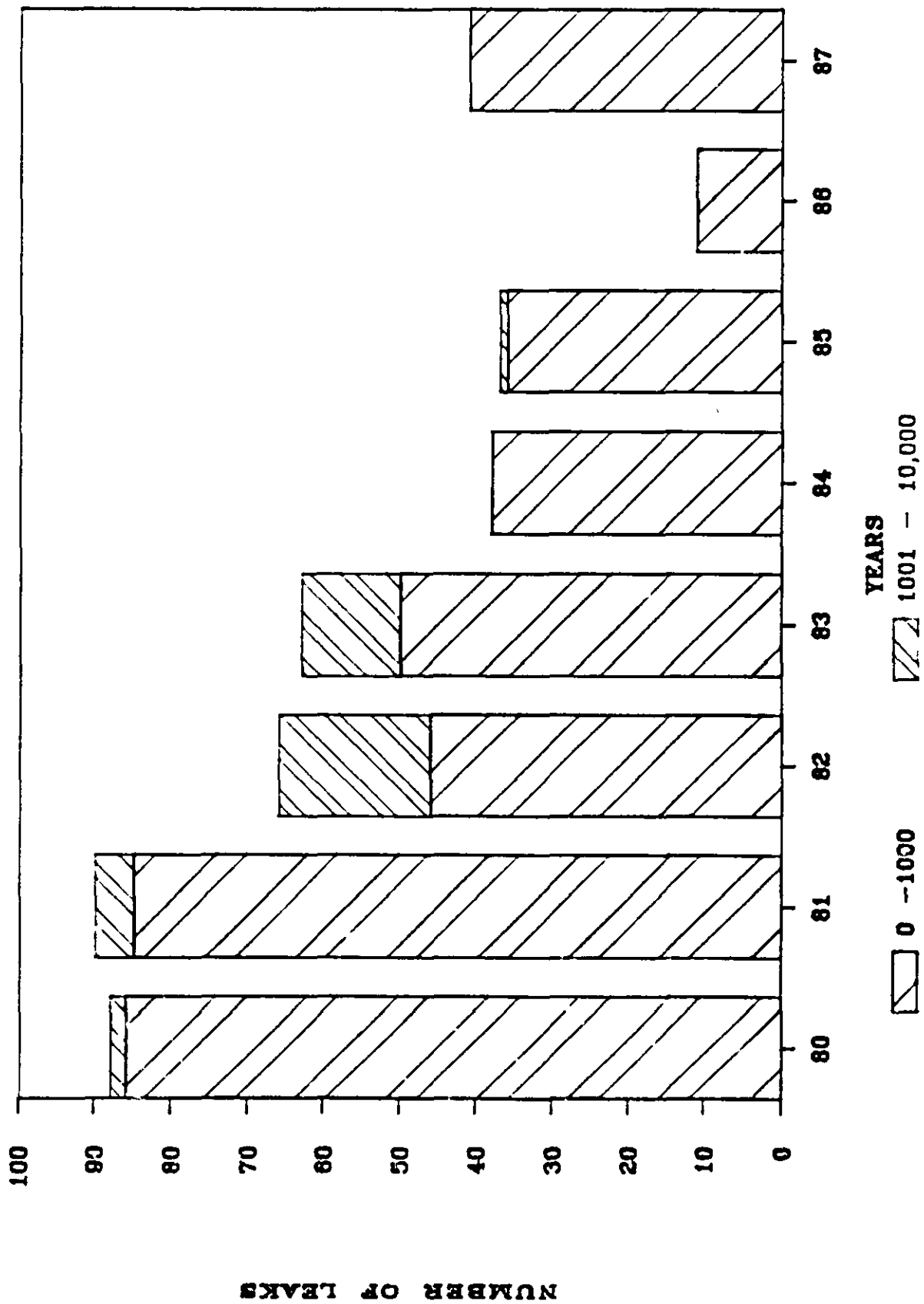
PROPOSED 12/24/75

PROMULGATED 10/20/76

PLANT OPEATED UNDER A WAIVER OF COMPLIANCE UNTIL SYSTEMS COULD BE INSTALLED TO MEET THE STANDARD 9/1/78.

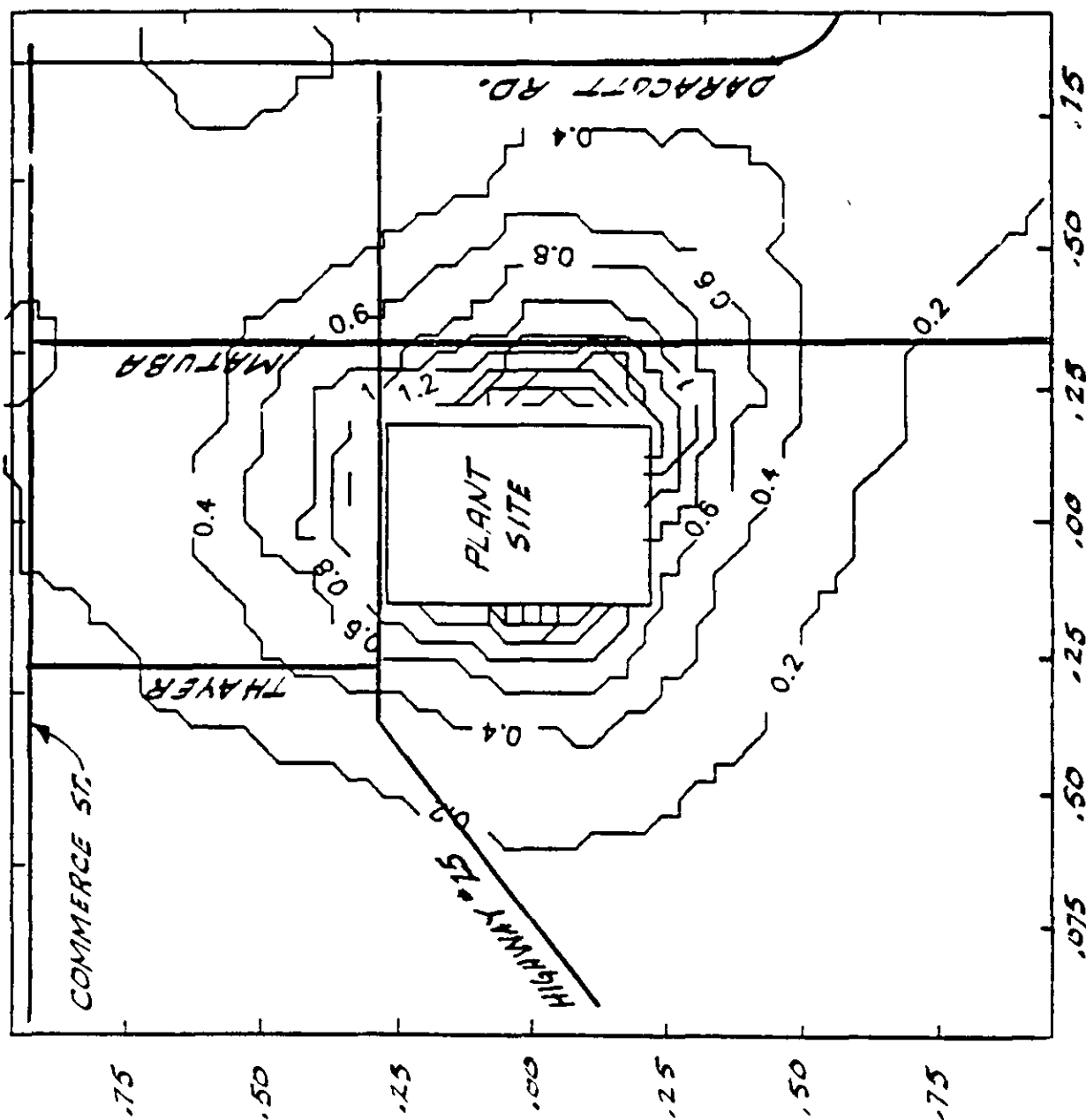
- STRIP SLURRY TO $\angle$ 400 PPM VCM
- REACTOR OPENING LOSS $\angle$ 20 PPM VCM
- NO MANUAL VENTING OF VCM
- NO RELIEF VALVE DISCHARGES OF VCM
- MINIMIZE FUGITIVE VCM EMISSIONS
 - o RAILCAR UNLOADING LINES
 - o DOUBLE MECHANICAL SEAL ON ROTATING PUMPS AND COMPRESSORS AND AGITATORS
 - o REDUCE VCM IN EQUIPMENT BEFORE OPENING TO ATMOSPHERE
 - o SAMPLES
 - o REQUIRED LEAK DETECTION AND ELIMINATION PLAN
- CONTINUOUS MONITORS
- PORTABLE MONITORS
 - o IN-PROCESS WASTEWATER STRIPPED TO LESS THAN 10 PPM VCM
 - o EXHAUST GASES REDUCED TO $\angle$ 10 PPM VCM
- EMISSION TESTS
- EMISSION MONITORING OF INCINERATOR OFFGAS
- REPORTING
- RECORDKEEPING

ANNUAL VCM SURVEY



VINYL CHLORIDE

ANNUAL AVERAGE CONCENTRATIONS PPB



EDGE MARKINGS IN MILES

1 PART PER MILLION PPM

1 INCH IN 16 MILES

1 MINUTE EVERY TWO YEARS

1 PART PER BILLION PPB

1 INCH IN 16,000 MILES

1 SECOND EVERY 32 YEARS

1 Teaspoon in the Astrodome

1 Chinese

SARA

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 - SARA

The Emergency Planning and Community Right-to-Know Act is a law included as Title III to SARA. SARA Title III represents Congress' response to concerns raised by the disaster in Bhopal, India in December 1984.

SARA Title III, Subtitle A

Mandates the establishment of State Emergency Response Commissions (SERCs) and Local Emergency Planning Committees (LEPCs) with responsibility to develop emergency plans and requires facilities to provide notification and supply information to these facilities.

SARA Title III, Subtitle B

The reporting requirements are the following:

- 302 Notification of identity of facilities subject to emergency planning provisions or those having extremely hazardous substances. Vista Safety Director is our emergency notification coordinator.
- 303 Submission of any "necessary" information by identified facilities under 302 to Local EPCs to assist in emergency planning.
- 304 Emergency notification of any release of a CERCLA hazardous substance or extremely hazardous substance into the environment to State ERC or Local EPC. A written followup report is also required.
- 311 Submission of material safety data sheets (MSDSs) or list of "hazardous chemicals" to State ERC, Local EPC and local fire department. This is updated every October.
- 312 Facilities must submit "emergency and hazardous chemical inventory forms" to the appropriate State ERC, Local EPC, and local fire department by March 1, 1988 and annually thereafter. Reporting is done in two tiers.
 - Tier I Reports give maximum and daily average amounts of hazardous chemicals present at the facility in the preceding year.
 - Tier II Reports give more detailed information on specific chemicals including maximum and daily average amounts present in the preceding year, the manner of storage for the chemical and the specific location of the chemical.
- 313 Annual Toxic Chemical Release Reporting to EPA and designated state officials is done in July of each year. Facilities manufacturing or processing more than 50,000 pounds in a year are required to submit the form. Facilities using listed toxic chemicals in quantities over 10,000 pounds in a calendar year are also required to submit the form.

TITLE III FACT SHEET

EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW



U S. Environmental Protection Agency

INTRODUCTION

On October 17, 1986, the "Superfund Amendments and Reauthorization Act of 1986" (SARA) was enacted into law. One part of the new SARA provisions is Title III, the Emergency Planning and Community Right-to-Know Act of 1986. Title III establishes requirements for Federal, State, and local governments and industry regarding emergency planning and 'community right-to-know' reporting on hazardous and toxic chemicals. This legislation builds upon EPA's Chemical Emergency Preparedness Program (CEPP) and numerous State and local programs aimed at helping communities to better meet their responsibilities in regard to potential chemical emergencies. The community right-to-know provisions of Title III will help to increase the public's knowledge and access to information on the presence of hazardous chemicals in their communities and releases of these chemicals into the environment.

Title III has four major sections: emergency planning (§301 - §303), emergency notification (§304), community right-to-know reporting requirements (§311, 312), and toxic chemical release reporting - emissions inventory (§313).

§301-303: Emergency Planning:

The emergency planning sections are designed to develop State and local governments' emergency

response and preparedness capabilities through better coordination and planning, especially within the local community.

Title III requires that the Governor of each State designate a State emergency response commission by April 17, 1987. If a State commission is not designated, the Governor will operate as the commission until the Governor makes such designation. While existing State organizations can be designated as the State emergency response commission, the commission can have broad-based representation. Public agencies and departments concerned with issues relating to the environment, natural resources, emergency services, public health, occupational safety, and transportation all have important roles in Title III activities. Various public and private sector groups and associations with interest and expertise in Title III issues also can be included in the State commission.

The State commission must designate local emergency planning districts by July 17, 1987, and appoint local emergency planning committees within one month after a district is designated. The State commission is responsible for supervising and coordinating the activities of the local emergency planning committees, for establishing procedures for receiving and processing public requests for information collected under other sections of Title III, and for reviewing local emergency plans.

This local emergency planning committee must include elected State

and local officials, police, fire, civil defense, public health professionals, environmental, hospital, and transportation officials as well as representatives of facilities subject to the emergency planning requirements, community groups, and the media. No later than September 17, 1987, facilities subject to the emergency planning requirements must designate a representative to participate in the planning process. The local committee must establish rules, give public notice of its activities and establish procedures for handling public requests for information.

The local committee's primary responsibility will be to develop an emergency response plan by October 17, 1988. In developing this plan, the local committee will evaluate available resources for preparing for and responding to a potential chemical accident. The plan must include

- Identification of facilities and extremely hazardous substances transportation routes
- Emergency response procedures, on-site and off-site
- Designation of a community coordinator and facility coordinator(s) to implement the plan
- Emergency notification procedures
- Methods for determining the occurrence of a release and the probable affected area and population

a quantity greater than its threshold planning quantity is subject to the emergency planning requirements. In addition, the State commission or the Governor can designate additional facilities, after public comment, to be subject to these requirements. By May 17, 1987, covered facilities must notify the State commission that they are subject to these requirements. If a facility begins to produce, use, or store any of the extremely hazardous substances in threshold quantity amounts, it must notify the State commission within 60 days.

Each State commission must notify EPA of all facilities subject to the emergency planning requirements, including facilities designated by the State commission or the Governor

§304: Emergency Notification

Facilities must immediately notify the local emergency planning committee and the State emergency response commission if there is a release of a listed hazardous substance that exceeds the reportable quantity for that substance. Substances subject to this requirement are substances on the list of 402 extremely hazardous substances as published in Federal Register on 11/17/86 and substances subject to the emergency notification requirements under CERCLA Section 103(a).

The initial notification can be by telephone, radio, or in person. Emergency notification requirements involving transportation incidents can be satisfied by dialing 911, or in the absence of a 911 emergency number, calling the operator.

This emergency notification needs to include:

- The chemical name
- An indication of whether the substance is extremely hazardous
- An estimate of the quantity released into the environment

- The time and duration of the release
- The medium into which the release occurred
- Any known or anticipated acute or chronic health risks associated with the emergency, and where appropriate, advice regarding medical attention necessary for exposed individuals
- Proper precautions, such as evacuation
- Name and telephone number of contact person.

Section 304 also requires the follow-up written emergency notice after the release. The follow-up notice or notices shall:

- Update information included in the initial notice, and
- Provide information on:
 - Actual response actions taken
 - Any known or anticipated data or chronic health risks associated with the release
 - Advice regarding medical attention necessary for exposed individuals.

Until State commissions and local committees are formed, releases should be reported to appropriate State and local officials

§311-312: Community Right-to-Know Reporting Requirements

There are two "community right-to-know" reporting requirements which apply primarily to manufacturers and importers. **Section 311** requires that facilities which must prepare or have available material safety data sheets (MSDS) under the Occupational Safety and Health Administration (OSHA) regulations to submit either copies of its MSDS or a list of MSDS chemicals to:

- The local emergency planning committee
- The State emergency response commission
- The local fire department.

If the facility owner or operator chooses to submit a list of MSDS chemicals, the list must include the chemical name or common name of each substance and any hazardous component as provided on the MSDS. This list must be organized in categories of health and physical hazards as set forth in OSHA regulations unless modified by EPA.

If a list is submitted, the facility must submit the MSDS for any chemical on the list upon the request of the local planning committee. Under **Section 311**, EPA may establish threshold quantities for hazardous chemicals below which no facility must report.

The initial submission of the MSDSs or list is required no later than October 17, 1987, or 3 months after the facility is required to prepare or have available an MSDS under OSHA regulations. A revised MSDS must be provided to update MSDS which were originally submitted if significant new information regarding a chemical is discovered.

The reporting requirement of **Section 312** involves submission of an emergency and hazardous chemical inventory form to the local emergency planning committee, the State emergency response commission and the local fire department. The hazardous chemicals covered by **Section 312** are the same for which facilities are required to submit MSDS or the list for **Section 311**.

Under **Section 312**, EPA may also establish threshold quantities for hazardous chemicals below which no facility must be subject to this requirement.

The inventory form incorporates a two-tier approach. Under Tier I,

- The name, location and type of business
- Whether the chemical is manufactured, processed, or otherwise used and the general categories of use of the chemical
- An estimate (in ranges) of the maximum amounts of the toxic chemical present at the facility at any time during the preceding year
- Waste treatment/disposal methods and efficiency of methods for each wastestream
- Quantity of the chemical entering each environmental medium annually
- A certification by a senior official that the report is complete and accurate.

EPA must establish and maintain a national toxic chemical inventory based on the data submitted. This information must be computer accessible on a national database.

In addition to the requirements for the emissions inventory in **Section 313**, EPA will arrange for a mass balance study to be carried out by the National Academy of Sciences using information collected from States that conduct a mass balance-oriented annual quantity toxic chemical release program. Mass balance

is the accounting of the total quantity of substances brought into a facility versus the amount that is shipped out. The difference is an indication of the amount released into the environment. A report of this study must be submitted by EPA to Congress no later than October 17, 1991.

The purpose of this study is to assess the value of obtaining mass balance information to determine the accuracy of information on toxic chemical releases. Also, the study will assess the value of using the information for determining the waste reduction efficiency and for evaluating toxic chemical management practices at categories of facilities. In addition, the study must determine the implications of mass balance information collected on a national scale including for use as part of a national annual quantity toxic chemical release program.

Other Title III Provisions

Section 322 of Title III addresses trade secrets and applies to emergency planning, community right-to-know, and toxic chemical release reporting. Any person may withhold the specific chemical identity of a hazardous chemical for specific reasons. Even if the chemical identity is withheld, the generic class or category of the chemical must be provided. The withholder must show each of the following:

- The information has not been disclosed to any other person other than a member of the local planning committee, a government official, an employee of such person or someone bound by a confidentiality agreement, that measures have been taken to protect the confidentiality, and that the withholder intends to continue to take such measures
- The information is not required to be disclosed to the public under any other Federal or State law
- The information is likely to cause substantial harm to the competitive position of the person
- The chemical identity is not readily discoverable through reverse engineering

However, even if chemical identity information can be legally withheld from the public, **Section 323** provides for disclosure under certain circumstances to health professionals who need the information for diagnostic purposes or from local health officials who need the information for assessment activities. In these cases, the person receiving the information must be willing to sign a confidentiality agreement with the facility.

Information claimed as trade secret and substantiation for that claim must be submitted to EPA. This includes information that otherwise would be submitted only to State or local officials, such as the emergency and hazardous material inventory (§312). People may challenge trade secret claims by petitioning EPA, which must then review the claim and rule on its validity.

EPA must publish regulations governing trade secret claims. The regulations will cover the process for submission of claims, petitions for disclosure and a review process for these petitions.

Section 305 of Title III authorizes the Federal Emergency Management Agency to provide \$5 million

Key Dates to Remember

(Continued from page 2)

July 1, 1988 (and annually thereafter)	Covered facilities submit initial toxic chemical forms to EPA and designated State officials (§313(a))
October 17, 1988	Local emergency planning committees complete preparation of an emergency plan (§303(a))
June 30, 1991	Comptroller general report to Congress on toxic chemical release information collection, use and availability (§313(k))
October 17, 1991	EPA report to Congress on Mass Balance Study (§313(l))

for each of fiscal years 1987, 1988, 1989, and 1990 for training grants to support State and local governments. These training grants are designed to improve emergency planning, preparedness, mitigation, response, and recovery capabilities. Such programs must provide special emphasis to hazardous chemical emergencies. The training grants may not exceed 80 percent of the cost of any such programs. The remaining 20 percent must come from non-Federal sources.

Under Section 305, EPA is required to review emergency systems for monitoring, detecting, and preventing releases of extremely hazardous substances at representative facilities that produce, use, or store these substances. EPA will report interim findings to Congress no later than May 17, 1987 and issue a final report of findings and recommendations to Congress by April 17, 1988.

The report must include EPA's findings regarding each of the following:

- Status of current technological capabilities to (1) monitor, detect, and prevent significant releases of extremely hazardous substances; (2) determine the magnitude and direction of the hazard posed by each release; (3) identify specific substances; (4) provide data on specific chemical composition of such releases; and (5) determine relative concentration of the constituent substances.
- Status of public emergency alert devices or systems for effective public warning of accidental releases of extremely hazardous substances into any media.
- The technical and economic feasibility of establishing, maintaining, and operating alert systems for detecting releases.

The report must also include EPA's recommendations for:

- Initiatives to support development of new or improved technologies or systems that would assist the timely monitoring, detection, and prevention of releases of extremely hazardous substances
- Improving devices or systems for effectively alerting the public in the event of an accidental release.

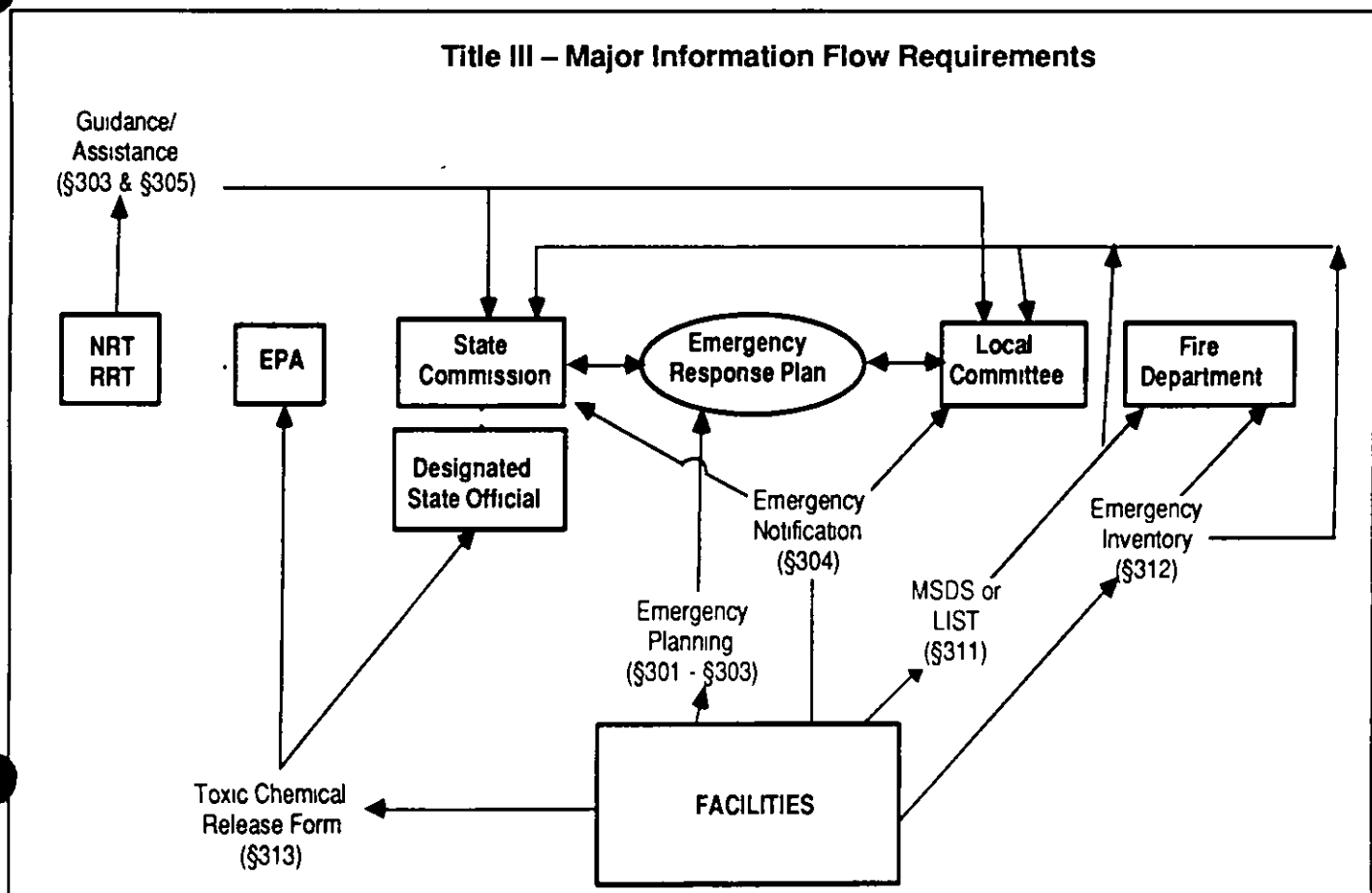
For more information on Title III and EPA's Chemical Emergency Preparedness Program, contact the CEPP Hotline:

1-800-535-0202

(In Washington, D.C. (202) 479-2449)

Hours. 8 30 am - 4 30 pm (EST),
Monday - Friday

This is NOT an emergency number



Vista Polymers
A Division of
Vista Chemical Company

Highway 25
Post Office Box 91

Aberdeen, Mississippi 39730
Phone (601) 369-8111

February 20, 1990

VISTA

Mr J E. Maher
Mississippi Emergency Response Commission
P O Box 4501, Fondren Station
Jackson, Ms. 39216-0501

Dear Sir:

Attached is the Section 312 reporting requirements for the Vista Chemical facility in Aberdeen, Mississippi. The Tier II forms have been completed per 40 CFR Part 370

If you have any questions or comments, please contact F G. Jeanson at (601)369-3637.

Sincerely,



R W. Seymour
Plant Manager

tjs

cc Jerome Husky
Local Emergency Planning Committee Chairman for Monroe County
Route 1 Box 275C
Greenwood Springs, Ms. 38848

Chief John P. George
125 West Commerce
Aberdeen, Ms. 39730

**Tier Two
EMERGENCY
AND
HAZARDOUS
CHEMICAL
INVENTORY**

Facility Identification

Name VISTA POLYMERS

Street Address P. O. BOX 91, HIGHWAY 25

City ABERDEEN State MS Zip 39130

SIC Code 2821 Date & Recd
Number 115270654

**FOR
OFFICIAL
USE
ONLY**

ID # _____ Date Received _____

**Specific
Information
by Chemical**

Owner/Operator Name _____
 Name WILLIAMS COMPANY Phone 1-714-351-3600
 Mail Address P. O. BOX 19029, HOUSTON, TX 77226
 Emergency Contact _____
 Name B. J. FRICK Title SALTY DIRECTOR
 Phone 1601 1369-3618 24 Hr. Phone 1601 1362-8111
 Name F. C. BLANSON Title INVENTORIAL COORDINATOR
 Phone 1601 1369-3637 24 Hr. Phone 1601 1362-8111

Important: Read all instructions before completing form

[illegible]

Certification (Read and sign after completing all sections)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

R. W. SEYMOUR / PLANT MANAGER

Name and official title of owner/oper/ator OR owner/oper/ator's authorized representative

Optional Attachments (Check one)

XX I have attached a list of nine coordinate abbreviations.

Facility Identification

Name VISTA POLYMERS

Street Address P. O. BOX 91, HIGHWAY 25

City ABERDEEN

State MS

Zip 39730

**Tier Two
EMERGENCY
AND
HAZARDOUS
CHEMICAL
INVENTORY**

Specific
Information
by Chemical

OS Code 2821 Date Rec'd 11-527 0654

FOR
OFFICIAL
USE
ONLY

Date Received

Owner/Operator Name

Name VISTA POLYMERS COMPANY Phone 1-601-369-1200

Mail Address P. O. BOX 19029, HOUSTON, TX 77224

Emergency Contact

Name B. J. PRIZGO Title SALLY DIRECTOR
Phone 1601-369-3618 24 Hr Phone 1601-369-8111

Name F. G. HANSON Title ENVIRONMENTAL COORDINATOR
Phone 1601-369-3637 24 Hr Phone 1601-369-8111

Reporting Period From January 1 to December 31, 19 89

Important: Read all instructions before completing form

Chemical Description

CAS 776644 417 Trade Secret ☐

Chem Name Ammonia

Check all that apply ☒ Pure ☐ Min ☐ Solid ☒ Liquid ☒ Gas

CAS 777822 505 Trade Secret ☐

Chem Name Chlorine

Check all that apply ☐ Pure ☒ Min ☐ Solid ☒ Liquid ☐ Gas

CAS 776644 939 Trade Secret ☐

Chem Name Sulfuric Acid

Check all that apply ☐ Pure ☒ Min ☐ Solid ☒ Liquid ☐ Gas

Inventory

Max. Daily Amount (code) 03 No of Days 02 365 Qty (days) 365

Physical and Health Hazards (check all that apply)
☒ Fire
☒ Spill Release
☒ Pressure
☒ Reactivity
☒ Immediate (acute)
☒ Delayed (chronic)

Storage Codes and Locations (Non-Confidential)

Storage Code Storage Locations

WFA

A 2 4
1 2 4
1 2 4

RMA

1 2 4
1 2 4
1 2 4

APA

WFA

A 1 4
1 2 4
1 2 4

Certification (Read and sign after completing all sections)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on my best knowledge of those individuals responsible for preparing the information, I believe that the submitted information is true, accurate and complete.

R. W. SEYMOUR/ PLANT MANAGER

Name and official title of owner/operator OR owner/operator's authorized representative

Signature R. W. Seymour

Date signed 2/21/90

Optional Attachments (Check one)

☒ I have attached a site plan
☒ I have attached a list of the chemicals and locations

I have attached a site plan
I have attached a list of site
candidate information

Facility Identification

Name VISTA POLYMERS
 Street Address P. O. BOX 91, HIGHWAY 25
 City ABERDEEN State NS Zip 19730

SAC Code 2821 Date Rec'd 11/5/77 0654

FOR
OFFICIAL
USE
ONLY

Date Received

Name VISTA POLYMERS COMPANY

Main Address P. O. BOX 19029, HOUSTON, TX 77224

Emergency Contact

Name B. J. BRIDG
 Phone (601) 369-1618

Name P. G. HANSON
 Phone (601) 369-3637

Title SALLY BIRL FOR
 24 Hr Phone (601) 362-8111

Title ENVIRONMENTAL COORDINATOR
 24 Hr Phone (601) 362-8111

Important: Read all instructions before completing form

Reporting Period From January 1 to December 31, 1989

Chemical Description

CAS 75014 Trade Secret ☐

Chem Name Vinyl Chloride Monomer

Check all that apply: ☒ Pure ☒ Mix ☐ Solid ☒ Liquid ☒ Gas

CAS 60242 Trade Secret ☐

Chem Name 2-Hydroxyethyl Mercaptan

Check all that apply: ☐ Pure ☒ Mix ☐ Solid ☒ Liquid ☐ Gas

CAS 128-37-0 Trade Secret ☐

Chem Name Thio-Organotin Compound;

2,6 Diterp. Butyl-p-Cresol

Check all that apply: ☐ Pure ☒ Mix ☐ Solid ☒ Liquid ☐ Gas

Physical and Health Hazards (check all that apply)

File ☒
 Sudden Release of Pressure ☒
 Reactivity ☒
 Immediate (acute) ☒
 Delayed (chronic) ☒

File ☒
 Sudden Release of Pressure ☒
 Reactivity ☒
 Immediate (acute) ☒
 Delayed (chronic) ☒

File ☒
 Sudden Release of Pressure ☒
 Reactivity ☒
 Immediate (acute) ☒
 Delayed (chronic) ☒

Inventory

Max. Daily Amount (code) 06
 Avg. Daily Amount (code) 05
 No. of Days On-site (days) 365

Max. Daily Amount (code) 03
 Avg. Daily Amount (code) 02
 No. of Days On-site (days) 365

Max. Daily Amount (code) 03
 Avg. Daily Amount (code) 03
 No. of Days On-site (days) 365

Storage Codes and Locations (Non-Confidential)

Storage Code

Q 24 VTF
 A 24 VTF
 A 24 RMA

Q 14 RPW
 Q 14 RMA

Q 14 BPW
 Q 14 CDA

Certification (Read and sign after completing all sections)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on my knowledge of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

Name and official title of owner/operator OR owner/operator's authorized representative
R. W. SEYMOUR / PLANT MANAGER

Signature
R. W. Seymour

Date signed
2/2/90

Optional Attachments (Check one)

☒ I have attached a site plan
☒ I have attached a list of site coordinate abbreviations

Tier Two EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY		Facility Identification		Owner/Operator Name	
Name <u>VISTA POLYMERS</u>		Name <u>VISTA POLYMERS COMPANY</u>		Name <u>VISTA POLYMERS COMPANY</u>	
Street Address <u>P. O. BOX 91, HIGHWAY 25</u>		Street Address <u>P. O. BOX 19029, HOUSTON, TX 77224</u>		Street Address <u>P. O. BOX 19029, HOUSTON, TX 77224</u>	
City <u>ABERDEEN</u>		City <u>ABERDEEN</u>		City <u>ABERDEEN</u>	
State <u>MS</u>		State <u>MS</u>		State <u>MS</u>	
Zip <u>39230</u>		Zip <u>39230</u>		Zip <u>39230</u>	
SIC Code <u>2821</u>		SIC Code <u>2821</u>		SIC Code <u>2821</u>	
Dun & Bradstreet Number <u>015270656</u>		Dun & Bradstreet Number <u>015270656</u>		Dun & Bradstreet Number <u>015270656</u>	
FOR OFFICIAL USE ONLY		FOR OFFICIAL USE ONLY		FOR OFFICIAL USE ONLY	
Date Received		Date Received		Date Received	

Important: Read all instructions before completing form		Reporting Period From January 1 to December 31, 1989	
Chemical Description		Storage Codes and Locations (Non-Confidential)	
CAS <u>9002895</u> Trade Secret ☐		Storage Code <u>114</u> <u>RPW</u>	
Chem Name <u>Polyvinyl Alcohol</u>		Storage Code <u>114</u> <u>RMA</u>	
(Alcotex 72.5)		Storage Code <u>114</u> <u>RMA</u>	
Check all that apply: ☐ Pure ☒ Mix ☒ Solid ☒ Liquid ☐ Gas		Inventory Avg. Daily Amount (code) <u>03</u> No. of Days On-site (days) <u>365</u>	
Physical and Health Hazards (check all that apply): ☒ Fire ☐ Subsonic Release of Pressure ☐ Reactivity ☒ Immediate (acute) ☒ Delayed (chronic)		Storage Code <u>114</u> <u>RMA</u>	
CAS <u>64741657</u> Trade Secret ☐		Storage Code <u>114</u> <u>RMA</u>	
Chem Name <u>Odorless Mineral Spirits</u>		Storage Code <u>114</u> <u>RMA</u>	
Check all that apply: ☒ Pure ☒ Mix ☒ Solid ☒ Liquid ☐ Gas		Inventory Avg. Daily Amount (code) <u>03</u> No. of Days On-site (days) <u>365</u>	
Physical and Health Hazards (check all that apply): ☒ Fire ☐ Subsonic Release of Pressure ☐ Reactivity ☒ Immediate (acute) ☒ Delayed (chronic)		Storage Code <u>114</u> <u>RMA</u>	
CAS <u>9002895</u> Trade Secret ☐		Storage Code <u>114</u> <u>RMA</u>	
Chem Name <u>Polyvinyl Alcohol, Polyvinyl Acetate</u>		Storage Code <u>114</u> <u>RMA</u>	
Methanol, Methyl Acetate		Storage Code <u>114</u> <u>RMA</u>	
79-20-9, 67-51-1		Storage Code <u>114</u> <u>RMA</u>	
Check all that apply: ☐ Pure ☒ Mix ☒ Solid ☒ Liquid ☐ Gas		Inventory Avg. Daily Amount (code) <u>03</u> No. of Days On-site (days) <u>365</u>	
Physical and Health Hazards (check all that apply): ☒ Fire ☐ Subsonic Release of Pressure ☐ Reactivity ☒ Immediate (acute) ☒ Delayed (chronic)		Storage Code <u>114</u> <u>RMA</u>	
Certification (Read and sign after completing all sections)		Optional Attachments (Check one)	
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.		☒ I have attached a site plan ☒ I have attached a list of site coordinate abbreviations	
Name and official title of owner/operator OR owner/operator's authorized representative		Date signed	
R. W. SEYMOUR / PLANT MANAGER		2/4/92	

Facility Identification

Name VISTA POLYMERS
 Street Address P.O. BOX 91, HIGHWAY 25
 City ABILEEN State TX Zip 79230

SIC Code 2821 Date Recd. 11/5/27
 FOR OFFICIAL USE ONLY
 Date Received

Tier Two EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific
Information
by Chemical

Owner/Operator Name

Name VISTA CHEMICAL COMPANY Phone 1711 3311 3400
 Mail Address P.O. BOX 19029, HOUSTON, TX 77224
 Emergency Contact
 Name B. J. FRIED Title SALES DIRECTOR
 Phone (601) 369-3618 24 Hr. Phone (601) 369-8111
 Name F. G. BLANSON Title ENVIRONMENTAL COORDINATOR
 Phone (601) 369-3637 24 Hr. Phone (601) 369-8111

Important: Read all instructions before completing form

Reporting Period From January 1 to December 31, 1989

Chemical Description

CAS 26748 470 Trade Secret ☐

Chem Name Cumyl Peroxynono-decanoate
(Esperox 939M) odorless mineral
spirits

Check all that apply Pure ☐ Mixture ☒ Solid ☐ Liquid ☒ Gas ☐

CAS 11611 629 Trade Secret ☐

Chem Name DI-(2 ethyl hexyl)
peroxydicarbonate (Lupersol 223M)
odorless mineral spirits

Check all that apply Pure ☐ Mixture ☒ Solid ☐ Liquid ☒ Gas ☐

CAS 29240 173 Trade Secret ☐

Chem Name Tertiary Amyl Peroxypropyl-
late (Lupersol 554M)

Check all that apply Pure ☐ Mixture ☒ Solid ☐ Liquid ☒ Gas ☐

Physical and Health Hazards

(check all that apply)

Flammable ☒
 Sudden Release of Pressure ☒
 Reactivity ☒
 Immediate (acute) ☒
 Delayed (chronic) ☐

Flammable ☒
 Sudden Release of Pressure ☒
 Reactivity ☒
 Immediate (acute) ☒
 Delayed (chronic) ☐

Flammable ☒
 Sudden Release of Pressure ☒
 Reactivity ☒
 Immediate (acute) ☒
 Delayed (chronic) ☐

Inventory

Max. Daily Amount (code) 03
 No. of Days On-site (days) 365

Storage Code N16
 Storage Locations RMA

Max. Daily Amount (code) 03
 No. of Days On-site (days) 365

Storage Code N16
 Storage Locations RMA

Max. Daily Amount (code) 03
 No. of Days On-site (days) 365

Storage Code N16
 Storage Locations RMA

Storage Codes and Locations
(Non-Confidential)

Storage Code

N16
RMA

N16
RMA

N16
RMA

Certification (Read and sign after completing all sections)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my knowledge of these individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

R. W. SEYHOUR / PLANT MANAGER

Name and official title of owner/operator OR owner/operator's authorized representative

Signed R. W. Seyhour

Date signed 2/21/90

Optional Attachments (Check one)

☒ I have attached a site plan
☒ I have attached a list of the coordinate abbreviations

[illegible]

Owner/Operator Name
Name VISTA CHEMICAL COMPANY Phone 1 713 331 1700
Mail Address P. O. BOX 19029, HOUSTON, TX 77224
Emergency Contact
Name B. J. FRAGO Title SAFETY DIRECTOR
Phone (601) 369-3618 24 hr Phone (601) 362-8111
Name F. G. HANSON Title ENVIRONMENTAL COORDINATOR
Phone (601) 369-3637 24 hr Phone (601) 362-8111

Facility Identification
Name VISTA POLYMERS
Street Address P. O. BOX 91, HIGHWAY 25
City ABERDEEN State MS Zip 39230
SIC Code 2821 Date Rec'd 11/5/27
FOR OFFICIAL USE ONLY
Date Received

Reporting Period From January 1 to December 31, 1989

Inventory	Max. Daily Amount (code)	Avg. Daily Amount (code)	No. of Days On-site (days)	Storage Codes and Locations (Non-Confidential)
Physical and Health Hazards (check all that apply)	02	02	365	Storage Code RMA RMA RPW
Fire Subst. Release at Pressure Reactivity Immediate (acute) Delayed (chronic)				
Fire Subst. Release at Pressure Reactivity Immediate (acute) Delayed (chronic)				
Fire Subst. Release at Pressure Reactivity Immediate (acute) Delayed (chronic)				

Chemical Description

CAS	11233	311	9	Trade Secret	
Chem Name	Hydroquinone				
1,4 Benzendiol					
Check all that apply	Pure	Min	Solid	Liquid	Gas
	X	X	X	X	
CAS	80	05	7	Trade Secret	
Chem Name	4,4 Isopropylidene diphenol (Bisphenol A)				
Check all that apply	Pure	Min	Solid	Liquid	Gas
	X	X	X	X	
CAS				Trade Secret	
Chem Name	Hexanol, Octanol, Decanol (Alfol 610)				
111-27-3, 111-87-5, 112-30-1					
Check all that apply	Pure	Min	Solid	Liquid	Gas
		X		X	

Certification (Read and sign after completing all sections)
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

Name and official title of owner/operator OR owner/operator's authorized representative
R. W. SEYMOUR / PLANT MANAGER

Signature R. W. Seymour Date 2/2/90

Optional Attachments (Check one)
☒ I have attached a site plan
☒ I have attached a list of site coordinate identifications

Facility Identification Name <u>VISTA POLYMERS</u> Street Address <u>P. O. BOX 91, HIGHWAY 25</u> City <u>ABERDEEN</u> State <u>MS</u> Zip <u>39230</u>		Owner/Operator Name <u>VISTA CHEMICAL COMPANY</u> Title <u>SALES DIRECTOR</u> Address <u>P. O. BOX 19029, HOUSTON, TX 77224</u> Phone <u>1601 1369-8111</u>	
Emergency Information by Chemical Specific Information by Chemical SC Code <u>2821</u> Date Rec'd <u>11/5/27</u>		Emergency Contact Name <u>B. L. TRIGO</u> Title <u>SALES DIRECTOR</u> Address <u>1601 1369-3618</u> Phone <u>1601 1369-8111</u>	
Date Received <u>11/5/27</u> Date Rec'd <u>11/5/27</u>		Name <u>F. G. JANSON</u> Title <u>ENVIRONMENTAL COORDINATOR</u> Address <u>1601 1369-3637</u> Phone <u>1601 1369-8111</u>	

Reporting Period From January 1 to December 31, 19-89

Important: Read all instructions before completing form

Chemical Description		Physical and Health Hazards		Inventory		Storage Codes and Locations	
		(check all that apply)		Avg. Daily Amount (code)		(Non-Confidential)	
				No. of Days On-site (days)		Storage Code	
CAS <u>13463677</u>	Titanium Dioxide	☐ Flammable ☐ Corrosive ☒ Irritant ☒ Toxic	☐ Volatile ☐ Soluble ☐ Insoluble	☐ 04 ☐ 03 ☐ 06 ☐ 05	☐ 1 ☐ 4 ☐ 4 ☐ 4	Storage Locations CDA CDA RPW	
CAS <u>1119073</u>	Octyl-Decyl Phthalate (108 P)	☐ Flammable ☐ Corrosive ☒ Irritant ☒ Toxic	☐ Volatile ☐ Soluble ☐ Insoluble	☐ 04 ☐ 03 ☐ 06 ☐ 05	☐ 1 ☐ 4 ☐ 4 ☐ 5	Storage Locations APA APA CDA	
CAS <u>84-75-3, 84-77-5, 117-84-0</u>	Hexy-octyl-decyl phthalate (610 P)	☐ Flammable ☐ Corrosive ☒ Irritant ☒ Toxic	☐ Volatile ☐ Soluble ☐ Insoluble	☐ 04 ☐ 04 ☐ 06 ☐ 05	☐ 1 ☐ 4 ☐ 5 ☐ 4	Storage Locations APA CDA APA RPW CDA	

Certification (Read and sign after completing all sections) I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on my best knowledge and belief, the information is true, accurate, and complete.	Optional Attachments (Check one) ☒ I have attached a site plan ☒ I have attached a list of site coordinate calculations
Name and official title of owner/operator OR owner/operator's authorized representative <u>R. W. SEYMOUR / PLANT MANAGER</u> Signature <u>R. W. Seymour</u> Date signed <u>2/24/90</u>	

Owner/Operator Name
Name VISTA CHEMICAL COMPANY Phone 1 3 6 1 1 1 2 0 0
Mail Address P. O. BOX 19029, HOUSTON, TX 77224
Emergency Contact
Name B. J. FRISCO Title SAFETY DIRECTOR
Phone 1 6 0 1 1 3 6 9 - 3 6 1 8 24 Hr. Phone 1 6 0 1 1 3 6 9 - 8 1 1 1
Name F. G. JANSON Title ENVIRONMENTAL COORDINATOR
Phone 1 6 0 1 1 3 6 9 - 3 6 1 7 24 Hr. Phone 1 6 0 1 1 3 6 9 - 8 1 1 1

Facility Identification
Name VISTA POLYMERS
Street Address P. O. BOX 91, HIGHWAY 25 City ABERDEEN State MS Zip 39230
EPC Code 2 8 2 1 Date Rec'd 1 1 5 2 7 0 6 5 4
FOR OFFICIAL USE ONLY
Date Received

Reporting Period From January 1 to December 31, 1982

Storage Codes and Locations (Non-Confidential)	
Storage Code	Storage Locations
A 1 4	APA
C 1 5	GDA
D 1 4	RPH
D 1 4	GDA
A 1 4	APA
C 1 5	GDA
D 1 4	RPH
D 1 4	GDA
A 1 4	APA
C 1 5	GDA
D 1 4	RPH
D 1 4	GDA
A 1 4	APA
C 1 5	GDA
D 1 4	RPH
D 1 4	GDA

Inventory

Max. Daily Amount (code)	Avg. Daily Amount (code)	No. of Days On-site (days)
0 4	0 4	3 6 5
0 4	0 3	3 6 5
0 4	0 4	3 6 5

Physical and Health Hazards
(check all that apply)

Pne	Subs. Release at Pressure	Reactivity	Immediate (acute)	Delayed (chronic)
☐	☐	☒	☒	☒
☐	☐	☒	☒	☒

Chemical Description

CAS	26761400	Trade Secret
Chem Name	D1-180-decyl phthalate (DIDP)	
Bisphenol A 80-05-7		
Check all that apply	Pure ☐ Mixture ☒ Solid ☐ Liquid ☒ Gas ☐	
CAS		Trade Secret
Chem Name	Tri (2 ethyl hexyl) trimellitate (TGHM)	
Topanol 1843-03-4		
Check all that apply	Pure ☐ Mixture ☒ Solid ☐ Liquid ☒ Gas ☐	
CAS		Trade Secret
Chem Name	Octanol, Decanol (Alfol 810 AI)	
111-87-5, 112-30-1		
Check all that apply	Pure ☐ Mixture ☒ Solid ☐ Liquid ☒ Gas ☐	

Certification (Read and sign after completing all sections)
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that based on my knowledge of these activities, the information is true, accurate and complete.

Optional Attachments (Check one)
☒ I have attached a site plan
☒ I have attached a list of the chemicals submitted

Signature R. W. SEYMOUR 2/24/90
Name and official title of owner/operator OR owner/operator's authorized representative Date signed

ADD000023337

Owner/Operator Name

Name VISTA CHEMICAL COMPANY Phone 713-331-1200

Mail Address P. O. BOX 19029, HOUSTON, TX 77224

Emergency Contact

Name B. J. TRIGO Title Safety Director

Phone 601-369-3618 24 Hr Phone 601-369-8111

Name F. G. ILANSON Title ENVIRONMENTAL COORDINATOR

Phone 601-369-3637 24 Hr Phone 601-369-8111

Facility Identification

Name VISTA POLYMERS

Street Address P. O. BOX 91, HIGHWAY 25

City ABERDEEN State MS Zip 39730

SIC Code 2821 Don't Read 11527 0654

FOR OFFICIAL USE ONLY

Date Received

Important: Read all instructions before completing form

Chemical Description	Physical and Health Hazards (check all that apply)	Inventory Max. Daily Amount (code)	Avg. Daily Amount (code)	No. of Days On-site (days)	Storage Codes and Locations (Non-Confidential)
CAS <u>7446</u> <u>142</u> <u>2</u> Chem Name <u>Tribasic Lead Sulfate</u> Trade Secret ☐	☐ Fire ☐ Sudden Release of Pressure ☒ Reactivity ☒ Immediate (acute) ☒ Delayed (chronic)	<u>04</u>	<u>04</u>	<u>365</u>	Storage Code J 1 4 J 1 4 RPW CDA
CAS <u>7439</u> <u>921</u> <u>1</u> Chem Name <u>Dibasic Lead Phosphite</u> Trade Secret ☐	☒ Fire ☐ Sudden Release of Pressure ☒ Reactivity ☒ Immediate (acute) ☒ Delayed (chronic)	<u>03</u>	<u>03</u>	<u>365</u>	Storage Code J 1 4 J 1 4 RPW CDA
CAS <u>6838</u> <u>853</u> <u>3</u> Chem Name <u>Dibasic Lead Phthalate</u> Trade Secret ☐	☐ Fire ☐ Sudden Release of Pressure ☒ Reactivity ☒ Immediate (acute) ☒ Delayed (chronic)	<u>03</u>	<u>03</u>	<u>365</u>	Storage Code J 1 4 J 1 4 RPW CDA

Certification (Read and sign after completing all sections)

I certify under penalty of law that I have personally audited and am familiar with the information submitted in this and all attached documents and that based on my inquiry of those individuals responsible for affixing the information, I believe that the submitted information is true, accurate and complete.

Name and official title of owner/operator OR owner/operator's authorized representative
R. W. SEYMOUR/ PLANT MANAGER
 Signature R. W. Seymour Date signed 2/2/90

Optional Attachments (Check one)

☒ I have attached a site plan

☒ I have attached a list of site contents attachments

Facility Identification

Name VISTA POLYMERS
Street Address P. O. BOX 91, HIGHWAY 25
City ABERDEEN State MS Zip 39230
SAC code 2821 Date Recd 11/5/27
FOR OFFICIAL USE ONLY
Date Received

Tier Two
EMERGENCY
AND
HAZARDOUS
CHEMICAL
INVENTORY
Specific Information by Chemical

Owner/Operator Name

Name VISTA CHEMICAL COMPANY Phone (601) 369-8111
Mail Address P. O. BOX 19029, HOUSTON, TX 77224
Emergency Contact
Name B. J. TRIGG Title DAILY DIRECTOR
Phone (601) 369-3618 24 Hr Phone (601) 369-8111
Name F. G. HANSON Title ENVIRONMENTAL LABORATORIAN
Phone (601) 369-3637 24 Hr Phone (601) 369-8111

Important: Read all instructions before completing form

Reporting Period From January 1 to December 31, 1989

Chemical Description	Physical and Health Hazards	Inventory	Storage Codes and Locations
CAS <u>130964</u> Chem Name <u>Antimony Oxide</u> Trade Secret ☐ Check all that apply: ☒ Pure ☐ Min ☒ Solid ☐ Liquid ☐ Gas	Fire ☐ Explosion ☐ Reactivity ☒ Immediate (acute) ☒ Delayed (chronic) ☒	Max. Daily Amount (code) <u>04</u> Avg. Daily Amount (code) <u>03</u> No. of Days On-site (days) <u>365</u>	Storage Code <u>4</u> RPW <u>4</u> CDA <u>4</u>
CAS <u>104154</u> Chem Name <u>Acrylic Polymers</u> (K-175, K-120N, KM 330, KM0653) Trade Secret ☐ Check all that apply: ☐ Pure ☒ Min ☒ Solid ☐ Liquid ☐ Gas	Fire ☐ Explosion ☐ Reactivity ☒ Immediate (acute) ☒ Delayed (chronic) ☒	Max. Daily Amount (code) <u>04</u> Avg. Daily Amount (code) <u>04</u> No. of Days On-site (days) <u>365</u>	Storage Code <u>4</u> RPW <u>4</u> CDA <u>4</u>
CAS <u>104154</u> Chem Name <u>Para-toluene Sulfonic Acid</u> Trade Secret ☐ Check all that apply: ☐ Pure ☒ Min ☐ Solid ☒ Liquid ☐ Gas	Fire ☐ Explosion ☐ Reactivity ☒ Immediate (acute) ☒ Delayed (chronic) ☒	Max. Daily Amount (code) <u>03</u> Avg. Daily Amount (code) <u>02</u> No. of Days On-site (days) <u>365</u>	Storage Code <u>4</u> RPW <u>4</u> CDA <u>4</u>

Certification (Read and sign after completing all sections)
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.
Name and official title of owner/operator OR owner/operator's authorized representative: R. H. SEYMOUR / PLANT MANAGER
Signature: R. H. Seymour Date signed: 2/4/90
Optional Attachments (Check one)
☒ I have attached a site plan
☒ I have attached a list of site chemical inventories

Owner/Operator Name
Name: VISTA CHEMICAL COMPANY Phone: (713) 31-1200
Mail Address: P. O. BOX 19029, HOUSTON, TX 77224
Emergency Contact
Name: B. J. FRISCO Title: SALLY DIRECTOR
Phone: (601) 369-3618 24 hr Phone: (601) 369-8111
Name: F. G. ILANSON Title: ENVIRONMENTAL COORDINATOR
Phone: (601) 369-3637 24 hr Phone: (601) 369-8111

Facility Identification
Name: VISTA POLYMERS
Street Address: P. O. BOX 91, HIGHWAY 25 State: MS Zip: 39130
City: ABERDEEN
SIC Code: 2821 Dun & Bradstreet Number: 11527 0654
FOR OFFICIAL USE ONLY
Date Received: _____

Reporting Period From January 1 to December 31, 1989

Inventory		Max. Daily Amount (code)		No. of Days On-site (days)	
APA	14	04	04	3	6
APA	15				
APA	15				
VTP	14				
RPM	14				
CDA	14				
CDA	14				
RPM	14				
CDA	14				
CDA	14				

Physical and Health Hazards (check all that apply)
☒ Fire
☒ Subsonic Release of Pressure
☒ Reactivity
☒ Immediate (acute)
☒ Delayed (chronic)

Chemical Description
CAS: 85449 Trade Secret: ☐
Chem Name: Phthalic Anhydride
Check all that apply: ☒ Pure ☐ Mix ☐ Solid ☒ Liquid ☐ Gas

CAS: 7440-39-3 Trade Secret: ☐
Chem Name: Barium, Cadmium, Zinc Stabilizer (Synprol 1438)
7440-39-3, 7440-43-9
Check all that apply: ☒ Pure ☐ Mix ☐ Solid ☒ Liquid ☐ Gas

CAS: 7440-39-3 Trade Secret: ☐
Chem Name: Barium, Cadmium, Zinc Organic Complex (Mark 2045)
7440-39-3, 7440-43-9, 7440-66-6, 8052-41-3, 8032-32-4
Check all that apply: ☒ Pure ☐ Mix ☐ Solid ☒ Liquid ☐ Gas

Optional Attachments (Check one)
☒ I have attached a skin (skin)
☒ I have attached a list of site coordinate abbreviations

Certification (Read and sign after completing all sections)
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this end of attached documents and that based on my knowledge of those documents, the information is true, accurate and complete.
Name and official title of owner/operator OR owner/operator's authorized representative: R. W. SEYMOUR / PLANT MANAGER
Signature: R. W. Seymour Date signed: 2/2/90

**Tier Two
EMERGENCY
AND
HAZARDOUS
CHEMICAL
INVENTORY**

Specific
Information
by Chemical

Facility Identification

Name VISTA POLYMERS
Street Address P. O. BOX 91, HIGHWAY 25
City ABERDEEN State MS Zip 39230
SIC Code 2821 Own & Prod Number 115220654
FOR OFFICIAL USE ONLY
Date Received

Owner/Operator Name

Name VISTA CHEMICAL COMPANY Phone 1-713-531-1200
Mailing Address P. O. BOX 19029, HOUSTON, TX 77224
Emergency Contact
Name B. J. TRIGO Title SAFETY DIRECTOR
Phone (601) 369-3618 24 hr Phone (601) 369-8111
Name F. G. HANSON Title ENVIRONMENTAL COORDINATOR
Phone (601) 369-3637 24 hr Phone (601) 369-8111

Important: Read all instructions before completing form

Reporting Period From January 1 to December 31, 1989

Chemical Description

CAS 1330 Trade Secret ☐
Chem Name Alkyl Mercaptide
(Mark 1900, 1925)

Check all that apply: Pure ☐ Mix ☒ Solid ☐ Liquid ☒ Gas ☐

CAS 1330 Trade Secret ☐
Chem Name Organotin Mercapto Ester
(Thermolite 137)

Check all that apply: Pure ☐ Mix ☒ Solid ☐ Liquid ☒ Gas ☐

CAS 68130 Trade Secret ☐
Chem Name 1,2,4-Benzenetricarboxyl
acid mixed hexyl, octyl and decyl
ester (PX-336)

Check all that apply: Pure ☐ Mix ☒ Solid ☐ Liquid ☒ Gas ☐

Physical and Health Hazards
(check all that apply)

Fire ☐ Sudden Release of Pressure ☐ Reactivity ☒ Immediate (acute) ☒ Delayed (chronic)

Fire ☐ Sudden Release of Pressure ☐ Reactivity ☒ Immediate (acute) ☐ Delayed (chronic)

Fire ☐ Sudden Release of Pressure ☐ Reactivity ☒ Immediate (acute) ☐ Delayed (chronic)

Inventory
Max. Daily Amount (code) 03 No. of Days On-site (days) 365

03 03 365

03 02 365

03 03 365

Storage Codes and Locations
(Non-Confidential)
Storage Code Storage Locations

0 1 4 RPW
0 1 4 CDA

0 1 4 RPW
0 1 4 CDA

0 1 4 APA
0 1 5 CDA
0 1 4 RPW
0 1 4 CDA

Certification (Read and sign after completing all sections)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

R. W. SEYMOUR / PLANT MANAGER

Name and official title of owner/operator OR owner/operator's authorized representative

Signature R. W. Seymour Date signed 2/21/90

Optional Attachments (Check one)

☒ I have attached a site plan
☒ I have attached a list of site coordinate data sheets

Tier Two EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY		Specific Information by Chemical	
Facility Identification			
Name <u>VISTA POLYMERS</u>		Date & Brand Number 2 8 2 1 1 1 5 2 7 0 6 5 4	
Street Address <u>P. O. BOX 91, HIGHWAY 25</u>		State <u>MS</u> Zip <u>39730</u>	
City <u>ABERDEEN</u>			
FOR OFFICIAL USE ONLY			
ID # <u> </u>		Date Received <u> </u>	
Owner/Operator Name			
Name <u>VISTA CHEMICAL COMPANY</u>		Title <u>SAFETY DIRECTOR</u>	
Mail Address <u>P. O. BOX 19029, HOUSTON, TX 77224</u>		Phone <u>(601) 369-8111</u>	
Emergency Contact			
Name <u>B. L. TREGO</u>		Title <u>SAFETY DIRECTOR</u>	
Phone <u>(601) 369-3618</u>		Phone <u>(601) 369-8111</u>	
Name <u>F. G. JEANSON</u>		Title <u>ENVIRONMENTAL COORDINATOR</u>	
Phone <u>(601) 369-3637</u>		Phone <u>(601) 369-8111</u>	

Important: Read all instructions before completing form

Chemical Description	Physical and Health Hazards (check all that apply)	Inventory Max. Daily Amount (code) Avg. Daily Amount (code) No. of Days On-site (days)	Storage Codes and Locations (Non-Confidential) Storage Code Storage Locations
CAS [][][][][][] Trade Secret [] Chem Name Color Concentrate Barium Stearate	Five [] Sudden Release of Pressure [] Reactivity [] Immediate (acute) [] Delayed (chronic) [X]	[0][3] [0][2] [3][6][5]	RPW CDA
Check all that apply [] Pure [X] Mix [X] Solid [] Liquid [] Gas []			
CAS [2][9][7][6][1][2][1][5] Trade Secret [] Chem Name Isodecyl Diphenyl Phosphate	Five [] Sudden Release of Pressure [] Reactivity [X] Immediate (acute) [X] Delayed (chronic) [X]	[0][3] [0][2] [3][6][5]	APA APA CDA
Check all that apply [] Pure [X] Mix [X] Solid [] Liquid [X] Gas []			
CAS [][][][][][] Trade Secret [] Chem Name _____	Five [] Sudden Release of Pressure [] Reactivity [] Immediate (acute) [] Delayed (chronic) []	[][] [][] [][]	
Check all that apply [] Pure [] Mix [] Solid [] Liquid [] Gas []			

Certification (Read and sign after completing all sections)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

R. W. SEYMOUR/ PLANT MANAGER

Name and official title of owner/operator OR owner/operator's authorized representative

Optional Attachments (Check one)

☒	I have attached a site plan
☒	I have attached a list of site coordinate abbreviations

Date started

Signature

STORAGE LOCATION ABBREVIATIONS

<u>Abbreviation</u>	<u>Description</u>
APA	Alcohol/Plasticizer Storage and Processing Area
BPF	Boilerhouse and Propane Tank Farm
VTF	Vinyl Chloride Monomer Tank Farm
CDA	Compound/Dryblend Manufacturing Area
RMA	Resin Manufacturing Area
RPW	Raw Materials/Finished Product Warehouse
WEA	Wastewater Treatment Facilities Area

Table I REPORTING RANGES

<u>Range Value</u>	<u>Weight Range in Pounds</u>	
	<u>From...</u>	<u>To...</u>
00	0	99
01	100	999
02	1,000	9,999
03	10,000	99,999
04	100,000	999,999
05	1,000,000	9,999,999
06	10,000,000	99,999,999
07	50,000,000	99,999,999
08	100,000,000	499,999,999
09	500,000,000	999,999,999
10	1 billion	higher than 1 billion

Table II - STORAGE TYPES

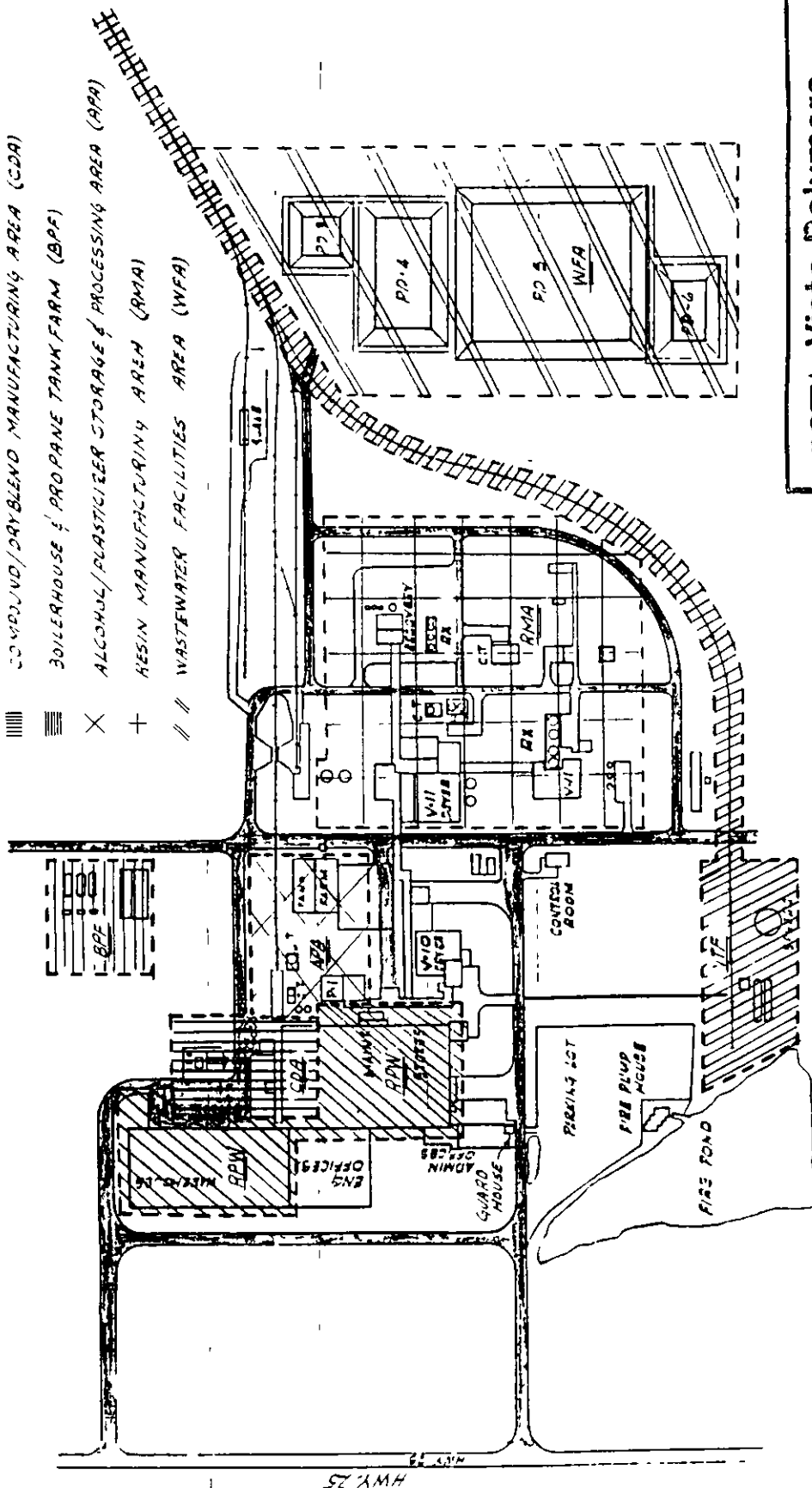
<u>CODES</u>	<u>Types of Storage</u>
A	Above ground tank
B	Below ground tank
C	Tank inside building
D	Steel drum
E	Plastic or non-metallic drum
F	Can
G	Carboy
H	Silo
I	Fiber drum
J	Bag
K	Box
L	Cylinder
M	Glass bottles or jugs
N	Plastic bottles or jugs
O	Tote bin
P	Tank wagon
Q	Rail car
R	Other

Table III - TEMPERATURE AND PRESSURE CONDITIONS

<u>CODES</u>	<u>Storage Conditions</u>
	(PRESSURE)
1	Ambient pressure
2	Greater than ambient pressure "
3	Less than ambient pressure
	(TEMPERATURE)
4	Ambient temperature
5	Greater than ambient temperature
6	Less than ambient temperature "
	but not cryogenic
7	Cryogenic conditions

LEGEND

- ||||| RAW MATERIAL/FINISHED PRODUCT WAREHOUSE (RPW)
- ||||| VINYL CHLORIDE MONOMER TANK FARM & RAILS/SLUR (VTF)
- ||||| COMBUND/DAYBLEND MANUFACTURING AREA (CDA)
- ||||| BOILERHOUSE & PROPANE TANK FARM (BPF)
- ||||| ALCOHOL/PLASTICIZER STORAGE & PROCESSING AREA (APA)
- ||||| RESIN MANUFACTURING AREA (RMA)
- ||||| WASTEWATER FACILITIES AREA (WFA)



VISTA Vista Polymers
Abe doon, Mississippi

APPD
DATE

No.

To J C Ledvina

From F G Jeanson
Date June 15, 1989

Interoffice
Communication

Subject SARA SECTION 313 REPORT

VISTA

Attached is a summary table and the full report for SARA Section 313 reporting requirements. A summary table of 1987 emissions is also attached. Major differences between 1987 and 1988 numbers are listed below:

<u>Chemical</u>	<u>lbs</u> <u>1987</u>	<u>lbs</u> <u>1988</u>	<u>Category</u>
VCM	90,480	73,554	Air (stack emissions)
VCM	29,521	3,008	Air (fugitive emissions)
Barium	1,223	388	Offsite (landfilled)
Lead	13,545	6,070	Offsite (landfilled)

VCM air emissions were decreased in both the stack and fugitive categories. The stack emissions were reduced due to more stringent stripping procedures (higher temperature, longer time held under vacuum). The fugitive emissions were reduced as a result of a bagging study completed on the flanges and valves in VCM service.

During 1988 a waste, vacuum/vent dust, was sold as a by-product. Instead of this material being landfilled, it was sold and used in compound production. The amount of barium and lead landfilled was reduced due to this change.

Ammonia and chlorine both reported in 1987 did not meet minimum usage requirements for 1988. Sodium sulfate was not reported in 1987.

If you have any questions, please refer them to me

F. G. Jeanson

F. G. Jeanson
Environmental Coordinator

tjs

cc RWS, DCS, PJK, CJM, DFJ, JEN, JBA, CLW, DAM, REP, RBN, SCH,
BLT, JEL, HGC, MRK

1988 SECTION 313 EMISSIONS

	FUG	AIR STACK	WATER	LAND	OFFSITE	SECOND OFFSITE	TOTAL OFFSITE
ANTIMONY	0	0	0	0	863 5(2) 3 (3) 1 (9)	863 5(1)	1731
BARIUM	0	0	0	0	61(2) 264(6) 2(3)	61(1)	388 *
CAUSTIC	0	0	0	0	0	0	0
Di-N-Octyl Phthalate	0	0	17*	0	6460(4) 326(9)	72184(5)	78970
LEAD	0	7	0	0	3018(2) 30(3) 4(9)	3018(1)	6070*
METHANOL	1-499	0	0	0	0	0	0
PHTHALIC ANHYDRIDE	0	0	0	0	1932(7)	0	1932
SODIUM SULFATE	0	0	148,276	0	0	0	0
SULFURIC ACID	0	0	0	0	0	0	0
VCM(8)	3008*	73,554*	0*	0	0	0	0

- (1) Empty Bags (Sent to Monroe County Landfill)
- (2) Empty Bags (Sent to Chem Waste Management)
- (3) Floor Sweep (Sent to Chem. Waste Management)
- (4) Filter Cake (Sent to Chem Waste Management)
- (5) Separator Oil (Sent to Stauffer in Baton Rouge to be burned)
- (6) Stabilizer Spill (Sent to Chem. Waste Management)
- (7) PA Spill (Sent to Chem. Waste Management)
- (8) Fugitive emissions were calculated using correlation factors developed from a bagging study done at this plant)
- (9) API Sludge (Sent to Chem Waste Management)

* Represents a reduction from 1987 emissions reported.

Notes

- 1 Ammonia and chlorine were both reported last year. Both of these chemicals did not meet minimum usage requirements for 1988 so they were not reported
- 2 Sodium Sulfate was not reported last year

SECTION 313 EMISSIONS REPORTED FOR 1987

	AIR		WATER	LAND	OFFSITE	SECOND OFFSITE	TOTAL OFFSITE
	FUG	STACK					
AMMONIA	1-499	0	1466	0	0	0	0
ANTIMONY	0	0	0	0	31(2) 1(3)	1223(1)	1255
BARIUM	0	0	0	0	495(2) 88(6)	640(1)	1223
CAUSTIC	0	0	0	0	0	0	0
CHLORINE	1-499	1-499	0	0	0	0	0
Di-N-Octyl Phthalate	0	0	50	0	6880(4)	64967(5)	71847
LEAD	0	7	0	0	7730(2) 11(3)	5804(1)	13545
PHTHALIC ANHYDRIDE	0	0	0	0	1012(7)	0	1012
SULFURIC ACID	0	0	0	0	0	0	0
VCM(8)	29,521	90,480	57	0	0	0	0

- (1) Empty Bags (Sent to Monroe County Landfill)
 (2) Vacuum Dust (Vacuum Dust has been eliminated as a waste in 1988, it is now sold as an offgrade.)
 (3) Floor Sweep (Sent to Chem. Waste Management)
 (4) Filter Cake (Sent to Chem. Waste Management)
 (5) Separator Oil (Sent to Stauffer in Baton Rouge to be burned)
 (6) Stabilizer Spill (Sent to Chem. Waste Management)
 (7) PA Spill (Sent to Chem. Waste Management)
 (8) Fugitive emissions were calculated using EPA's Stratified Emission Factors.

RCRA

RESOURCE CONSERVATION AND RECOVERY ACT - RCRA

RCRA regulates discharges into groundwater and some air emissions (e g , incinerators) and general waste management, including spills. Focuses on current and future activities. The scope of RCRA includes the following three areas:

- 1 Waste Management - regulates disposal of hazardous (Subtitle C) and non-hazardous (Subtitle D) wastes. It also regulates the maintenance of underground storage tanks (Subtitle I).
- 2 Promotes Resource Recovery and Reuse of materials.
- 3 Authority for enforcement, studies, grants, National Ground Water Commission, etc.

Hazardous Waste Management under Subtitle C is the main area of concern for RCRA. It is a program of federal standards with state implementation of cradle to grave tracking of hazardous waste. The subject matter includes the manifest system, listing and definition of hazardous waste, inspections and enforcement, site inventory, analysis and testing and exposure and health assessments. The EPA Regulations are found in 40 CFR Parts 260 thru 271.

The following is a list of Manifested Wastes sent from the plant for offsite disposal

<u>Waste</u>	<u>Reason Manifested</u>	<u>Site</u>	<u>Proper Shipping Name, Haz. Class & I D. No</u>	<u>Waste No</u>
Waste Oil API Separator	combustible liquid barium, cadmium, lead	Baton Rouge, La., Stauffer Chemical Co.	waste combustible liquid N.O.S combustible liquid, NA 1993, RQ (D005R, D006R, D008R)	D005R, D006R, D008R
Parts Clean Solvent	Naphtha combustible liquid	Safety Kleen Corp., Southaven, MS	waste petroleum Naphtha combustible liquid UN1255 (EPA D001) 501	D001
Lead Contaminated Bags	lead, antimony & barium contamination	CWM, Emelle, AL	non-hazardous MARU11039	NH0000
Plasticizer Filter Cake	plasticizer	CWM, Emelle, AL	plasticizer filter cake, non- hazardous MAR007363	NH0000
Floor Sweeps	floor sweeps & ventilation dust hazardous material (lead)	CWM, Emelle, AL	hazardous wastes solid, N.O.S. ORM-E NA 9189 RQ 0008 MSE 64751	D008
API Sludge	hazardous waste (lead)	CWM, Emelle, AL	hazardous waste solid N.O.S. ORM-E NA 9189 RQ D008 MS 007317	D008
P A Spill	hazardous waste (phthalic anhydride)	CWM, Emelle, AL	hazardous waste solid N.O.S. ORM-E NA9189 (phthalic anhydride) MS 007318	U190
Asbestos	gaskets and insulation to Emelle	CWM, Emelle, AL	asbestos insulation MSD 37292	
Stabilizer Spill	hazardous waste barium, cadmium	CWM, Emelle, AL	hazardous waste solid N.O.S , ORM-E NA 9189 RQ (D005, D006) MSE 69245	D005, D006

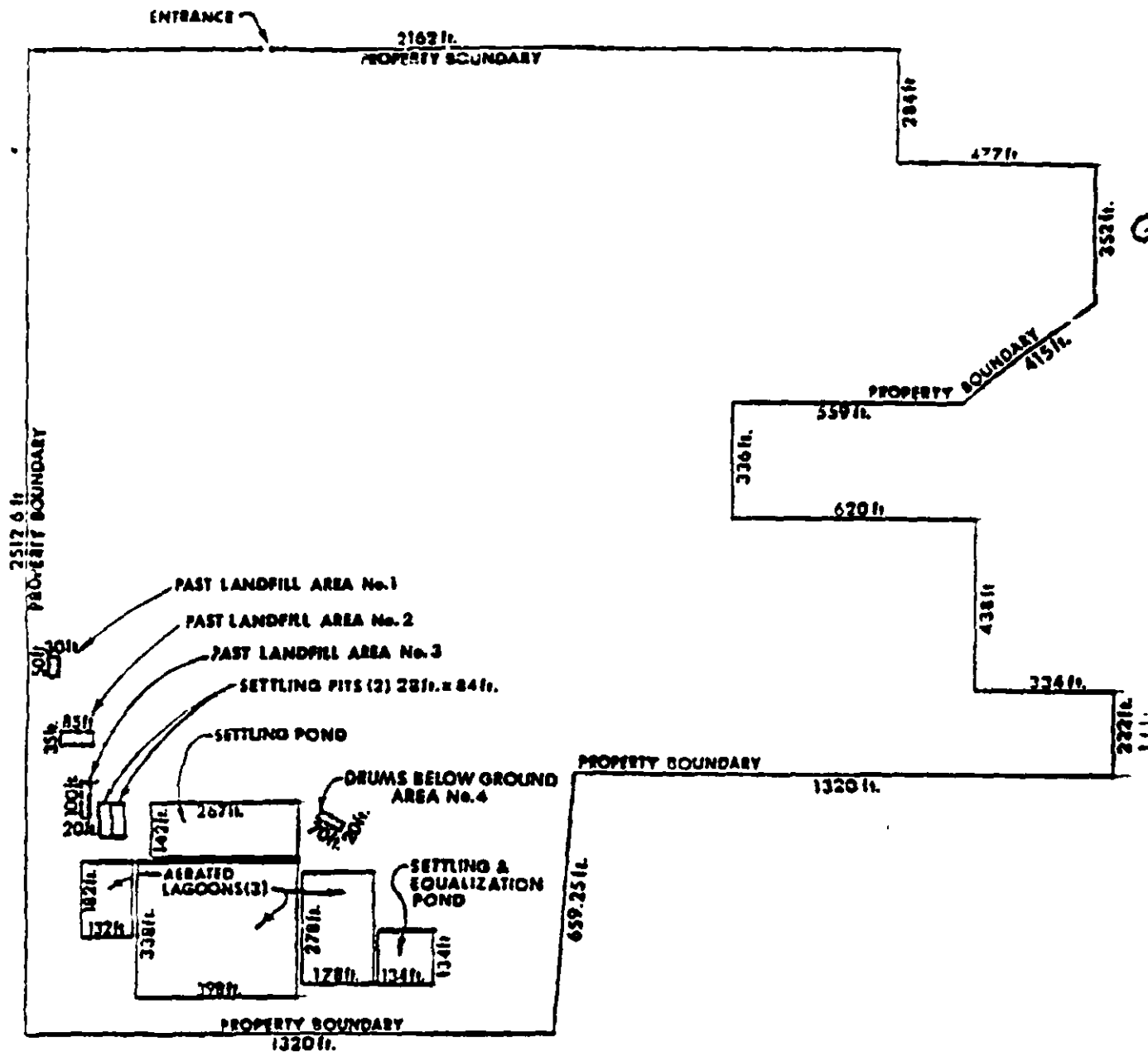
Mississippi Hazardous Waste Management Regulations implementing the Resource Conservation and Recovery Act require facilities handling hazardous wastes to prepare and submit a Biennial Report by March 1st of each even numbered year covering the activities during the previous year

CERCLA

COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT
CERCLA

This CERCLA of 1980 better known as "Superfund" seeks to establish the "no fault" liability of facility owners and operators, generators, and certain transporters of hazardous substances for releases of those hazardous substances. Allows governments to spend funds to clean up and then seek reimbursement from liable parties. Its principal concern is to address past activities resulting in present releases from waste sites.

There are four Hazardous Waste Sites at the Aberdeen Plant. These four sites are Superfund sites because the waste material contained in these sites (BIS (2-ethylhexyl) phthalate) is on the RCRA Hazardous Waste List (U-028). Please refer to the following two pages for site description and location.



NOTIFICATION
OF
HAZARDOUS
WASTE SITE
FACILITY DRAWING
CONOCO CHEMICALS
ABERDEEN, MISSISSIPPI
EPA ID No. MS0007031230

SCALE : 1 inch = 400 Feet
(ATTACHMENT TO
EPA FORM 8900-1)

NOTIFICATION OF HAZARDOUS WASTE SITECONOCO CHEMICALSABERDEEN, MISSISSIPPI

(ATTACHMENT TO EPA FORM 8900-1)

<u>Site</u> <u>(See Attached Drawing)</u>	<u>Estimate</u> <u>Of Area</u> <u>(Square Feet)</u>	<u>Estimate of</u> <u>Waste Amount</u> <u>(Cubic Feet) (A)</u>	<u>Description (A)</u>
Past Landfill Area #1	1,500	1,200	Waste material buried.
Past Landfill Area #2	2,125	6,500	Waste material buried.
Past Landfill Area #3	2,000	1,700	Waste material buried.
Drums, below ground, Area #4	<u>1,400</u>	<u>600</u>	Buried drums of waste.
TOTAL	7,025	10,000	

NOTES:

- (A) The waste material contains some plasticizers (phthalate diesters), of which one is BIS (2-Ethylhexyl) Phthalate (U-028 on the RCRA Hazardous Waste List). The composition of plasticizers in the waste material varies greatly.

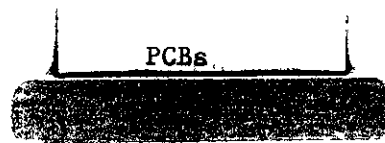
TSCA

TOXIC SUBSTANCES CONTROL ACT - TSCA

Enacted in 1976, TSCA has extremely broad regulatory powers over chemical substances and mixtures. This regulatory authority is vested entirely in the federal government. The TSCA grants EPA authority to regulate the entire life cycle of a chemical, from its initial manufacture to its ultimate disposal.

TSCA has broad information gathering provisions. It can require

- 1 It can require health and/or environmental effect testing of new manufactured chemicals
- 2 It requires manufacturers and processors to maintain records and submit information on existing chemicals for assessing risks.
- 3 It requires all manufacturers to keep records on significant adverse reactions to health or the environment alleged to have been caused by a chemical substance or mixtures.
- 4 It requires the submission of unpublished health and safety studies
- 5 It has control over new chemicals made or entering the country and requires Premanufacture Notification ("PMN") 90 days before such manufacture or processing of a new chemical.



REGULATION OF POLYCHLORINATED BIPHENYLS (PCBs)

TSCA Section 6 (e) requires EPA to promulgate regulations prescribing disposal and labeling methods and prohibiting the manufacture, processing, distribution and use of PCBs except in three instances.

Annual reports for PCBs in service or projected for disposal are due by July 1 for previous calendar year.

DOT

DEPARTMENT OF TRANSPORTATION - DOT

The Code of Federal Regulations volume 49 deals with the transportation of Hazardous Wastes and Materials. A hazardous material is a substance capable of posing an unreasonable risk to health, safety, and property when transported in commerce. DOT is concerned with how hazardous materials are identified, packaged, documented, stored, transported, marked, labeled, and placarded

The DOT enforces the regulations with fines and/or imprisonment. Fines are most often given for failure to use the proper shipping name on manifests and bills of lading and improper placarding

The Environmental Coordinator should be consulted when determining any of the following questions

- 1 Is the material to be shipped hazardous?
- 2 What is the proper shipping name?
- 3 Do packages/bulk loads need to be labeled/placarded?
- 4 What types of labels/placards are necessary for certain chemicals?
- 5 Is a manifest required for this shipment?

SPCC PLAN



SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN - SPCC

SPCC is located in 40 CFR Part 112 and is regulated by the EPA. Owners or operators of non-transportation related facilities which due to their location, could reasonably be expected to discharge oil in harmful quantities must prepare a SPCC Plan.

SPCC Plans must specify established procedures and methods and equipment and physical structures to prevent discharge of oil. An SPCC Plan must be prepared within six months after a facility begins operations and must be certified by a Registered Professional Engineer.

A copy of our SPCC Plan follows.

SPILL PREVENTION CONTROL
AND COUNTERMEASURE PLAN

April 10, 1989

SPILL PREVENTION CONTROL
AND COUNTERMEASURE PLAN

April 10, 1989

PREPARED BY:

F. G. Jeanson
F. G. Jeanson
Environmental Coordinator

CERTIFIED BY:

James L. White
James L. White
P. E. of MS No. 5609

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN

CONTENTS

SECTION I	INTRODUCTION
SECTION II	PLANT DRAINAGE AND RUNOFF CONTROL
SECTION III	INSPECTIONS
SECTION IV	SPILL CLEANUP
SECTION V	REPORTING
SECTION VI	TRAINING
SECTION VII	AVAILABLE SPILL CLEAN-UP EQUIPMENT
SECTION VIII	DIKE AND TRENCH INSPECTION REPORT

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLANI INTRODUCTION

Federal regulations require that facilities which could reasonably be expected to discharge oil prepare a SPCC Plan (Spill Prevention, Control and Countermeasure Plan). The intent of the SPCC Plan is to minimize the potential for harmful oil discharges to navigable waters within the U. S. A harmful oil discharge is defined as any oil discharge which causes a visible sheen on or discoloration of, the surface of water. Harmful oil discharges are prohibited by law.

The Aberdeen Plant uses a variety of oil during operations, such as plasticizers, alcohols, lubricants and chemical substances. Most of these oils are handled in diked, curbed or trenched-in areas which drain to the process sewer; however, it is possible that oil could be spilled outside of these areas and subsequently run to the storm sewer. In order to trap any free oil which may have been spilled to the storm sewer, there are concrete basins with underflow baffles upstream from each storm sewer outfall.

All potential spill areas are under plant security. The plant facilities are enclosed in a fenced area, and all the gates are locked except the main gate where a guard is present at all times.

II. PLANT DRAINAGE AND RUNOFF CONTROL

Oily substances are stored or handled at several locations within the plant. The following preventive measures have been taken to minimize the potential for an oil discharge from the plant.

A. Plasticizer Tank Farm

Bulk quantities of plasticizer, alcohol and caustic soda are stored in tanks at the tank farm. The area is enclosed by a three-foot high concrete dike which will contain spills. Oil which is spilled at the tank farm will collect on the surface of the API separator and will subsequently be recovered to the process.

All of the tanks at the tank farm have level gauges. The tank levels are checked daily and recorded on a form. The drains on all of the tanks are either blinded or plugged.

B. Fuel Storage Area

A diesel oil storage tank and a gasoline storage tank are located north of the plasticizer tank farm in a concrete diked area. There is a valve between the plasticizer tank farm and the fuel storage area which can be opened in order to drain the fuel storage pad to the tank farm.

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLANII. PLANT DRAINAGE AND RUNOFF CONTROL - ContinuedC. Alcohol Unloading Area

Alcohol is unloaded from trucks on the south side of the tank farm. The area around the hookup stations is enclosed by a trench in the roadway which drains to the API separator.

Oil which is spilled at the unloading station in any quantity must be cleaned up immediately. This should be accomplished by washing the spilled oil into the trench with water or cleaning up the spilled oil with sorb all. Failure to clean up oil promptly will result in the spreading of the oil into the roadway by vehicles.

D. T-450, 460 Area

The area around T-450 and T-460 tanks on the east side of the plasticizer building is enclosed by concrete curbing, and the curbed area drains to the API separator. The two above ground tanks which are located within the curbed area have level gauges which are checked daily and recorded on a form.

E. Plasticizer Reactor Relief Knockout Tank

If a plasticizer reactor were to overpressure or relieve for some reason, the discharge would pass through the plasticizer reactor relief knockout tank. Entrained liquid in the discharge would collect in the tank instead of being discharged to the area around the plasticizer building. Although the tank is normally empty, there is a trench around the tank which drains to the API separator.

F. Large Drum Storage Area

There is a large drum storage area located on the south side of the east warehouse. This area is enclosed by a concrete dike, fenced-in, locked and covered by a roof. There is a valve at the southeast of the dike which can be opened in order to let out rainwater.

G. Waste Oil and Slop Oil Tanks

There are two tanks on the north side of the API separator which are used to store waste oil and oil which has been recovered from the API separator. Both of these tanks are surrounded by a concrete dike, and the diked-in areas drain to the API separator. Each tank has a level gauge.

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLANII PLANT DRAINAGE AND RUNOFF CONTROL - ContinuedH. Empty Drum Storage Pad

Empty drums from around the plant are drained and stacked on a concrete pad east of the API separator. The concrete pad is enclosed by a concrete curb, and oily drainage from the pad is collected in a small sump at the north end of the pad. The sump is pumped out to the waste oil storage tank or the API separator as necessary. If the level in the sump becomes too high, the sump and the concrete pad will overflow to the API separator.

I. Lubricating Oil Storage Area

Lubricating oils are stored on a concrete pad east of the truck scales. The pad is surrounded by a trench and a concrete curb, and covered by a roof. There is a drain valve on the south side of the curb which is blanked-off, and is not to be opened under any circumstances. Oil which is collected in this trench must be drummed and transferred to the waste oil sump by the API separator.

J Drum Storage Areas at Reactor Units

There are small drum storage pads at each of the reactor units which are enclosed by a concrete curb. These areas drain to the process sewer. In the event of a chemical spill within these areas, there is a drain valve which can be closed if necessary.

K. Firewater System Diesel Oil Storage Tanks

There are two small diesel oil storage tanks at the firewater pond deluge building and at pond #5 deluge building. The area under the pond #5 deluge diesel oil storage tanks is contained by a concrete curb; however, if oil is spilled outside of the curbed area the oil will run into the wastewater treatment ponds. The situation at the firewater pond is similar. If diesel oil is spilled outside of the curbing and it runs to the firewater pond, there is an underflow baffle which will keep the oil from being discharged from the plant.

L. Emergency Generator Diesel Oil Storage Tank

There is a diesel oil storage tank for the emergency generator located just east of the emergency generator building. The area under the tank is concrete and there is a concrete dike to contain any spillage. There is a roof over the tank to prevent rainwater from entering the diked area.

M. The Sphere and The Bullets

The sphere and the bullets are surrounded by a concrete dike, which will contain VCM that may be spilled during a massive VCM release.

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLANII. PLANT DRAINAGE AND RUNOFF CONTROL - ContinuedN Storm Water Runoff

If there is an oil spill outside of the above areas, there is a possibility that the spill could reach the storm sewer instead of the process sewer. In order to prevent oil from being discharged from the plant via a storm sewer, there is a concrete basin upstream from each storm sewer outfall. These basins have two underflow baffles which will trap any free oil which may get into the stormwater runoff. Oil which collects on the basins must be cleaned up as soon as possible, since the oil will eventually become entrained or dissolved in the stormwater.

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLANIII INSPECTIONSA Dikes and Trenches

All dikes and trenches around potential oil spill areas are to be inspected semi-annually by the Environmental Coordinator. The attached inspection form must be completed and filed during this inspection. Cracked dikes or plugged trenches must be promptly repaired or cleaned out as necessary.

B. Storm Sewer Basins

The storm sewer concrete basins must be inspected for oil at least once per week by the Environmental Coordinator. If oil is observed on the basins during these inspections, or during an inspection by any other employee, the Environmental Coordinator and the Contract Supervisor must be notified. The oil must then be cleaned up promptly and the source of the oil identified if possible.

IV SPILL CLEANUP

In the event of an oil or chemical spill, efforts must be made to prevent the spill from leaving the plant's boundary. Any employee who observes a spill must take immediate action to control the spill, and if the spill is too large to control by ordinary means, the Supervisor of the affected area must be contacted. The Supervisor will make an evaluation of the spill and will notify the Operations Supervisor or Superintendent, who will coordinate cleanup of the spill. If the spill enters a storm sewer or approaches a plant boundary, the Environmental Coordinator must be contacted for assistance.

Spills which occur to grade should be contained with whatever materials are available and the spill area should be roped off. Spills which enter the plant's sewers should be cleaned up whenever the spill material reaches the concrete settling basins. Sorbent booms should be placed at the storm sewer outfall if oil is spilled to the storm sewer. When spilled material is cleaned up, the necessary Safety and Environmental disposal procedures must be used. If there is any doubt concerning the safe and proper cleanup and disposal of certain materials, the Environmental Coordinator must be contacted for assistance.

V REPORTING

If there is any visible oil discharge from the plant, the incident must be reported to the Mississippi Department of Natural Resources and the National Response Center. The following personnel are authorized to report oil discharges from the plant. The report must be made as soon as possible after becoming aware of the spill, but no later than within 24 hours of the spill.

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLANV REPORTING - Continued

Environmental Coordinator	Frank G. Jeanson	1-324-2329
Chief Process Engineer	Rendell B. Newton	1-328-0904
Senior Process Engineer	Vernon L. Thornhill	369-8952
Senior Process Engineer	Steve C. Hillman	369-7892
Plant Superintendent	Doug C. Skokna	1-327-0679
Plant Manager	R. W. Seymour	369-4412
Vinyl Operations Superintendent	Paul J. Kober	369-7096
Compound Operations Superintendent	Ted Nickerson	369-9025
Mechanical Superintendent	Dan A. Miller	1-356-6274

The following numbers may be useful when reporting an oil spill.

MDNR

Between 7 30 a.m. - 4 30 p.m. call. (601) 961-5171

After 4:30 p.m., weekends and holidays call: (601) 961-5340

Earl Mahaffey	Engineering in Training
Bob Rogers	Emergency Coordinator
Jerry Cain	Section Chief

National Response Center

All Hours 1-800-424-8802

VI TRAINING

Employees engaged in the operation and maintenance of equipment which could reasonably be expected to spill oil are to be trained on the SPCC Plan.

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLANAPPENDIX AAVAILABLE SPILL CLEANUP EQUIPMENT

- (1) VACUUM TRUCKS - Vacuum trucks are available from the following truck service companies:
- A. RDB Trucking - LOCATION: Aberdeen, MS
PHONE: 369-9383
ARRIVAL TIME: 15 minutes
 - B. G.B. Smith, Inc. - LOCATION: Hattiesburg, MS
PHONE: 649-1220
ARRIVAL TIME: 3.5 - 4 hours
 - C. Industrial Maintenance Cleaning Contractors, Inc. (I.M.C.C.I.)
LOCATION: Bessemer, AL
PHONE: 205-428-0621
ARRIVAL TIME: 6 hours
 - D. Ergon LOCATION: Jackson, MS
PHONE: 948-3472
ARRIVAL TIME: 3 hours
- (2) SKIMMING PUMP - Skimming pumps available from RDB Trucking.
- (3) ALUMINUM BOAT - An aluminum boat is available from the waste treatment ponds.
- (4) Spill booms, rolls and pads of oil sorbent materials are available from storeroom to remove oil from the creek or settling pits.
- (5) Sorbent materials for liquid spills on concrete areas or the ground are available from the storeroom.

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLANAPPENDIX BSPCC PLAN DIKE AND TRENCH INSPECTION REPORT

Date. _____

Inspector _____

ItemStatus

Plasticizer Tank Farm:

VCM Tank Farm Dike:_____
Lagoons Acid Dike:_____
Alcohol Unloading Area:_____
T450, 460 Area:_____
Diesel Oil Storage Areas:_____
Waste Oil and Slop Oil Dikes:_____
Empty Drum Storage Pad:_____
Lubricating Oil Storage Area._____
Reactor Drum Storage Pads:_____
Large Drum Storage Area By East Warehouse:_____
Plasticizer Reactor Relief Knockout Tank:_____
Firewater System Diesel Oil Storage Tanks:_____
Emergency Generator Diesel Oil Storage Tank:

SPCC PLAN AND TRENCH INSPECTION REPORT
Page 2

The following problems should be checked for and noted, along with any other obvious discrepancies

- 1 Cracks or damage to dike walls, curbing.
2. Trenches that are full of solid debris and will not drain.
- 3 Liquid-full trenches or curbed areas.
- 4 Obvious signs of oil spillage outside of the contained area.
- 5 Drain valves that are open where the area to be drained does not tie into the process sewer system.
- 6 Write "W O. Written" under status column after a work order has been written to correct a discrepancy

ADDENDUM TO S.P.C.C. PLAN
RCRA HAZARDOUS WASTE CONTINGENCY PLAN

April 10, 1989

ADDENDUM TO S.P.C.C. PLAN
RCRA HAZARDOUS WASTE CONTINGENCY PLAN

April 10, 1989

PREPARED BY: Frank G. Jeanson
Frank G. Jeanson
Environmental Coordinator

CERTIFIED BY: James L. White
James L. White
P.E. MS No. 5609

ADDENDUM TO S.P.C.C. PLAN
RCRA HAZARDOUS WASTE CONTINGENCY PLAN

Contents

- I. INTRODUCTION
- II. EMERGENCY COORDINATOR
- III. EMERGENCY PROCEDURES
- IV ARRANGEMENTS WITH LOCAL AUTHORITIES
- V AREAS COVERED BY CONTINGENCY PLAN
- VI REPORTING
- VII. AMENDING EMERGENCY PROCEDURES
- VIII. EQUIPMENT

RCRAHAZARDOUS WASTE CONTINGENCY PLANI INTRODUCTION

Section F, Subpart D (402.7-50 to 402.7-56) of the Mississippi Hazardous Waste Management Regulations require an owner or operator of a hazardous waste management facility to have a contingency plan for his facility. The Contingency Plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned release of hazardous wastes to the air, soil, or surface waters. The plan includes provisions for an emergency coordinator who will assess the possible hazards of any spill, fire, or explosion of hazardous waste. The Emergency Coordinator will implement the Contingency Plan if he deems the emergency situation threatens human health or the environment.

Hazardous wastes which are managed at the Aberdeen Plant are waste phthalic anhydride, API sludge, waste barium, cadmium or lead stabilizers, and any waste mixtures containing significant amounts of barium, cadmium, or lead stabilizers. The areas of the plant which are covered under the Contingency Plan are the hazardous waste drum storage area, the API separator and slop oil tank.

II. EMERGENCY COORDINATOR

At all times, there must be at least one employee on the facility premises or available to respond within a short period of time to an emergency situation involving hazardous wastes. This person has the responsibility for coordinating hazardous waste emergency response measures.

The Emergency Coordinator must be:

1. Familiar with the plant layout.
2. Familiar with the location and characteristics of the hazardous waste handled.
3. Familiar with hazardous waste related operations and activities at the plant.
4. Familiar with hazardous waste related records within the plant.
5. Familiar with all aspects of the plant's Contingency Plan.
6. Have the authority to commit the resources necessary to implement the Contingency Plan.

RCRAHAZARDOUS WASTE CONTINGENCY PLANII. EMERGENCY COORDINATOR - Continued

The following people will serve as emergency coordinator for the area affected by a hazardous waste emergency.

<u>DRUM STORAGE AREA AND COMPOUND AREA</u>	<u>PLANT EXTENSION</u>	<u>HOME PHONE</u>
Ted Nickerson - Primary	3635	369-9025
Charles Worlow - Alternate	3657	369-2269
Frank Jeanson - Alternate	3637	1-324-2329
Bruce Trego - Alternate	3618	1-327-8673
Bob Seymour - Alternate	3606	369-4412
Doug Skokna - Alternate	3610	1-327-0679

API SEPARATOR

Dan Miller - Primary	3622	1-356-6274
Frank Jeanson - Alternate	3637	1-324-2329
Bruce Trego - Alternate	3618	1-327-8673
Bob Seymour - Alternate	3606	369-4412
Doug Skokna - Alternate	3610	1-327-0679

In the absence of the department heads, the department head will designate another person to perform his duties. The designee will become the primary Emergency Coordinator for the area affected by a hazardous waste emergency.

III. EMERGENCY PROCEDURES

The plant has an emergency plan which is implemented in the event of any plant emergency. The plan is included in Section 1.23 of the Plant Safety and Health Manual. In addition to this plan, the Emergency Coordinator must evaluate any emergency situation involving hazardous wastes and determine if the RCRA Hazardous Waste Contingency Plan is to be implemented. If the plan is implemented, the Emergency Coordinator has the following responsibilities:

- A. Take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste. These measures include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.
- B. Monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate, if the facility stops operation in response to the emergency.
- C. Provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, immediately after the emergency.

RCRAHAZARDOUS WASTE CONTINGENCY PLANIII. EMERGENCY PROCEDURES - Continued

- D. Ensure that in the affected area(s) no waste which may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed.

If there are any questions concerning the proper handling of hazardous wastes or the means by which a hazardous waste spill should be cleaned up, contact the Environmental Coordinator.

IV. ARRANGEMENT WITH LOCAL AUTHORITIES

The following verbal agreement has been made with the local fire department: If outside assistance is required and requested, the firemen who come into the plant will operate under the guidance and leadership of the Shift Supervisor involved with the emergency.

V AREAS COVERED BY THE CONTINGENCY PLANA. Hazardous Waste Drum Storage Area

The hazardous waste drum storage area is the diked and fenced in area south of the east warehouse. This area is used for the storage of drummed hazardous wastes and other drummed materials.

B. API Separator and Slop Oil Tank

The API separator which is located east of the plasticizer tank farm is used to reclaim oils from the waste water generated during the plasticizer operation. Waste oils which cannot be reclaimed are stored in the slop oil tank just south of the API. Waste oil from the slop oil tank is periodically shipped to Stauffer Chemical Company who burn the oil for heat recovery.

RCRAHAZARDOUS WASTE CONTINGENCY PLANVI. REPORTING

If the Emergency Coordinator determines that the plant has had a spill or fire that could threaten human health or the environment outside of the Plant, the National Response Center (1-800-424-8802) should be contacted immediately. The following personnel are authorized to contact the National Response Center:

Safety Director	Bruce Trego	1-327-8673
Environmental Coordinator	Frank Jeanson	1-324-2329
Chief Process Engineer	Rendell Newton	1-328-0904
Senior Process Engineer	Vernon Thornhill	369-8952
Senior Process Engineer	Steve Hillman	369-7892
Plant Superintendent	Doug Skokna	1-327-0679
Plant Manager	Bob Seymour	369-4412
Vinyl Operations Superintendent	Paul Kober	369-7096
Compound Operations Superintendent	Ted Nickerson	369-9025
Mechanical Superintendent	Dan Miller	1-356-6274

In the event that the Hazardous Waste Contingency Plan is implemented, the time, date, and details of the incident are to be recorded in operating records of the unit affected. Within 15 days of the incident, a written report of the incident must be submitted to the State Solid Waste Division. The report is to include the following information:

1. Name, address, and telephone number of the plant.
2. Date, time, and type of incident (fire or spill).
3. Name and quantity of material(s) involved.
4. The extent of injuries, if any.
5. An assessment of actual or potential hazards to human health or the environment.
6. Estimated quantity and disposition of recovered material that resulted from the incident.

RCRAHAZARDOUS WASTE CONTINGENCY PLANVII. AMENDING EMERGENCY PROCEDURES

The Contingency Plan must be reviewed and amended, if necessary, whenever:

- A. Applicable regulations are revised.
- B. The plan fails in an emergency.
- C. The plant changes in its design, construction, operations and maintenance in a way that materially increases the potential for releases of hazardous wastes or hazardous waste constituents.

VIII. EQUIPMENTA. Communications

The following communications equipment is available at the plant:
(1) two-way radios, (2) five channel Gaitronics system, (3) public address system, and (4) telephone.

B. Fire Fighting

There are fire extinguishers located throughout the plant. Fire fighting equipment is listed in Section 1.23 of the PVC Health and Safety Manual.

C. Spill Cleanup

For a list of available spill cleanup equipment, refer to Appendix A of the S.P.C.C. Plan.

AGENCIES

AGENCIES

EPA REGION IV - ENVIRONMENTAL
PROTECTION AGENCY

MDEQ, BPA - MISSISSIPPI DEPARTMENT
OF ENVIRONMENTAL QUALITY,
BUREAU OF POLLUTION
CONTROL (PREVIOUSLY THE
MDNR, MISSISSIPPI
DEPARTMENT OF NATURAL
RESOURCES)

NRC - NATIONAL RESPONSE CENTER,
CERCLA REPORTING

MERC - MISSISSIPPI EMERGENCY
PLANNING COMMITTEE

LEPC - MISSISSIPPI EMERGENCY
RESPONSE COMMITTEE



III AGENCIES

A The regulatory agencies that the Aberdeen plant deals with and the contacts at each are as follows:

ENVIRONMENTAL PROTECTION AGENCY - REGION IV

Region IV includes the sates of Mississippi, Alabama, Georgia, Florida, South Carolina, Tennessee, and North Carolina

Address. USEPA
Region IV
345 Courtland Street
Atlanta, GA 30365

<u>Division</u>	<u>Contact</u>	<u>Phone Number</u>
CERCLA	Undine Johnson	(404)347-5065
Library		(404)347-4216
Freedom of Information		(404)347-3004

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

BUREAU OF POLLUTION CONTROL

Address: Mississippi Department of Natural Resources
Bureau of Pollution Control
P O. Box 10385
Jackson, MS 39209

<u>Section</u>	<u>Contact</u>	<u>Phone Number</u>
N Mississippi Air Emissions	Danny Jackson	(601)961-5171
Industrial Wastewater Control	Taher Diab	(601)961-5171
RCRA	Sam Mabry	(601)961-5171
CERCLA	Jim Hardage	(601)961-5171

BUREAU OF LAND AND WATER RESOURCES

<u>Section</u>	<u>Contact</u>	<u>Phone Number</u>
Director of Bureau	Charles Branch	(601)961-5265
Hydrologist	Mike Gross	(601)961-5265

III AGENCIES

B Spill/Release Reporting

NATIONAL RESPONSE CENTER

1-800-424-8802

LOCAL EMERGENCY PLANNING COMMITTEE

Emergency Coordinator Jerome Husky (601)369-6439

MISSISSIPPI EMERGENCY RESPONSE COMMISSION

Regular Hours	Bill Austin	(601)960-9000
In State	24-hour number	1-800-222-6362
Out of State	24-hour number	(601)352-9100

PERMITS

PERMITS ADMINISTERED BY STATE

- WATER** - **CWA, NPDES**
*NATIONAL POLLUTANT
DISCHARGE ELIMINATION
SYSTEM*
- AIR** - **CAA, NESHAP**
- CONSTRUCTION-** **MAJOR PROJECTS**
- GROUNDWATER -** **MDEQ, BLDR**
*BUREAU OF LAND
AND WATER RESOURCES*
- WASTE** - **GENERATOR, EPA**
IDENTIFICATION NUMBER

AIR PERMIT

PERMITS

A Operating Permit No 1840-00014 for Air Emissions Equipment

An application for a construction permit needs to be submitted for any significant modification to the process or facility which alters the rate or composition of air pollutant emissions. A new permit application must be submitted 180 days prior to March 1, 1991, in order to renew this permit.

This permit gives emissions limitations on our three boilers, nine PVC dryers, particulate matter on 35 baghouses combined, particulate matter from the Compound Production area, particulate matter from the Dryblend area, air contaminants from the Plasticizer Production area, emissions from the VCM incinerators, and emissions covered under NESHAPS.



MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171



February 24, 1988

CERTIFIED MAIL NO. P-125 260 667

Mr. John Friend, Plant Manager
Vista Polymers
P. O. Box 91
Aberdeen, Mississippi 39730

Dear Mr. Friend:

Re: Operating Permit No. 1840-00014
Aberdeen, Mississippi

Enclosed please find Operating Permit No. 1840-00014 issued for the operation of the air emissions equipment. Operation of the air emissions equipment at the facility shall be in accordance with the terms, conditions, and limitations of the permit.

Any significant modification to this process or facility which will alter the rate or composition of air pollutant emissions will cause this permit to become invalid. Should you wish to make such a modification, it will be necessary to submit a new application for a construction permit.

This permit expires on March 1, 1991. A new permit application must be submitted one hundred and eighty (180) days prior to this date in order to renew this permit.

Any appeal of this permit action must be made within the 30 day period provided for in Section 49-17-29(4)(b) Mississippi Code of 1972.

If you have any questions or if we can be of service, please let me know.

Very truly yours,

A handwritten signature in cursive script that reads "Bobby V. Whitaker".

Bobby V. Whitaker
North Air Emissions Section

BVW:eb
Enclosure

**STATE OF MISSISSIPPI
AIR POLLUTION CONTROL
PERMIT
TO OPERATE AIR EMISSIONS EQUIPMENT**

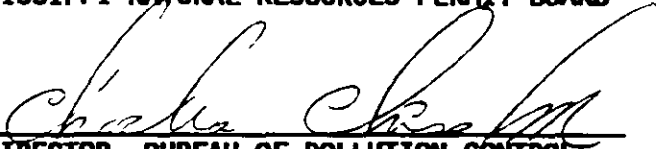
THIS CERTIFIES THAT

Vista Polymers
Hwy. 25
Aberdeen, Mississippi

has been granted permission to operate air emissions equipment in accordance with emission limitations, monitoring requirements and conditions set forth herein. This permit is issued in accordance with the provisions of the Mississippi Air and Water Pollution Control Law (Section 49-17-1 et. seq., Mississippi Code of 1972), and the regulations and standards adopted and promulgated thereunder.

Issued this 23rd, day of February, 1988

MISSISSIPPI NATURAL RESOURCES PERMIT BOARD



**DIRECTOR, BUREAU OF POLLUTION CONTROL
MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES**

Expires 1st day of March, 1991

Permit No. 1840-00014

PART I

Page 3 of 11

Permit No. 1840-00014

- b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any air emission.
- 8. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to:
 - a. Violation of any terms or conditions of this permit.
 - b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or
 - c. A change in any condition that required either a temporary or permanent reduction or elimination of authorized air emissions.
 - 9. For renewal of this permit the applicant shall make application not less than one-hundred eighty (180) days prior to the expiration date of the permit substantiated with current emissions data, test results or reports or other data as deemed necessary by the Mississippi Department of Natural Resources Permit Board.
 - 10. Except for data determined to be confidential under the Mississippi Air & Water Pollution Control Law, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Mississippi Department of Natural Resources Bureau of Pollution Control.
 - 11. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.
 - 12. Nothing herein contained shall be construed as releasing the permittee from any liability for damage to persons or property by reason of the installation, maintenance, or operation of the air cleaning facility, or from compliance with the applicable statutes of the State, or with local laws, regulations, or ordinances.
 - 13. This permit is non-transferable.
 - 14. This permit is for air pollution control purposes only.

PART II

Page 4 of 11

Permit No. 1840-00014

PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning February 23, 1988, and lasting until March 1, 1991, the permittee is authorized to operate air emissions equipment and emit air contaminants from the boiler, Emission Point 001.

Boilers:

1. Springfield No. L680 - 39.9×10^6 BTU/HR
2. Springfield No. L694 - 39.9×10^6 BTU/HR
3. Cleaver Brooks No. OL76 - 59.8×10^6 BTU/hr

Such emissions shall be limited and monitored by the permittee as specified below:

EMISSION LIMITATIONS

Boiler No. 1

Particulate Matter	19.01 lbs/hr
Sulfur Dioxide	95.76 lbs/hr

Boiler No. 2

Particulate Matter	19.01 lbs/hr
Sulfur Dioxide	95.76 lbs/hr

Boiler No. 3

Particulate Matter	26.64 lbs/hr
Sulfur Dioxide	143.52 lbs/hr

Also included with this Emission Point is the Vinyl Chloride Reaction and Monomer Storage Area. (See PART III of this Permit.)

PART II

Page 5 of 11

Permit No. 1840-00014

PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning February 23, 1988, and lasting until March 1, 1991, the permittee is authorized to operate air emissions equipment and emit air contaminants from the PVC Dryers, Emission Point 002.

PVC Dryers:

1. PVC Dryer #1 with Baghouse
2. PVC Dryer #2 with Baghouse
3. PVC Dryer #4 with Baghouse
4. PVC Dryer #5 with Baghouse
5. PVC Dryer #6 with Baghouse
6. PVC Dryer #7 with Baghouse
7. PVC Dryer #8 with Baghouse
8. Fluidized Bed PVC Dryer with Scrubber
9. Resin Reclaim Dryer with Baghouse

Such emissions shall be limited and monitored by the permittee as specified below:

EMISSION LIMITATIONS

Particulate Matter:

- | | |
|-------------------------------|-------------|
| 1. PVC Dryer #1 | 19.1 lbs/hr |
| 2. PVC Dryer #2 | 19.1 lbs/hr |
| 3. PVC Dryer #4 | 19.1 lbs/hr |
| 4. PVC Dryer #5 | 19.1 lbs/hr |
| 5. PVC Dryer #6 | 19.1 lbs/hr |
| 6. PVC Dryer #7 | 19.1 lbs/hr |
| 7. PVC Dryer #8 | 19.1 lbs/hr |
| 8. Fluidized Bed
PVC Dryer | 36.3 lbs/hr |
| 9. Resin Reclaim
Dryer | 5.9 lbs/hr |

PART II

Page 6 of 11
Permit No. 1840-00014

**PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS**

During the period beginning February 23, 1988, and lasting until March 1, 1991, the permittee is authorized to operate air emissions equipment and emit air contaminants from the PVC Storage and Handling Process, Emission Point 003. Thirty-five (35) baghouses are included with this Emission Point for control of particulate matter.

Such emissions shall be limited and monitored by the permittee as specified below:

EMISSION LIMITATIONS

Particulate Matter	36.4 lbs/hr - This represents the total mass limit for the entire Emission Point (all 35 baghouse combined). It is based on a process weight rate of 26.0 tons per hour.
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PART II

Page 7 of 11

Permit No. 1840-00014

**PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS**

During the period beginning February 23, 1988, and lasting until March 1, 1991, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Compound Production Area, Emission Point 004. This includes all cyclones and baghouses associated with the process.

Such emissions shall be limited and monitored by the permittee as specified below:

EMISSION LIMITATIONS

Particulate Matter	12.3 lbs/hr - Based on a process weight of 5.1 tons per hour.
--------------------	---

PART II

Page 8 of 11

Permit No. 1840-00014

**PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS**

During the period beginning February 23, 1988, and lasting until March 1, 1991, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Dry Blend Production Area, Emission Point 005. This includes all particulate matter collection devices associated with the process.

Such emissions shall be limited and monitored by the permittee as specified below:

EMISSION LIMITATIONS

Particulate Matter	10.9 lbs/hr - Based on a process weight of 4 3 tons per hour.
--------------------	---

PART II

Page 9 of 11
Permit No. 1840-00014

**PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS**

During the period beginning February 23, 1988, and lasting until March 1, 1991, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Plasticizer Production Area, Emission Point 006.

Such air emissions equipment shall be operated as efficiently as possible to provide the maximum reduction of air contaminants.

PART II

Page 10 of 11
Permit No. 1840-00014

PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning February 23, 1988, and lasting until March 1, 1991, the permittee is authorized to operate air emissions equipment and emit air contaminants from the Vinyl Chloride Monomer Incinerators, Emission Point 007.

Such emissions shall be limited and monitored by the permittee as specified below:

EMISSION LIMITATIONS

Chlorine (Cl_2)	0.084 lbs/hr and 0.368 tons/year
Hydrogen Chloride (HCl)	0.086 lbs/hr and 0.377 tons/year

PART III

Page 11 of 11
Permit No. 1840-00014

**PART III
OTHER REQUIREMENTS**

- (1) The permittee is authorized to emit air contaminants from equipment and processes in accordance with the terms and conditions of the National Emission Standards for Hazardous Air Pollutants (NESHAPS), 40 CFR Part 61 Subpart A - General Provisions and Subpart F - Vinyl Chloride.

SR-154

CONSTRUCTION
PERMIT

IV PERMITS

B Permit for Construction of Air Emissions Equipment

Although we are presently not required to have a Prevention of Significant Deterioration ("PSD") permit, we could trigger that requirement if we have new construction of \$1 2MM or modifications of the process. We are a major emitting facility because we emit or have the potential to emit 100 tons per year of particulates. The new baghouses for the rotary dryers should bring us under the 100 tpy trigger point. No new construction may be started on a major source or modification in any area where PSD requirements apply without preconstruction review of air quality impacts. Therefore, we submitted a request for construction permits to install new baghouses on our rotary dryers. A copy of that request and consent is attached.

Vista Polymers
A Division of
Vista Chemical Company

Highway 25
Post Office Box 91

Aberdeen, Mississippi 39730
Phone (601) 369-8111

May 3, 1989

VISTA

Mr. Bobby V. Whitaker
North Air Emissions Section
Mississippi Department of Natural Resources
Bureau of Pollution Control
P.O. Box 10385
Jackson, MS 39209

Dear Mr. Whitaker:

Re: Construction Permit No. 1840-00014
Aberdeen, Mississippi

As we discussed in a recent telephone conversation, the approved construction permit for a new baghouse on our dryers needs two modifications. The modifications requested are for limitations in fuel and production and volatile organic compounds.

When we discussed the rate of natural gas to the dryers, I gave you an average usage not a maximum. Please change the limitation on natural gas to the dryers to a rate of 180,000 scf per day.

During the production of Poly Vinyl Chloride, a certain amount of residual vinyl chloride is contained in the PVC particle. As the PVC particle is handled through our process the vinyl chloride in the particle is given off. When the PVC particles reach our dryers, there is some residual vinyl chloride contained in them. This vinyl chloride is released during the drying process and would be vented out the baghouse. The maximum amount of vinyl chloride released in the drying process would be 0.1 lbs/hr or 0.438 tons/yr.

If you have any questions, please give me a call at 369-3637

Sincerely,


Frank G. Jeanson
Environmental Coordinator

c: RWS, RBN



MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P O. Box 10385
Jackson, Mississippi 39289-0385
(601) 961-5171



April 13, 1989

CERTIFIED MAIL NO. P 965 304 005

Mr. Frank G. Jeansen
Environmental Coordinator
Vista Polymers
P. O. Box 91
Aberdeen, Mississippi 39730

Dear Mr. Jeansen:

Re: Construction Permit No. 1840-00014
Aberdeen, Mississippi

We have completed our review of the plans and specifications for the above referenced permit and approval is hereby indicated for air pollution control purposes only. Enclosed please find Construction Permit No. 1840-00014 for the construction of the air emissions equipment and air pollution control equipment.

Prior to startup of the air emissions equipment at this facility, a Performance Evaluation Permit must be obtained from the Permit Board. In order to obtain the Performance Evaluation Permit, it will be necessary to submit certification by a professional engineer registered in the State of Mississippi that construction was completed in accordance with the approved plans and specifications and a written request for the permit.

Any appeal of this permit action must be made within the 30 day period provided for in Section 49-17-29(4)(b) Mississippi Code of 1972.

If you have any questions or if we can be of any service, please let me know.

Very truly yours,

Bobby V. Whitaker

Bobby V. Whitaker
North Air Emissions Section

BVW:els
Enclosure

**STATE OF MISSISSIPPI
AIR POLLUTION CONTROL
PERMIT
TO CONSTRUCT AIR EMISSIONS EQUIPMENT**

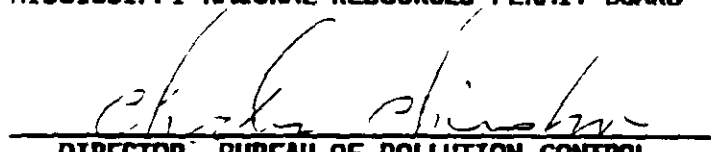
THIS CERTIFIES THAT

Vista Polymers
Highway 25
Aberdeen, Mississippi

has been granted permission to construct air emissions equipment to comply with emission limitations, monitoring requirements and other conditions set forth herein. This permit is issued in accordance with the provisions of the Mississippi Air and Water Pollution Control Law (Section 49-17-1 et. seq., Mississippi Code of 1972), and the regulations and standards adopted and promulgated thereunder.

Issued this 11th day of April, 1989

MISSISSIPPI NATURAL RESOURCES PERMIT BOARD


**DIRECTOR, BUREAU OF POLLUTION CONTROL
MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES**

Permit No. 1840-00014

PART I

Page 2 of 9

Permit No. 1840-00014

PART I
GENERAL CONDITIONS

1. The plans, specifications, schedules, dates and other data submitted to the Permit Board are filed with and considered as a part of this permit.
2. All air pollution control facilities shall be designed and constructed such as to allow proper operation and maintenance of this permit.
3. The necessary facilities shall be constructed so that solids removed in the course of control of air emissions may be disposed of in a manner such as to prevent the solids from becoming windborne and to prevent the materials from entering State waters.
4. The air pollution control facilities shall be constructed such that diversion from or bypass of collection and control facilities is not needed except (i) where unavoidable to prevent loss of life or severe property damage or (ii) when approved by the Mississippi Natural Resources Permit Board.
5. The construction of facilities shall be performed in such a manner as to reduce both point source and fugitive dust emissions to a minimum.
6. The permittee shall allow the Mississippi Department of Natural Resources Bureau of Pollution Control and the Mississippi Natural Resources Permit Board and/or their representatives upon presentation of credentials:
 - a. To enter upon the permittee's premises where an air emission source is located or in which any records are required to be kept under the terms and conditions of this permit; and
 - b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any air emission.
7. After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to:
 - a. Violation of any terms or conditions of this permit;
 - b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts, or
 - c. A change in any condition that requires either a temporary or permanent reduction or elimination of authorized air emissions.

PART I

Page 3 of 9

Permit No. 1840-00014

8. Except for data determined to be confidential under the Mississippi Air & Water Pollution Control Law, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Mississippi Department of Natural Resources Bureau of Pollution Control.
9. The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.
10. Nothing herein contained shall be construed as releasing the permittee from any liability for damage to persons or property by reason of the installation, maintenance, or operation of the air cleaning facility, or from compliance with the applicable statutes of the State, or with local laws, regulations, or ordinances.
11. This permit is non-transferable.
12. This permit is for air pollution control purposes only.
13. Approval to construct will expire should construction not begin within one (1) year of the issuance of this permit, or should construction be suspended for one (1) year or more.
14. This permit shall become void upon completion of construction. The permittee shall furnish the Bureau of Pollution Control written notification of construction completion within 15 days of such date.
15. Prior to startup of air emissions equipment at this source, a Performance Evaluation Permit must be obtained. The permittee shall submit certification by a professional engineer registered in the State of Mississippi that construction completed in accordance with the approved plans and specifications and a written request for the permit.

PART II

Page 4 of 9

Permit No. 1840-00014

PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning April 11, 1989, the permittee is authorized to construct air emissions equipment for the emission of air contaminants from Baghouse No. 3 in the PVC Drying Area, Emission Point 002.

The air emissions equipment shall be constructed to comply with the emission limitations and monitoring requirements specified below.

EMISSION LIMITATIONS

Particulate Matter	2.4 lbs/hr and 10.5 tons/year, verifiable by Test Methods 1-5, 40 CFR 60, Appendix A.
PM ₁₀	2.4 lbs/hr & 10.5 tons/year
Sulfur Dioxide	0.004 lb/hr and 0.018 ton/year, verifiable by Test Method 6, 40 CFR 60, Appendix A.
Carbon Monoxide	0.134 lb/hr and 0.587 ton/year, verifiable by Test Method 10, 40 CFR 60, Appendix A.
Nitrogen Oxides	0.667 lb/hr and 2.92 tons/year, verifiable by Test Method 7, 40 CFR 60, Appendix A.
Volatile Organic Compounds	0.054 lbs/hr and 0.0234 ton/year, verifiable by Test Method 18, 40 CFR 60, Appendix A.
Opacity	40% verifiable by Test Method 9, 40 CFR 60, Appendix A.

All test methods specified above shall be those versions which are in effect April 11, 1989.

FUEL & PRODUCTION LIMITATIONS

The drier controlled by this baghouse is permitted to be heated only with natural gas at a rate not to exceed 160,000 scf per day.

PART II

Page 5 of 9

Permit No. 1840-00014

**PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS**

Beginning April 11, 1989, the permittee is authorized to construct air emissions equipment for the emission of air contaminants from Baghouse No. 4 in the PVC Drying Area, Emission Point 002.

The air emissions equipment shall be constructed to comply with the emission limitations and monitoring requirements specified below.

EMISSION LIMITATIONS

Particulate Matter	2.4 lbs/hr and 10.5 tons/year, verifiable by Test Methods 1-5, 40 CFR 60, Appendix A
PM ₁₀	2.4 lbs/hr & 10.5 tons/year
Sulfur Dioxide	0.004 lb/hr and 0.018 ton/year, verifiable by Test Method 6, 40 CFR 60, Appendix A.
Carbon Monoxide	0.134 lb/hr and 0.587 ton/year, verifiable by Test Method 10, 40 CFR 60, Appendix A.
Nitrogen Oxides	0.667 lb/hr and 2.92 tons/year, verifiable by Test Method 7, 40 CFR 60, Appendix A.
Volatile Organic Compounds	0.054 lbs/hr and 0.0234 ton/year, verifiable by Test Method 18, 40 CFR 60, Appendix A
Opacity	40% verifiable by Test Method 9, 40 CFR 60, Appendix A.

All test methods specified above shall be those versions which are in effect April 11, 1989.

FUEL & PRODUCTION LIMITATIONS

The drier controlled by this baghouse is permitted to be heated only with natural gas at a rate not to exceed 160,000 scf per day.

PART II

Page 6 of 9

Permit No. 1340-00014

**PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS**

Beginning April 11, 1989, the permittee is authorized to construct air emissions equipment for the emission of air contaminants from Baghouse No. 5 in the PVC Drying Area, Emission Point 002.

The air emissions equipment shall be constructed to comply with the emission limitations and monitoring requirements specified below.

EMISSION LIMITATIONS

Particulate Matter	2.4 lbs/hr and 10.5 tons/year, verifiable by Test Methods 1-5, 40 CFR 60, Appendix A
PM ₁₀	2.4 lbs/hr & 10.5 tons/year
Sulfur Dioxide	0.004 lb/hr and 0.018 ton/year, verifiable by Test Method 6, 40 CFR 60, Appendix A.
Carbon Monoxide	0.134 lb/hr and 0.587 ton/year, verifiable by Test Method 10, 40 CFR 60, Appendix A.
Nitrogen Oxides	0.667 lb/hr and 2.92 tons/year, verifiable by Test Method 7, 40 CFR 60, Appendix A.
Volatile Organic Compounds	0.054 lbs/hr and 0.0234 ton/year, verifiable by Test Method 18, 40 CFR 60, Appendix A.
Opacity	40% verifiable by Test Method 9, 40 CFR 60, Appendix A.

All test methods specified above shall be those versions which are in effect April 11, 1989.

FUEL & PRODUCTION LIMITATIONS

The drier controlled by this baghouse is permitted to be heated only with natural gas at a rate not to exceed 160,000 scf per day.

PART II

Page 7 of 9
Permit No. 1840-00014

PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning April 11, 1989, the permittee is authorized to construct air emissions equipment for the emission of air contaminants from Baghouse No. 6 in the PVC Drying Area, Emission Point 002.

The air emissions equipment shall be constructed to comply with the emission limitations and monitoring requirements specified below.

EMISSION LIMITATIONS

Particulate Matter	2.4 lbs/hr and 10.5 tons/year, verifiable by Test Methods 1-5, 40 CFR 60, Appendix A
PM ₁₀	2.4 lbs/hr & 10.5 tons/year
Sulfur Dioxide	0.004 lb/hr and 0.018 ton/year, verifiable by Test Method 6, 40 CFR 60, Appendix A.
Carbon Monoxide	0.134 lb/hr and 0.587 ton/year, verifiable by Test Method 10, 40 CFR 60, Appendix A.
Nitrogen Oxides	0.667 lb/hr and 2.92 tons/year, verifiable by Test Method 7, 40 CFR 60, Appendix A.
Volatile Organic Compounds	0.054 lbs/hr and 0.0234 ton/year, verifiable by Test Method 18, 40 CFR 60, Appendix A.
Opacity	40% verifiable by Test Method 9, 40 CFR 60, Appendix A.

All test methods specified above shall be those versions which are in effect April 11, 1989.

FUEL & PRODUCTION LIMITATIONS

The drier controlled by this baghouse is permitted to be heated only with natural gas at a rate not to exceed 160,000 scf per day.

PART II

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Permit No. 1840-00014

PART II
EMISSION LIMITATIONS AND MONITORING REQUIREMENTS

Beginning April 11, 1989, the permittee is authorized to construct air emissions equipment for the emission of air contaminants from Baghouse No. 7 in the PVC Drying Area, Emission Point 002.

The air emissions equipment shall be constructed to comply with the emission limitations and monitoring requirements specified below.

EMISSION LIMITATIONS

Particulate Matter	2.4 lbs/hr and 10.5 tons/year, verifiable by Test Methods 1-5, 40 CFR 60, Appendix A
PM ₁₀	2.4 lbs/hr & 10.5 tons/year
Sulfur Dioxide	0.004 lb/hr and 0.018 ton/year, verifiable by Test Method 6, 40 CFR 60, Appendix A.
Carbon Monoxide	0.134 lb/hr and 0.587 ton/year, verifiable by Test Method 10, 40 CFR 60, Appendix A.
Nitrogen Oxides	0.667 lb/hr and 2.92 tons/year, verifiable by Test Method 7, 40 CFR 60, Appendix A.
Volatile Organic Compounds	0.054 lbs/hr and 0.0234 ton/year, verifiable by Test Method 18, 40 CFR 60, Appendix A
Opacity	40% verifiable by Test Method 9, 40 CFR 60, Appendix A.

All test methods specified above shall be those versions which are in effect April 11, 1989.

FUEL & PRODUCTION LIMITATIONS

The drier controlled by this baghouse is permitted to be heated only with natural gas at a rate not to exceed 160,000 scf per day.

PART III

Page 9 of 9

Permit No. 1840-00014

**PART III
OTHER REQUIREMENTS**

The operator of the equipment covered by this permit shall operate and maintain this equipment to assure that the emission rates will not, at any time, exceed the rates allowed by the Mississippi Air Emission Regulations.

SR-158

WATER PERMIT

VI PERMITS

C State of Mississippi Water Pollution Control Permit

This NPDES Permit Number MS0001970 expires March 31, 1991, and application for renewal needs to be made 180 days prior to the expiration date. It gives effluent limitations and monitoring requirements for the following waste streams:

- 001 Process Water from Pond 6 Outfall
- 002 South of Pit #2 New Module non-contact cooling water and storm water
- 003 Pit #1 non-contact cooling water and storm water
- 004 Once through breathing air pump seal water



MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
Bureau of Pollution Control
P. O. Box 10385
Jackson, Mississippi 39209
(601) 961-5171



June 23, 1986

CERTIFIED MAIL NO. P 283 765 578

Mr. John Friend
Vista Polymers, Inc.
P. O. Box 91
Aberdeen, Mississippi 39730

Dear Mr. Friend:

Re: NPDES Permit No. MS0001970

Enclosed is National Pollutant Discharge Elimination System (NPDES) Permit Number MS0001970, which is hereby issued to Vista Polymers, Inc. Please note the effluent limitations, schedule of compliance, monitoring requirements, and monitoring reporting dates in Part I of the permit.

This permit is issued in accordance with the provisions of the Mississippi Air and Water Pollution Control Law (Sections 49-17-1, et. seq., Mississippi Code of 1972), and the regulations and standards adopted and promulgated thereunder, and under the authority granted to the Mississippi Natural Resources Permit Board pursuant to Section 402(b) of the Federal Water Pollution Control Act.

If you desire that a Permit Board hearing be held regarding this permit, you must make written application to the Permit Board within thirty (30) days of receipt of this notice; otherwise, the terms, conditions and limitations of this permit become final.

Very truly yours,

James E. Mahaffey
James E. Mahaffey
Industrial Wastewater Control Section

JEM:els

Enclosure

cc: Mr. Robert F. McGhee, EPA (w/enclosure)
Mr. Warren Foster
NRO (w/enclosure)

JUN 26

State of Mississippi Water Pollution Control PERMIT

TO DISCHARGE WASTEWATER IN ACCORDANCE WITH THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

THIS CERTIFIES THAT

VISTA POLYMERS, INC.
Aberdeen, Mississippi

has been granted permission to discharge wastewater into

James Creek

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, and III hereof. This permit is issued in accordance with the provisions of the Mississippi Water Pollution Control Law (Section 49-17-1 et seq., Mississippi Code of 1972), and the regulations and standards adopted and promulgated thereunder, and under authority granted pursuant to Section 402 (b) of the Federal Water Pollution Control Act.

MISSISSIPPI NATURAL RESOURCES PERMIT BOARD



DIRECTOR, BUREAU OF POLLUTION CONTROL
MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES

Issued: May 9, 1986

Permit No. MS0001970

Expires: March 31, 1991

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- 1 During the period beginning May 9, 1986 and lasting until March 31, 1991 the permittee is authorized to discharge from outfall(s) serial number(s) 001 (Process Water)

Such discharges shall be limited and monitored by the permittee as specified below

PARAMETER	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS	
	kg/day (lbs/day)	Daily Avg.	Daily Max.	Measurement Frequency	Sample Type
Flow - M ³ /day (MGD)	--	--	--	Continuous	Recorder
Biochemical Oxygen Demand					
Winter 1/	196(431)	364(800)	32.0 mg/l	Weekly	24-Hr. Compo.
Summer 2/	163(357)	338(744)	26.5 mg/l	Weekly	24-Hr. Compo.
Chemical Oxygen Demand					
Winter 1/	664(1461)	1233(2712)	--	Weekly	24-Hr. Compo.
Summer 2/	551(1212)	1147(2523)	--	Weekly	24-Hr. Compo.
Total Suspended Solids	306(674)	635(1396)	--	Weekly	24-Hr. Compo.
Temperature	--	--	35° (95°F)	Weekly	Grab
Ammonia	6.1(13.5)	12.7(27.9)	--	Weekly	24-Hr. Compo.
Bis (2-Ethyl-hexyl) Phthalate	--	--	--	Quarterly	24-Hr. Compo.
Di-N-Octyl Phthalate	--	--	--	Quarterly	24-Hr. Compo.
Vinyl Chloride	--	--	--	Quarterly	Grab

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once/week with a grab sample.
3. There shall be no discharge of floating solids or visible foam in other than trace amounts.
4. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at the nearest accessible point after final treatment, but prior to actual discharge to or mixing with the receiving waters.
5. The dissolved oxygen shall not be less than 6.0 mg/l and shall be monitored weekly with a grab sample taken at the location specified in 4 above.
- 1/ Winter is defined as December 1 through April 30.
- 2/ Summer is defined as May 1 through November 30.

PART I

A EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- 1 During the period beginning May 9, 1986 and lasting until March 31, 1991 the permittee is authorized to discharge from outfall(s) serial number(s) 002, 003 (Non-Contact Cooling Water and Storm Water)

Such discharges shall be limited and monitored by the permittee as specified below.

PARAMETER	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS	
	kg/day (lb/day) Daily Avg.	Daily Max.	Other Units (Specify) Daily Avg. Daily Max	Measurement Frequency	Sample Type
Flow - M^3/day (MGD)	--	--	--	2/Month	Instantaneous
Temperature °C(°F)	N/A	N/A	N/A	2/Month	Grab
Total Suspended Solids	--	--	100 mg/l 35 (95)	2/Month	Composite
Chromium, Total*	--	--	1.0 mg/l 2.0 mg/l	1/Month	Grab
Zinc, Total*	--	--	0.5 mg/l 1.0 mg/l	1/Month	Grab
Chlorine, Residual*	--	--	0.2 mg/l 0.2 mg/l	1/Month	Grab

*These parameters shall be monitored and limited only in those instances where materials containing these pollutants are added to the cooling water and/or boiler water and are subject to being discharged. Samples for the determination of chlorine shall be taken during the time period when the effluent will be affected by elemental chlorine additions.

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per month with a grab sample.
3. There shall be no discharge of floating solids or visible foam in other than trace amounts.
4. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at the nearest accessible point after final treatment but prior to actual discharge or mixing with the receiving waters.

PART I

A EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- 1 During the period beginning May 9, 1986 and lasting until March 31, 1991 the permittee is authorized to discharge from outfall(s) serial number(s) 004 (Once thru Pump Seal Water)

Such discharges shall be limited and monitored by the permittee as specified below.

PARAMETER	DISCHARGE LIMITATIONS			MONITORING REQUIREMENTS		
	kg/day (lbw/day) Daily Avg.	Daily Max.	Other Units (Specify) Daily Avg.	Measurement Frequency	Sample Type	
Flow - M ³ /day (MGD)	--	--	--	2/Month	Instantaneous	
Temperature °C (°F)	--	--	35 (95)	2/Month	Grab	

2. The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per month with a grab sample.

3. There shall be no discharge of floating solids or visible foam in other than trace amounts.

4. Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location(s): at the nearest accessible point after final treatment but prior to actual discharge or mixing with the receiving waters.

Page 5 of 14
Permit No MS0001970

1 The permittee shall achieve compliance with the effluent limitations specified for discharge in accordance with the following schedule:

2. No later than 10 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

B. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Reporting

Monitoring results obtained during the month shall be summarized and reported on a Discharge Monitoring Report Form (EPA No. 3320-1), postmarked no later than the 28th day of the month following the completed reporting month. The first report is due on July 28, 1986. Copies of these, and all other reports required herein, shall be signed in accordance with Section 6 and 7 of the Mississippi Wastewater Permit Regulations, and shall be submitted to the Mississippi Natural Resources Permit Board at the following address:

MISSISSIPPI DEPARTMENT OF NATURAL RESOURCES
BUREAU OF POLLUTION CONTROL
P. O. Box 10385
Jackson, Mississippi 39209

3. Test Procedures

Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304(h) of the Federal Water Pollution Control Act, as amended.

4. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling;
- b. The dates the analyses were performed;
- c. The person(s) who performed the analyses;
- d. The analytical techniques or methods used; and
- e. The results of all required analyses.

5. Records Retention

- a. All records and information resulting from the monitoring activities required by this permit (including all records of: analyses performed; calibration and maintenance of instrumentation; and recording from continuous monitoring instrumentation) shall be retained for a minimum of three (3) years, or longer if requested by the Permit Board.

PART I

Page 7 of 14

Permit No. MS0001970

- b. The permittee shall furnish to the Permit Board, upon request, copies of records required to be kept by this permit.

6. Definitions

- a. The "monthly average" (applicable to municipal and domestic permits), other than for fecal coliform bacteria, is the arithmetic mean of all samples collected in a one-month period. The monthly average for fecal coliform bacteria is the geometric mean of all samples collected in a one-month period. In computing the geometric mean, one (1) shall be substituted for sample results of zero.
- b. The "weekly average" (applicable to municipal permits), other than for fecal coliform bacteria, is the arithmetic mean of all the samples collected during a one-week period. The weekly average for fecal coliform bacteria is the geometric mean of all samples collected during a one-week period. In computing the geometric mean, one (1) shall be substituted for sample results of zero. For self-monitoring purposes the value to be reported is the single highest weekly average computed during a one-month period.
- c. The "daily average" (applicable to industrial permits), other than for fecal coliform bacteria, is the arithmetic mean of all samples collected in a one-month period. The daily average for fecal coliform bacteria is the geometric mean of all samples collected in a one-month period. In computing the geometric mean, the value one (1) shall be substituted for sample results of zero.
- d. The "daily maximum" (applicable to industrial and domestic permits), is the highest value recorded of any sample collected on any single day of the calendar month.

PART II

A. MANAGEMENT REQUIREMENTS

1. Change in Discharge

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions or treatment modifications which will result in new, different, or increased discharges of pollutants must be reported by submission of a new NPDES application. If such changes will not violate the effluent limitations specified in this permit, and upon written notice (in lieu of a new NPDES application) to the Mississippi Natural Resources Permit Board, the permit may be modified to specify and limit any pollutants not previously limited.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with or will be unable to comply with any provision specified in this permit, the permittee shall notify the Mississippi Pollution Control Permit Board orally within 24 hours of becoming aware of such conditions. A written report shall also be provided within five (5) days of such time and shall contain the following information:

- a. A description of the discharge and cause of noncompliance; and
- b. The period of noncompliance, including exact dates and times; or if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Bypassing

Any diversion from or bypass of wastewater collection and treatment facilities is prohibited, except (i) where unavoidable to prevent loss of life or severe property damage, or (ii) where excessive storm drainage or runoff would damage any facilities necessary for compliance with the effluent limitations and prohibitions of this permit.

The permittee shall notify the Natural Resources Permit Board orally of each such diversion or bypass within 24 hours of the diversion or bypass, or if the need for the bypass is known in advance, it shall submit prior notice, if possible, at least ten (10) days before the date of the bypass.

6. Removed Substances

Solids, sludges, filter backwash, or other residuals removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent such materials from entering State waters and in a manner consistent with the Mississippi Solid Waste Disposal Act and the Federal Resource Conservation and Recovery Act.

7. Power Failures

In order to maintain compliance with the effluent limitations and prohibitions of this permit, the permittee shall either:

- a. In accordance with the Schedule of Compliance contained in Part I, provide an alternate power source sufficient to operate the wastewater collection and treatment facilities, or, if such alternate power source is not in existence, and no date for its implementation appears in Part I,
- b. Provide a method whereby the effluent limitations contained in Part I shall be met upon the reduction, loss, or failure of the primary source of power to the wastewater collection and treatment facilities.

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Mississippi Natural Resources Permit Board and the Regional Administrator of the U.S. Environmental Protection Agency and/or their authorized representatives, upon the presentation of credentials.

- a. To enter upon the permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to sample any discharge of pollutants.

2. Transfer of Ownership or Control

This permit is not transferable to any person except after proper notice. In the event of any change in control or ownership of facilities from which the authorized discharges emanate, the permittee shall notify the Mississippi Natural Resources

PART II

Page 10 of 14

Permit No. MS0001970

Permit Board at least thirty (30) days in advance of the proposed transfer date. The notice should include a written agreement between the existing and new permittees containing a specific date for the transfer of permit responsibility, coverage, and liability.

3. Availability of Records

Except for data determined to be confidential under the Mississippi Water Pollution Control Law, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of the Mississippi Department of Natural Resources Bureau of Pollution Control.

4. Permit Modification

- a. The permittee shall furnish to the Permit Board within a reasonable time any relevant information which the Permit Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit.
- b. Upon sufficient cause this permit may be modified, revoked, reissued, or terminated during its term.
- c. The filing of a request by the permittee for a permit modification, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

5. Toxic Pollutants

The permittee shall comply with any toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) established under Section 307(a) of the Federal Water Pollution Control Act.

6. Civil and Criminal Liability

- a. Any person who violates a term, condition or schedule of compliance contained within this permit or the Mississippi Water Pollution Control Law is subject to the actions defined by law.
- b. Except as provided in permit conditions on "Bypassing" (Part II, A-5), nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.
- c. It shall not be the defense of 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.

7. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties

to which the permittee is or may be subject to under Section 311 of the Federal Water Pollution Control Act and applicable provisions of the Mississippi Water Pollution Control Law pertaining to spills of oil and hazardous materials.

8. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

9. 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 circumstance, and the remainder of this permit, shall not be affected thereby.

10. Expiration of Permit

The permittee shall not discharge after the expiration date of this permit unless he has submitted a completed application for reissuance no later than 180 days prior to the expiration date. The Executive Director may grant permission to submit an application later than this, but no later than the expiration date of the permit.

PART III

A. REOPENER CLAUSE

This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Section 301(b)(2)(C), and (D), 304(b)(2), and 307(a)(2) of the Federal Water Pollution Control Act if the effluent standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

B. TOXIC POLLUTANTS NOTIFICATION REQUIREMENTS

The permittee shall comply with the applicable provisions of 40 CFR 122.42.

C. CLOSURE REQUIREMENTS

Should the permittee decide to permanently close and abandon the premises upon which it operates, it shall so notify the Permit Board no later than 90 days prior to doing so. Accompanying this notification shall be a closure plan which describes how and when all manufactured products, by-products, raw materials, stored chemicals, and solid and liquid wastes will be removed from the premises such that they will present no potential environmental hazard to the area. Abandonment of the site without providing proper notification as required herein, or without completing all aspects of the closure plan, will constitute a violation of this permit and may result in penalties of up to \$25,000.

PART III.

D. BIOASSAY REQUIREMENTS

The Water Quality Standards of Mississippi require that all waters be free from substances in concentrations or combinations which are harmful to humans, animals, or aquatic life (State of Mississippi, Water Quality Criteria for intrastate, Interstate and Coastal Waters. Section II.4. Minimum Conditions Applicable to All Waters, page 3, adopted November 12, 1974). In accordance with such requirements, the permittee is authorized to discharge from outfall(s) 001 (process Wastewater) only in accordance with the following conditions:

1. The permittee shall submit any existing toxicity data for review by Mississippi Bureau of Pollution Control within 30 days of the effective date of this permit.
2. The permittee shall initiate the following series of tests within 60 days of the effective date of issuance of the permit to evaluate wastewater toxicity. The permittee shall conduct a 7-day Ceriodaphnia survival and reproduction test, and Pimephales promelas (fathead minnows) larval survival and growth test (or use the embryo-larval survival and teratogenesis test) on different concentrations of effluent to determine if the discharge from outfall 001 is chronically toxic. Such testing will determine if the water affects the survival and reproduction of the test organisms. Such testing will be conducted using 24-hour composite samples of effluent collected daily. Chronic toxicity will be demonstrated if: 1) there is a 20% or more difference in survival between test organisms exposed to appropriate control water and any serial dilution of the effluent; or 2) there is a statistically significant difference at the 95% confidence level in reproduction between Ceriodaphnia exposed to an appropriate control water and any serial dilution of the effluent. Dilution water should be taken from the receiving water at a point as close as possible to the outfall, but upstream from the zone influenced by the effluent. When the receiving stream has no flow, a substitute dilution water must have a total hardness, total alkalinity, and specific conductance within 25 percent, and pH within 0.2 units, of the receiving water.
3. a. Such chronic toxicity tests shall be conducted once/quarter (with organism type being alternatively used) for a period of one year following the effective date of the permit. After the first year of testing, frequency of monitoring will be reduced to 1/6 months for the life of the permit. The first 6 month test will evaluate Ceriodaphnia according to the testing requirements in B. 2. The second 6 month test will evaluate Pimephales promelas (fathead minnows) according to the testing requirements in B.2. These organisms will be alternatively tested every six 6 months. If any one test during this period indicates the presence of chronic toxicity, then another confirmatory chronic toxicity test will be conducted within 2 weeks. If this confirmatory test indicates the presence of chronic toxicity, then the provisions of Section 3(b) shall apply. If no chronic toxicity is indicated in this confirmatory test, then the provisions of Section 3(b) will not apply. The results of each toxicity test shall be submitted to Mississippi Bureau of Pollution Control within 2 weeks of completion of testing.

- b. If the presence of chronic toxicity is confirmed, this will constitute a violation of Part I of this permit. The permittee will then be subject to the provisions of the Section 5.
4. All quality assurance criteria used shall be in accordance with short-term Methods for Estimating the Chronic Toxicity of Effluents to Freshwater Organisms, EPA-600/4-85. All test organisms and procedures used shall be in accordance with Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Section 12; Ceriodaphnia Survival and Reproduction Test Method 702.0.
5. In the event that after review of the above studies, the Mississippi Natural Resources Permit Board determines the waste stream is toxic to the receiving stream¹, the permittee shall:
- A. Provide plans and specifications to reduce the toxicity of the waste discharge to safe levels. (Safe levels will be determined by the Mississippi Natural Resources Permit Board).
- B. Develop a schedule for implementing this plan.
- ¹ In large rivers, lakes and estuaries the permittee must provide a schematic map showing isopleths of waste concentrations.

VCM EMISSIONS

IV PERMITS

D Historical Emissions of VCM

Attached is a history of VCM NESHAP's enforcement at the Aberdeen plant. The plant is no longer under a compliance plan and hasn't had a release of VCM since 1986. We are presently reviewing the need for Compliance Plan refresher training.

The second attachment is a copy of the SARA 313 Emissions for all PVC plants in the United States. They are listed alphabetically, by stack emissions, by fugitive emissions and total emissions.

The third attachment is a list of all the SARA 313 Emissions from the Aberdeen plant.

HISTORY OF VCM NESHAP'S ENFORCEMENT

Oct. 20, 1976	VCM Neshap's Promulgated		
Jan. 19, 1977	VCM Neshap's Becomes Effective		
Feb 2, 1979	RVD	25,500 lbs.	D-300
Jan. 19, 1980	RVD	24 lbs.	D-400
Apr. 3, 1980	RVD	180 lbs.	D-9
Apr. 7, 1980	RVD	36 lbs.	D-9
Sept 16, 1981	RVD	20 lbs.	Charge filter
Oct. 16, 1981	RVD	357 lbs.	T-201
Nov 5, 1981	RVD	89 lbs.	Charge filter
Jan 11, 1982	RVD	3-7 lbs.	Recovered monomer condenser
June 10, 1982	RVD	57 lbs.	Recovered monomer condenser
Jan. 13, 1983	RVD	222 lbs.	D-745
Dec. 18, 1983	Manual Vent	229 lbs.	?
Feb 1, 1984	Conoco Sued by DOJ on behalf of EPA		
After July 20, 1984	July voluntarily becomes a party to the suit.		
Aug. 19, 1985	Vista & Conoco agree to settle out of court. \$100,000 penalty Agree to submit a compliance plan.		
Sept. 16, 1985	Compliance plan submitted to EPA. Suggest 3 projects plus administrative; asks for ROL equivalency		
Oct. 25, 1985	EPA asks for more information		
Nov. 14, 1985	Vista sends more information		
Dec. 31, 1985	EPA tentatively approved plan; they do not approve ROL equivalencies.		

Mar. 27, 1986	EPA approves ROL equivalency.
Apr. 1, 1986	AFE for projects submitted. \$107,500 1. Reactor valve limit switches 2. Water Stripper T/P recorder 3. New module BD Tank level indicator Conoco
Apr. 3, 1986	EPA Approves compliance plan.
Dec. 23, 1986	Three projects complete.
July 27, 1986	VCM release
Aug 8, 1986	VCM release
Mar 11, 1987	MS Bureau of Pollution Control issues complaint for 2 releases
Apr. 14, 1987	Vista settles with the State for \$2,000
Aug. 6, 1987	Termination filed on the consent decree
Nov 7, 1987	Case closed.

TABLE 1 - COMPANY ALPHABETICAL

SARA 313 EMISSIONS - 1987
PVC PLANTS

COMPANY	LOCATION	1987 PVC CAPACITY, MM LBS		VCH EMISSIONS (LBS.)			VCH EMISSIONS/MM LBS PRODUCTION		
		Suspension Dispersion	Total	FUGITIVE	STACK	OTHER	FUGITIVE	STACK	OTHER
AIR PRODUCTS	CALVERT CITY, KY	300	300	15000	9000	24000	50	33	0
AIR PRODUCTS	PENSACOLA, FL	200	200	4500	1500	6000	23	8	0
BORLEN	ILLINOIS, IL	300	300	12700	60075	73055	37	177	1
BORLEN	GETTYSBURG, PA	400	400	26443	32185	58628	67	80	0
CERTAINTEED	LAKE CHARLES, LA	220	220	26000	15000	41002	110	60	0
FORNOSA PLASTICS	DELAWARE CITY, DE	90	90	123710		250	1377	0	3
FORNOSA PLASTICS	PT. COMFORT, TX	800	800	2978	10256	13234	3	12	0
GEORGIA-GULF	PLAQUEMINE, LA	700	700	5500	15000	20500	8	21	0
GEORGIA-GULF	DELAWARE CITY, DE	100	100	5000	63003	12	36	436	0
GOODRICH	AVON LAKE, OH	205	219	13400	25470	8030	49	92	32
GOODRICH	DEER PARK, TX	205	205	170	1600	410372	1	6	2240
GOODRICH	HEMERY, IL	130	70	35244	30756	2737	169	145	13
GOODRICH	LOUISVILLE, KY	207	207	4600	13000	511	16	45	2
GOODRICH	PERDUEVILLE, NJ	165	170	22000	57000	325	77	200	1
GOODRICH	PLAQUEMINE, LA	160	160	4237	4059	507	26	30	3
GOODYEAR	NIAGARA FALLS, NY	115	115	53000	55000	109200	468	482	0
LETISOR	SAUGUS, CA	60	60	40	860	900	1	14	0
OCCIDENTAL	DATON ROUSE, LA	305	385	4000	19000	15000	10	50	33
OCCIDENTAL	BURLINGTON, NJ (N)	110	110	15000	18000	30	104	117	0
OCCIDENTAL	BURLINGTON, NJ (S)	170	170	1170	57700	100	10	401	1
OCCIDENTAL	PASADENA, TX	900	900	2000	80000	75010	2	46	83
OCCIDENTAL	POTTSDOM, PA	70	120	19000	18000	3430	100	100	10
SHINTECH	FREEPORT, TX	1000	1000	117370	43425	160945	117	46	0
UNION CARBIDE	TEXAS CITY, TX	125	125	10943	5346	1345	120	43	11
VISTA	AMSTERDAM, MS	400	400	29521	90400	57	62	109	0
VISTA	OKLAHOMA CITY, OK	200	200	10303	50370	209	66	101	1

TABLE 2 SORTED IN ORDER OF DECREASING STACK EMISSIONS

COMP.	LOCATION	1987 PVC CAPACITY, MM LBS			VEN EMISSIONS (LBS.)			VEN EMISSIONS/MM LBS PRODUCTION		
		Suspension	Dispersion	Total	Stack	Other	Total	Fugitive	Stack	Other
VISTA	ABERDEEN MS	400		400	19180	37	120030	42	189	0
GEORGIA-GULF	DELMORE CITY, DE	100	40	140	43803	12	40815	36	456	0
BORER	ILLIQUOLIS, IL	300	40	340	60675	200	73055	37	177	1
OCCIDENTAL	BURLINGTON, NJ (S)	120		120	57700	100	58970	10	401	1
GOODRICH	PERMICKTON, NJ	165	120	285	57000	325	79325	77	200	1
GOODYEAR	NIAGARA FALLS, NY	115	115	230	55000		107200	400	402	0
VISTA	DELAWARE CITY, DE	200		200	50374	209	47264	56	181	1
SWINTECH	FREEMONT, IL	1000		1000	117320		140945	117	44	0
OCCIDENTAL	PASADENA, IL	900		900	60000		117010	2	40	83
BORER	GETTYSBURG, LA	400		400	32185	15	50043	67	80	0
GOODRICH	NEWRY, IL	130	70	200	35216	2737	40239	169	145	13
GOODRICH	AYON LAKE, OH	205	74	279	25070	8030	40100	49	92	32
OCCIDENTAL	BAYTON ROUGE, LA	305		305	19000		54000	10	50	33
OCCIDENTAL	POTTSDOM, PA	70		70	19000		41002	100	100	10
CERTAINTEED	LAKE CHARLES, LA	220		220	15000	2	41002	110	60	0
GEORGIA-GULF	PLAQUEMINE, LA	700		700	15000		20500	8	21	0
GOODRICH	LOUISVILLE, KY	207		207	13000	514	10114	16	45	2
OCCIDENTAL	WILMINGTON, NJ (N)	110		110	17000	30	20730	104	117	0
FARMASA PLASTICS	PT. COMFORT, IL	800		800	10756		13234	3	12	0
AIR PRODUCTS	CALVERT CITY, KY	300		300	9000		24000	50	33	0
GOODRICH	PLAQUEMINE, LA	160		160	4059	507	10003	26	30	3
UNION CARBIDE	TEXAS CITY, IL	125		125	5366	1345	21634	120	43	11
GOODRICH	DEER PARK, IL	205		205	170		402302	1	6	2240
AIR PRODUCTS	PENSACOLA, FL	200		200	1500		6000	23	0	0
KETSON	SAUBUS, CA	60		60	860		900	1	10	0

TABLE 3 ORDER OF DECREASING FUGITIVE EMISSION

SARA 313 EMISSIONS - 1987

PVC PLANTS

COMPANY	LOCATION	1987 PVC CAPACITY, MM LBS.		1987 EMISSIONS (LBS.)		1987 EMISSIONS/MM LBS PRODUCTION			
		Suspension	Dispersion	FUGITIVE	STACK OTHER TOTAL	FUGITIVE	STACK	OTHER	TOTAL
JUNGA PLASTICS	DELAWARE CITY, DE	90	90	123910	230 124140	1377	0	3	1379
SHINTECH	FREEMONT, TX	1000	1000	117320	43425 160745	117	41	0	161
GOODYEAR	WINSTON-SALEM, NC	115	115	53800	53800	660	482	0	950
GOODYEAR	HEARTY, IL	130	200	35246	30754 2737 44239	169	163	13	320
VISTA	ABERDEEN, MS	400	400	29321	90480 37 120038	62	185	0	250
DOUGHER	DELSHAW, LA	400	400	26443	15 50833	67	80	0	147
CERTAINTEED	LAKE CHARLES, LA	220	220	26000	15000 2 41002	110	68	0	186
GOODYEAR	PERDUEVILLE, NJ	165	120	27000	325 79325	77	260	1	270
OCCIDENTAL	POITTSVILLE, PA	70	170	19000	19000 3430 41030	100	100	18	218
VISTA	DELAWARE CITY, DE	200	200	18383	287 49244	44	181	1	247
OCCIDENTAL	BURLINGTON, NJ (B)	110	110	15000	17900 30 20730	100	117	0	261
AIR PRODUCTS	CALVERT CITY, TX	300	300	15000	9000 24000	50	33	0	83
UNION CARBIDE	TEXAS CITY, TX	125	125	19943	1345 21634	120	43	11	175
GOODYEAR	AVON LAKE, OH	74	279	13400	25470 8030 40180	49	92	32	175
DOUGHER	ILLINOIS, IL	40	340	12700	60075 200 73055	37	177	1	215
GEORGIA-GULF	PLAQUEMINE, LA	700	700	3500	15000 20500	8	21	0	29
GEORGIA-GULF	DELAWARE CITY, DE	40	40	5000	63003 12 68015	36	436	0	492
GOODYEAR	LOUISVILLE, KY	207	207	4400	13000 510 18114	16	45	2	63
AIR PRODUCTS	PENSACOLA, FL	200	200	4500	1500 6000	23	0	0	30
GOODYEAR	PLAQUEMINE, LA	160	160	4237	4059 507 10003	26	30	3	60
OCCIDENTAL	DATON ROUSE, LA	305	305	4000	19400 12400 34000	10	50	33	94
FRANSA PLASTICS	PT. COMFORT, TX	840	840	2978	10756 13234	3	12	0	15
OCCIDENTAL	PASADENA, TX	900	900	2000	60000 75018 117018	2	44	83	130
OCCIDENTAL	BURLINGTON, NJ (B)	120	120	1170	100 50970	10	481	1	491
GOODYEAR	DEER PARK, TX	205	205	170	1600 640372	1	6	2240	2254
KEYCOR	SANJOS, CA	60	60	40	940	1	14	0	15

SARA 313 EMISSIONS - 1987
PVC PLANTS

TABLE 4 -- SORTED IN ORDER OF DECREASING TOTAL EMISSIONS

COMPANY	LOCATION	1987 PVC CAPACITY, MM LBS		VCH EMISSIONS (LBS)			VCH EMISSIONS/MM LBS PRODUCTION				
		Suspension	Dispersion	Total	FUGITIVE	STACK	OTHER	TOTAL			
GOODRICH	DEER PARK, TX	285		285	170	1600	640572	1	4	2210	2234
SHAW-WALKER	FREEDPORT, TX	1000		1000	117320	43423		137	44	0	181
FORMOSA PLASTICS	BELMONT CITY, DE		90	90	123910		230	1337	6	3	1379
VISTA	ABERDEEN MS	400		400	29521	90480	37	42	189	4	230
OCCIDENTAL	PASADENA, TX	900		900	2900	40000	75010	2	44	83	130
GOODRICH	NIAGARA FALLS, NY		113	113	53800	53400		648	482	0	930
GOODRICH	PEBBLETON, NJ	145		145	22000	57000	325	77	200	1	278
WORTH	ILLIQUOLIS, IL	300		300	12700	40073	280	37	177	1	215
VISTA	OKLAHOMA CITY, OK	200		200	10303	50374	209	44	181	1	217
GEORGIA GULF	BELMONT CITY, DE	100		100	5000	43803	12	34	454	0	492
GOODRICH	HEARTY, IL	130		130	33276	30256	2737	189	143	13	320
OCCIDENTAL	BURLINGTON, NJ (S)	120		120	11170	57700	100	10	481	1	491
WORTH	GETSMAN, LA	400		400	24443	32183	15	47	80	0	147
GOODRICH	AVON LAKE, OH	205		205	13400	19000	3430	49	92	32	173
OCCIDENTAL	POITTSWOM, PA	70		70	19000	19000	3430	100	100	10	210
CERTIFICATE	LAKE CHARLES, LA		220	220	28000	15000	2	110	60	0	186
OCCIDENTAL	BATON ROUGE, LA	383		383	9000	19400	12400	10	50	33	94
OCCIDENTAL	BURLINGTON, NJ (H)		110	110	13000	12900	30	144	117	0	261
AIR PRODUCTS	CALVERT CITY, KY	300		300	15000	9000		50	33	0	83
UNION CARBIDE	TEXAS CITY, TX		125	125	14943	5364	1345	120	43	11	173
GEORGIA GULF	PLAQUEMINE, LA	700		700	5500	15000		8	21	0	29
GOODRICH	LOUISVILLE, KY	207		207	4400	13000	514	16	45	2	43
FORMOSA PLASTICS	PT. COMFORT, TX	840		840	2970	10250		3	12	0	15
GOODRICH	PLAQUEMINE, LA	100		100	4237	6059	507	26	30	3	60
AIR PRODUCTS	PENSACOLA, FL	200		200	4500	1500		23	0	0	30
KEYSON	SAUBUS, CA	40		40	40	860		1	14	0	15

CALENDAR YEAR 1988 -- SARA 313 -- VINYL CHLORIDE (in pounds)

ALPHABETICALLY

	FUGITIVE	STACK	OFFSITE	TOTAL
AIR PRODUCTS, Calvert City	17050	11363		28413
AIR PRODUCTS, Pace	4630	7409		12040
BFGOODRICH, Avon Lake	13000	27000	999	53999
BFGOODRICH, Calvert City	20824	64960	0	85800
BFGOODRICH, Deer Park	1400	1600	620551	623551
BFGOODRICH, Henry	6095	26699	378	33172
BFGOODRICH, LaPorte	1648	1440	0	3088
BFGOODRICH, Louisville	4300	4900	150	9364
BFGOODRICH, Pedricktown	20000	52000	100	72108
BFGOODRICH, Plaquemine	3900	15000	6	18906
BORDEN CHEM. & PLASTICS, Geismar	2761	36307		39068
BORDEN CHEM. & PLASTICS, Illinois	13271	76407	1155	91223
DOW CHEMICAL, Louisiana VCM Plant	1500	5700		7200
DOW CHEMICAL, Texas VCM Plant	2200			2200
GEORGIA GULF, Delaware City	3946	87507	2188	93642
GEORGIA GULF, Plaquemine	2560	16000		18560
OCCIDENTAL, Addis	3318	28150	5000	36468
OCCIDENTAL, Burlington S	1342	51944	71	53385
OCCIDENTAL, Pasadena	2000	35000	21300	58318
OCCIDENTAL, Pottstown	9420	205390		219250
PFG INDUSTRIES, Lake Charles	1600	1000	23	2678
SHINTECH, Freeport	58400	27150		85588
VISTA, Aberdeen	3008	73554		76562
VISTA, Oklahoma City	621	65049		65760
VISTA, Westlake	14000	1500	499	15512

FUGITIVE

FUGITIVE	FUGITIVE	STACK	OFFSITE	TOTAL
SHINTECH, Freeport	58400	27150		85588
BFGOODRICH, Calvert City	20824	64960	0	85800
BFGOODRICH, Pedricktown	20000	52000	100	72108
AIR PRODUCTS, Calvert City	17050	11363		28413
VISTA, Westlake	14000	1500	499	15512
BORDEN CHEM. & PLASTICS, Illiopolis	13271	76407	1155	91223
BFGOODRICH, Avon Lake	13000	27000	999	53999
OCCIDENTAL, Pottstown	9420	205390		219250
BFGOODRICH, Henry	6095	26699	378	33172
AIR PRODUCTS, Pace	4630	7409		12040
BFGOODRICH, Louisville	4300	4900	150	9364
GEORGIA GULF, Delaware City	3946	87507	2188	93642
BFGOODRICH, Plaquemine	3900	15000	6	18906
OCCIDENTAL, Addis	3318	28150	5000	36468
VISTA, Aberdeen	3008	73554		76562
BORDEN CHEM. & PLASTICS, Geismar	2761	36307		39068
GEORGIA GULF, Plaquemine	2560	16000		18560
DOW CHEMICAL, Texas VCM Plant	2200			2200
OCCIDENTAL, Pasadena	2000	35000	21300	58318
BFGOODRICH, LaPorte	1648	1440	0	3088
PPG INDUSTRIES, Lake Charles	1600	1000	23	2678
DOW CHEMICAL, Louisiana VCM Plant	1500	5700		7200
BFGOODRICH, Deer Park	1400	1600	620551	623551
OCCIDENTAL, Burlington S	1342	51944	71	53385
VISTA, Oklahoma City	621	65049		65760

STACK

	STACK	FUGITIVE	OFFSITE	TOTAL
OCCIDENTAL, Pottstown	205390	9420		219250
GEORGIA GULF, Delaware City	87507	3946	2188	93642
BORDEN CHEM. & PLASTICS, Illinois	76407	13271	1155	91223
VISTA, Aberdeen	73554	3008		76562
VISTA, Oklahoma City	65049	621		65760
BFGOODRICH, Calvert City	64960	20824	0	85800
BFGOODRICH, Pedricktown	52000	20000	100	72108
OCCIDENTAL, Burlington S	51944	1342	71	53385
BORDEN CHEM. & PLASTICS, Geismar	36307	2761		39068
OCCIDENTAL, Pasadena	35000	2000	21300	58318
OCCIDENTAL, Addis	28150	3318	5000	36468
SHINTECH, Freeport	27150	58400		85588
BFGOODRICH, Avon Lake	27000	13000	999	53999
BFGOODRICH, Henry	26699	6095	378	33172
GEORGIA GULF, Plaquemine	16000	2560		18560
BFGOODRICH, Plaquemine	15000	3900	6	18906
AIR PRODUCTS, Calvert City	11363	17050		28413
AIR PRODUCTS, Pace	7409	4630		12040
DOW CHEMICAL, Louisiana VCM Plant	5700	1500		7200
BFGOODRICH, Louisville	4900	4300	150	9364
BFGOODRICH, Deer Park	1600	1400	620551	623551
VISTA, Westlake	1500	14000	499	15512
BFGOODRICH, LaPorte	1440	1648	0	3088
PFG INDUSTRIES, Lake Charles	1000	1600	23	2678
DOW CHEMICAL, Texas VCM Plant		2200		2200

OFFSITE

	OFFSITE	FUGITIVE	STACK	TOTAL
BFGOODRICH, Deer Park	620551	1400	1600	623551
OCCIDENTAL, Pasadena	21300	2000	35000	58318
OCCIDENTAL, Addis	5000	3318	28150	36468
GEORGIA GULF, Delaware City	2188	3946	87507	93642
BORDEN CHEM. & PLASTICS, Illinois	1155	13271	76407	91223
BFGOODRICH, Avon Lake	999	13000	27000	53999
VISTA, Westlake	499	14000	1500	15512
BFGOODRICH, Henry	378	6095	26699	33172
BFGOODRICH, Louisville	150	4300	4900	9364
BFGOODRICH, Pedricktown	100	20000	52000	72108
OCCIDENTAL, Burlington S	71	1342	51944	53385
PPG INDUSTRIES, Lake Charles	23	1600	1000	2678
BFGOODRICH, Flaquemine	6	3900	15000	18906
BFGOODRICH, Calvert City	0	20824	64960	85800
BFGOODRICH, LaPorte	0	1648	1440	3088
VISTA, Oklahoma City		621	65049	65760
VISTA, Aberdeen		3008	73554	76562
SHINTECH, Freeport		58400	27150	85588
AIR PRODUCTS, Pace		4630	7409	12040
GEORGIA GULF, Flaquemine		2560	16000	18560
OCCIDENTAL, Pottstown		9420	205390	219250
DOW CHEMICAL, Louisiana VCM Plant		1500	5700	7200
AIR PRODUCTS, Calvert City		17050	11363	28413
BORDEN CHEM. & PLASTICS, Geismar		2761	36307	39068
DOW CHEMICAL, Texas VCM Plant		2200		2200

TOTAL

	TOTAL	FUGITIVE	STACK	OFFSITE
BFGOODRICH, Deer Park	623551	1400	1600	620551
OCCIDENTAL, Pottstown	219250	9420	205390	
GEORGIA GULF, Delaware City	93642	3946	87507	2188
BORDEN CHEM. & PLASTICS, Illinois	91223	13271	76407	1155
BFGOODRICH, Calvert City	85800	20824	64960	0
SHINTECH, Freeport	85588	58400	27150	
VISTA, Aberdeen	76562	3008	73554	
BFGOODRICH, Pedricktown	72108	20000	52000	100
VISTA, Oklahoma City	65760	621	65049	
OCCIDENTAL, Pasadena	58318	2000	35000	21300
BFGOODRICH, Avon Lake	53999	13000	27000	999
OCCIDENTAL, Burlington S	53385	1342	51944	71
BORDEN CHEM. & PLASTICS, Geismar	39068	2761	36307	
OCCIDENTAL, Addis	36468	3318	28150	5000
BFGOODRICH, Henry	33172	6095	26699	378
AIR PRODUCTS, Calvert City	28413	17050	11363	
BFGOODRICH, Flaquimine	18906	3900	15000	6
GEORGIA GULF, Flaquimine	18560	2560	16000	
VISTA, Westlake	15512	14000	1500	499
AIR PRODUCTS, Pace	12040	4630	7409	
BFGOODRICH, Louisville	9364	4300	4900	150
DOW CHEMICAL, Louisiana VCM Plant	7200	1500	5700	
BFGOODRICH, LaPorte	3088	1648	1440	0
PFG INDUSTRIES, Lake Charles	2678	1600	1000	23
DOW CHEMICAL, Texas VCM Plant	2200	2200		

US EPA NESHAP LIST - ON - AS OF 9/11/89

COMPANY	STATE	REGION	PRODUCT	INITIATED	CONCLUDED	\$ SETTLEMENT	MISC.
A) CASES SETTLED WITH \$ PENALTIES:							
AIR PRODUCTS	KY	4		10/78	12/78	\$ 24,000	
AIR PRODUCTS	KY	4		5/80	3/83	125,000	
BORDEN	LA	6	VC	6/83	2/88	416,666	
BORDEN	LA	6	VC	3/83	2/88	416,666	
BORDEN	MASS	1	PVC	4/81	5/85	90,000	
CONOCO	MISS	4	PVC	1/80	8/85	100,000	
CONOCO	OKLA	6	PVC	3/83	8/85	125,000	
CONOCO	LA	6	VC	6/83	8/85	100,000	
DOW	TX	6	VC	6/85	3/87	105,000	
GA-PAC	LA	6	PVC	9/84	1/86	625,000	
GOODRICH	KY	4		3/80	2/87	123,500	
GOODRICH		4		10/80	9/87	335,500	
GOODRICH	LA	6		3/86	6/87	75,000	
GOODYEAR/GOODRICH	LA	6		9/83	6/87	395,000	
OCCIDENTAL	NJ	2	PVC	2/85	7/87	490,000	
OCCIDENTAL	LA	6	PVC	3/83	8/87	75,000	
OCCIDENTAL	LA	6	PVC	6/86	10/87	425,000	
PPG	LA	6	VC	9/83	8/87	225,000	
SHELL	LA	6	VC	6/83	6/85	50,000	
TENNECO	NJ	2	PVC	2/80	6/82	50,000	
UCC	NJ	2		10/80	10/83	30,000	
UCC	TX	6		9/85	6/87	142,000	
TOTAL '89						\$4,543,332	
(88 TOTAL)						(3,534,500)	
87 TOTAL)						(3,309,500)	
(86 TOTAL)						(1,916,000)	

[illegible]

STATE RESIAP PENALTIES (in USA)

PLANT CODE	STATE	PROD. MFGD.	YEAR	PAID	NUMBER OF EXCEEDANCES							TOTAL
					ROL	STRPPD RESIN	STRPPD WASTWAT	RECOVERY VENT	RVD	MV	OTHER	
1	CA			\$ 700							1 *	1
2	FL	PVC	81-86	\$ 81,000		3	1	5	4	2	2 **	17
3	KY	PVC	88	\$ 17,000				1	2	1		4
4	LA	VC	85	\$ 1,500					3			3
			87	\$ 12,500				20	3	1		24
5	LA		88	\$ 15,400				21	1			22
6	LA	PVC	87	\$ 130,000		ALL	PAST	EXCEEDANCES				?
			86	\$ 10,000					31			31
			87	\$ 25,000	574	31			5			610
7	MS	PVC	87	\$ 2,000					1	1		2
8	MS	PVC	86	\$ 4,000						2		2
9	TX	VC	87	\$ 5,000				1				1
			88	\$ 6,000					1		1 ***	2
10	TX	PVC	80-85	\$ 200,000	500	13			4			517
			88	\$ 500				1				1
11	PA	PVC	80-81	\$ 1,500		ALL	PAST	EXCEEDANCES				?
			82-83	\$ 2,125		ALL	PAST	EXCEEDANCES				?
			83-85	\$ 6,000		25		39				64
			86-87	\$ 5,000		12	1	31	1			45
			87	\$ 31,500		20	1	16	4			41
12	?	PVC	86	\$ 4,000						2		2
TOTAL				\$ 560,725	1074	104	3	135	60	9	4	1389
* AMB AIR STAND		**	UNKNOWN	*** LEAK DETECT/PREV PROGRAM								
NOTE. FOUR OTHER PLANTS			REPORTED	NO PENALTIES PAID TO STATES								

AIR PERMITTING
PROCESS

To Environmental Coordinators

From David Cohen
Date May 20, 1988

Interoffice
Communication

Subject AIR PERMITTING PROCESS

VISTA

Please note the following clarification of my May 11, 1988 memo concerning the air permitting process: Sources subject to National Emissions Standards for Equipment Leaks (NESEL), a subpart of the NESHAPs rules, need not also comply with NSPS requirements. (See 40 CFR §61.240(c)). In order to be subject to NESEL, a source must be intended for operation in volatile hazardous air pollutant (VHAP) service. Subject sources include pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, flanges and other connectors, product accumulator vessels and control devices or systems. "Product accumulator vessel" is defined as any distillate receiver, bottoms receiver, surge control vessel, or product separator in VHAP service that is vented to the atmosphere. A product accumulator vessel is considered to be in VHAP service if the liquid or vapor in the vessel is at least 10% by weight VHAP. VHAPs include benzene and vinyl chloride. As a result of this rule, a valve regulated by a NESEL obviously must comply with the NESEL, but is exempt from any otherwise applicable NSPS. Thus, modification or reconstruction of such equipment may be accomplished without going through the NSPS procedure. Of course, any equipment not regulated by a NESEL is not eligible for this exemption.

In addition, please be aware that EPA recently issued a policy memo stating that in reviewing PSD permit applications, the Agency will place the burden on the applicant to justify use of control technology which will not achieve LAER (lowest achievable emissions rate). The two allowable justifications for higher emissions rates than LAER will be technical feasibility and cost. Unless an applicant can justify to EPA such higher emissions rates, LAER will be required.

David Cohen
David Cohen

/b1

52.dlc

VEM

To Environmental Coordinators

From David Cohen
Date May 11, 1988

Interoffice
Communication

Subject AIR PERMITTING PROCESS: PSD AND NSPS OVERVIEW

VIST

Introduction

This memo discusses the basic elements of the PSD and NSPS programs. More specifically, it describes the process of obtaining a PSD permit, and indicates various things to consider when modifying or expanding plant operations. Please bear in mind that this memo describes federal programs. State programs may differ slightly. Also remember that the following is merely a summary of the PSD and NSPS programs. You must carefully read the actual regulations prior to taking any action that may be regulated under these programs.

Pursuant to the Clean Air Act, the EPA has established National Ambient Air Quality Standards ("NAAQS") for each criteria pollutant. "Criteria pollutants" include sulfur oxides, carbon monoxide, total suspended particulates, nitrogen dioxide, photochemical oxidants and lead. Each state is divided into air quality regions, and each region is placed in one of two categories -- attainment or non-attainment -- for each criteria pollutant. An "attainment" area for a particular pollutant is an area in which the ambient air quality meets the NAAQS for that pollutant. A "non-attainment area" for a particular pollutant is an area in which the ambient air quality does not meet the NAAQS for that pollutant. It is important to note that a region can be an attainment area for one pollutant and a non-attainment area for a different pollutant.

In order to ensure that ambient air quality remains below NAAQS in attainment areas and meets NAAQS in non-attainment areas, the Clean Air Act ("the Act") requires that states promulgate State Implementation Plans ("SIPs"). The SIPs contain pre-construction review procedures for major new sources of air pollution. Additionally, EPA has adopted technology-based New Source Performance Standards ("NSPS"), which set emissions limits on certain new or modified facilities.

PSD Issues

Each SIP contains Prevention of Significant Deterioration ("PSD") requirements. These requirements apply in attainment areas, as well as in areas that are unclassifiable with respect to the NAAQS. They set maximum allowable increases in ambient air pollutant concentration levels ("increments") for certain

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pollutants, and are designed to ensure that the air quality in attainment areas remains below the NAAQS for those areas. Thus, PSD permits allow facilities to increase the concentration of a specific pollutant, in an area that meets the NAAQS for that pollutant, by a set amount -- a portion of the area's increment.

The size of the increment for each area depends on the area's classification. The PSD regulations establish 3 separate classes for air pollution control regions. Class I areas include such things as large national parks and wildlife areas, and allow only minimal increases in pollutant concentration over baseline concentrations. Class II areas provide for larger maximum allowable increases, and Class III areas provide the largest maximum allowable increases. All Vista plants are located in class II areas for all pollutants they emit.

PSD permit requirements apply only to major stationary sources and major modifications of stationary sources. "Major stationary sources" are defined as stationary sources, including chemical process plants, which emit, or have the potential to emit, 100 tons or more per year of any pollutant subject to regulation under the Act. Thus, unlike the NAAQS program, the PSD program does not make its category determinations on a pollutant-specific basis. In other words, if a plant is a major stationary source because of a single pollutant, it is a major stationary source under the PSD program. Fugitive emissions from chemical process plants must be included in determining whether a stationary source is major. ~~that~~ that any physical change that occurs at a non-major stationary source will not make the source major unless the change would by itself constitute a major source, i.e., emit, or have the potential to emit, 100 tons or more per year of a regulated pollutant. For example, a source that emits 90 tons per year of SO₂ is not major. If the source implemented a modification that increased SO₂ emissions by 90 tons per year, the modification would not be major. ~~Of course, once the modification is complete and the source emits 180 tons per year, it will be considered major for all future calculations.~~

A "major modification" is any physical change in, or change in the method of operation of, a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act. A "physical change or change in the method of operation" does not mean routine maintenance, repair or replacement of equipment, various uses of new fuels as specified at 40 CFR § 52.21(b)(2)(iii)(D)-(E), increased hours of operation, increased rate of production (unless such increase would be prohibited under a federally enforceable PSD permit) or changes in ownership. A "significant" emissions increase is defined as a rate of emissions equal to or greater than the following:

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Pollutant and Emissions Rate

Carbon Monoxide: 100 tons per year (tpy)
 Nitrogen oxides: 40 tpy
 Sulfur dioxide: 40 tpy
 Particulate matter:
 25 tpy of particulate matter emissions;
 15 tpy of PM10 emissions
 Ozone: 40 tpy of volatile organic compounds
 Lead: 0.6 tpy
 Asbestos: 0.007 tpy
 Beryllium: 0.0004 tpy
 Mercury: 0.1 tpy
 Vinyl chloride: 1 tpy
 Fluorides: 3 tpy
 Sulfuric acid mist: 7 tpy
 Hydrogen sulfide (H₂S): 10 tpy
 Total reduced sulfur (including H₂S): 10 tpy
 Reduced sulfur compounds (including H₂S): 10 tpy

Several exemptions to the PSD rules exist for older facilities (see 40 CFR § 52.21(i)(4) and (7)). The requirement of conducting impact and air quality analyses as they relate to any maximum allowable increase for a class II area does not apply to any major modification of a stationary source that was in existence on March 1, 1978, if the net increase in allowable emissions of each pollutant subject to regulation under the Act from the modification after the application of best available control technology would be less than 50 tons per year. In addition, the Administrator may, at his discretion, exempt facilities that submit complete permit applications by June 1, 1988 from various pre-application air quality monitoring requirements. Also, the Administrator may exempt a stationary source or modification from pre-application air quality monitoring requirements for a specific pollutant if the emissions increase of the pollutant from the new source or the net emissions increase of the pollutant from the modification would cause in any area air quality impacts less than the following amounts:

Carbon monoxide - 575 ug/m³, 8-hour average;
 Nitrogen dioxide - 14 ug/m³, annual average;
 Particulate matter:
 10 ug/m³ of TSP, 24-hour average;
 10 ug/m³ of PM10, 24-hour average;
 Sulfur dioxide - 13 ug/m³, 24-hour average;
 Ozone;
 Lead - 0.1 ug/m³, 3-month average;
 Mercury - 0.25 ug/m³, 24-hour average;
 Beryllium - 0.002 ug/m³, 24-hour average;
 Fluorides - 0.25 ug/m³, 24-hour average;

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Vinyl chloride - 15 ug/m³, 24-hour average;
 Total reduced sulfur - 10 ug/m³, 1-hour average;
 Hydrogen sulfide - 0.2 ug/m³, 1-hour average;
 Reduced sulfur compounds - 10 ug/m³, 1-hour average;

The administrator may also make such an exemption if the concentrations of the pollutant in the area that the source or modification would affect are less than these concentrations, or the pollutant is not listed on this list.

The PSD permit regulations contain five major categories of requirements. Under the first category, "control technology review", major stationary sources and major modifications must meet all applicable emissions limitations under the SIP, as well as all performance standards required by NSPS or NESHAPS. In addition, each new major stationary source must apply the best available control technology ("BACT") for each pollutant subject to regulation under the Act that it would have the potential to emit in significant amounts. Similarly, major modifications must apply BACT for each pollutant subject to regulation under the Act for which the modification would result in a significant net emissions increase at the source. Note that throughout the PSD rules, when calculating the total emissions from a source undergoing a major modification, facilities are allowed to "net out" their emissions, i.e., subtract the total decrease from the total increase. Recognize, also, that once the requirement to use BACT is triggered, it applies to each proposed "emissions unit" (any part of a stationary source with the potential to emit any pollutant regulated under the Act) at which a significant net emissions increase in the triggering pollutant would occur as a result of the modification. Be aware also that for phased construction projects BACT determinations must be periodically reviewed and, where appropriate, modified.

The second major category of requirements under the PSD permit regulations is "source impact analysis." These regulations require the owner/operator of the proposed new source or modification to demonstrate that the proposed increase in emissions will not cause or contribute to air pollution in violation of any NAAQS in any air quality control region or any applicable maximum allowable increase over the baseline concentration in any area.

The third category is "air quality modeling." This section requires that all estimates of ambient air concentrations be based on the applicable air quality models, data bases and other requirements specified in EPA's modeling guidelines. These models may be modified, or other models may be substituted, only after notice and opportunity for comment by the public, and written approval by the Administrator.

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The fourth category is "air quality analysis." PSD permit applications must contain an analysis of ambient air quality for each pollutant that a new source might emit in a significant amount or for which a modification would result in a significant net increase. In addition, the analyses must include at least a year of continuous pre-application monitoring for such pollutants. Post-construction monitoring as EPA or the state deems necessary may also be required.

The last category is "source information." These regulations require the PSD permit applicant to submit, at a minimum, information on the nature, location, design capacity and typical operating schedule of the source or modification, a construction schedule and various technical information needed to determine which BACT is appropriate. The application must also include an analysis of impairment to visibility, soils and vegetation in the area that would result from the new source or modification.

NSPS Issues

Separate and apart from the PSD permitting process are the New Source Performance Standards ("NSPS"). NSPS are set out at 40 CFR Part 60, Subparts D through PPP, and specify which processes and types of equipment they cover (see Appendix). These standards are applicable to owners/operators of any stationary source that contains an affected facility, the construction or modification of which is commenced after the date of publication of any proposed NSPS applicable to that facility. Sources subject to National Emission Standards for Hazardous Air Pollutants ("NESHAPs") must also comply with any and all applicable NESHAPs.

An "affected facility" is any apparatus to which a standard is applicable. "Modification" is defined as any physical change in, or change in the method of operation of, an existing facility which increases the amount of any air pollutant (to which a standard applies) emitted into the atmosphere by that facility or which results in the emission of any air pollutant (to which a standard applies) into the atmosphere not previously emitted. The following are not considered modifications:

1. routine maintenance, repair and replacement;
2. increased production that can be accomplished without capital expenditure (Note: "capital expenditure" means an expenditure for a physical or operational change to an existing facility which exceeds the product of the applicable "annual asset guideline repair allowance percentage" specified in the latest addition of IRS publication 534 and the facility's existing basis, as

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defined in section 1012 of the Internal Revenue Code. The total expenditure for a physical or operational change to an existing facility may not be reduced for any "excluded additions" as defined in IRS publication 534. For obvious reasons, I recommend that anybody who believes his plant might be eligible for this exemption work with the Tax, Environmental and Legal Departments to determine whether the exemption applies);

3. increased hours of operation;
4. certain changes in type of fuel or raw material used;
5. addition of a system or device whose primary function is to reduce air pollutants, unless the new device or system is less environmentally beneficial than the one it replaces;
6. relocation or change in ownership of an existing facility.

Facilities must achieve compliance with all applicable standards within 180 days of the completion of any modification that requires compliance with such standards.

In addition to the foregoing, existing facilities must comply with NSPS upon undergoing reconstruction, regardless of whether such reconstruction effects any change in emissions. "Reconstruction" is defined as the replacement of components of an existing facility to such an extent that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility, and it is technically and economically feasible to meet the applicable standards set forth under NSPS. "Fixed capital cost" is defined as the capital needed to replace all the depreciable components.

An owner/operator planning to replace components, where the fixed capital costs of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility must notify the Administrator of the proposed replacements 60 days (or as soon as practicable) before construction of the replacements commences. The notification must include various items specified at 40 CFR § 60.15(d). Upon receipt of the notification, the Administrator has 30 days to determine whether the proposed replacement constitutes reconstruction.

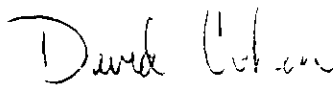
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Owners/operators of facilities subject to NSPS standards must notify the Administrator of the following things:

1. the date construction or reconstruction of an affected facility is commenced, within 30 days of the date of commencement;
2. the anticipated start-up date of an affected facility, not more than 60 days nor less than 30 days prior to such date;
3. the actual date of initial start-up of an affected facility within 15 days after such date;
4. any non-exempt physical or operational change that may increase emissions of any air pollutant to which a standard applies, within 60 days or as soon as practicable before the change is commenced;
5. the date upon which continuous monitoring system performance commences, not less than 30 days prior to such date;
6. the anticipated date for conducting opacity observations, and the type of test to be used, not less than 30 days prior to such date;

In addition, owners/operators of facilities subject to NSPS standards must maintain extensive records regarding operations and monitoring at the facility (see 40 CFR § 60.7(b), (c) and (d)). NSPS regulations also require affected facilities to conduct performance tests, as specified in 40 CFR § 60.8, opacity observations as described in 40 CFR § 60.11, and continuous monitoring, as specified at 40 CFR § 60.13.

As you can see, the PSD and NSPS programs are extremely complex. Accordingly, I urge you to scrutinize the regulations and consult with the Legal and Environmental Departments in Houston whenever you consider modifying or expanding plant operations.


David Cohen

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APPENDIX

The following is a list of standards of performance for new stationary sources (NSPSs):

- Subpart D - Standards of Performance for Fossil-Fuel Fired Steam Generators for Which Construction is Commenced After August 17, 1971
- Subpart Da - Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978
- Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units
- Subpart E - Standards of Performance for Incinerators
- Subpart F - Standards of Performance for Portland Cement Plants
- Subpart G - Standards of Performance for Nitric Acid Plants
- Subpart H - Standards of Performance for Sulfuric Acid Plants
- Subpart I - Standards of Performance for Asphalt Concrete Plants
- Subpart J - Standards of Performance for Petroleum Refineries
- Subpart K - Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978
- Subpart Ka - Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984
- Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984
- Subpart L - Standards of Performance for Secondary Lead Smelters
- Subpart M - Standards of Performance for Secondary Brass and Bronze Production Plants

- Subpart N - Standards of Performance for Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973
- Subpart Na - Standards of Performance for Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983
- Subpart O - Standards of Performance for Sewage Treatment Plants
- Subpart P - Standards of Performance for Primary Copper Smelters
- Subpart Q - Standards of Performance for Primary Zinc Smelters
- Subpart R - Standards of Performance for Primary Lead Smelters
- Subpart S - Standards of Performance for Primary Aluminum Reduction Plants
- Subpart T - Standards of Performance for the Phosphate Fertilizer Industry: Wet-Process Phosphoric Acid Plants
- Subpart U - Standards of Performance for the Phosphate Fertilizer Industry: Superphosphoric Acid Plants
- Subpart V - Standards of Performance for the Phosphate Fertilizer Industry: Diammonium Phosphate Plants
- Subpart W - Standards of Performance for the Phosphate Fertilizer Industry: Triple Superphosphate Plants
- Subpart X - Standards of Performance for the Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities
- Subpart Y - Standards of Performance for Coal Preparation Plants
- Subpart Z - Standards of Performance for Ferroalloy Production Facilities
- Subpart AA - Standards of Performance for Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974 and on or Before August 17, 1983
- Subpart AAa - Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarburization Vessels Constructed After August 7, 1983

Subpart BB - Standards of Performance for Kraft Pulp Mills

Subpart CC - Standards of Performance for Glass Manufacturing Plants

Subpart DD - Standards of Performance to Grain Elevators

Subpart EE - Standards of Performance for Surface Coating of Metal Furniture

Subpart FF - Reserved

Subpart GG - Standards of Performance for Stationary Gas Turbines

Subpart HH - Standards of Performance for Lime Manufacturing Plants

Subpart KK - Standards of Performance for Lead-Acid Battery Manufacturing Plants

Subpart LL - Standards of Performance for Metallic Mineral Processing Plants

Subpart MM - Standards of Performance for Automobile and Light-Duty Truck Surface Coating Operations

Subpart NN - Standards of Performance for Phosphate Rock Plants

Subpart PP - Standards of Performance for Ammonium Sulfate Manufacture

Subpart QQ - Standards of Performance for the Graphic Arts Industry: Publication Rotogravure Printing

Subpart RR - Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations

Subpart SS - Standards of Performance for Industrial Surface Coating: Large Appliances

Subpart TT - Standards of Performance for Metal Coil Surface Coating

Subpart UU - Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture

Subpart VV - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry

Subpart WW - Standards of Performance for the Beverage Can Surface Coating Industry

- Subpart XX - Standards of Performance for Bulk Gasoline Terminals
- Subparts AAA-EEE Reserved
- Subpart FFF - Standards of Performance for Flexible Vinyl and Urethane Coating and Printing
- Subpart GGG - Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries
- Subpart HHH - Standards of Performance for Synthetic Fiber Production Facilities
- Subpart III - Reserved
- Subpart JJJ - Standards of Performance for Petroleum Dry Cleaners
- Subpart KKK - Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants
- Subpart LLL - Standards of Performance for Onshore Natural Gas Processing; SO₂ Emissions
- Subparts MMM-NNN Reserved
- Subpart 000 - Standards of Performance for Nonmetallic Mineral Processing Plants
- Subpart PPP - Standard of Performance for Wool Fiberglass Insulation Manufacturing Plants

TO R W SEYMOUR

FROM: V E MESSICK

DATE APRIL 4, 1988

SUBJECT: PERMITS FOR DEBOTTLENECKING PROJECTS

BELOW IS MY UNDERSTANDING OF PERMITTING REQUIREMENTS FOR DEBOTTLENECKING PROJECTS

WE NEED TO WORRY ABOUT THREE TYPES OF PERMITS.

1 NESHAP

THIS IS TRIGGERED BY THE AMOUNT OF MONEY SPENT IF WE EXCEED 12.5% OF THE BOOK VALUE OF THE ASSETS, A PERMIT IS REQUIRED FOR AN EXPANSION THIS WOULD BE ABOUT \$1.25MM THIS APPLICATION IS SUBMITTED TO THE STATE. THEY MAY CONSULT REGION IV, BUT WLM THINKS TIME FRAME IS TOO SHORT FOR THEM TO SUBMIT TO REGION IV FOR REVIEW. REGION IV HAS TYPICALLY ASKED SOME DETAILED QUESTIONS ABOUT EXPANSIONS IN THE PAST.

2. STATE PERMIT

WE ARE PERMITTED FOR 455MM POUNDS PER YEAR. EMISSIONS ON PRODUCTION ABOVE THIS AMOUNT ARE NOT PERMITTED HOWEVER, EARLIER IN THE YEAR, RAF HAD A CONVERSATION WITH BOBBY WHITAKER, OUR REPRESENTATIVE IN THE STATE DNR BOBBY INDICATED GOING TO 465MM POUNDS PER YEAR WOULD NOT BE A PROBLEM SINCE NO CAPITAL PROJECT HAS BEEN INSTALLED.

THE STATE DEFINES A NEW FACILITY TO INCLUDE "ANY EXISTING FACILITY MODIFIED OR RECONSTRUCTED... THAT EMITS DUST, FUMES, MIST, SMOKE, OTHER PARTICULATE MATTER, VAPOR, GAS OR ANY COMBINATION THEREOF FROM THE SAME PROCESS OR RELATED OPERATION " A NEW FACILITY REQUIRES A PERMIT THE PERMIT APPLICATION MUST BEAR SIGNATURE AND REGISTRATION NUMBER OF THE PROFESSIONAL ENGINEER (REGISTERED IN THE STATE OF MISSISSIPPI) RESPONSIBLE FOR THE DESIGN OR REVIEW OF THE NEW FACILITY AN APPLICATION FOR A PERMIT TO CONSTRUCT MUST BE SUBMITTED AND APPROVED PRIOR TO THE START OF ACTUAL CONSTRUCTION OR INSTALLATION.

3. PSD PERMIT

THE MAJOR ISSUES FOR DETERMINING IF A PROJECT NEEDS A PSD PERMIT ARE:

A IS THE FACILITY A MAJOR SOURCE? A FACILITY IS A MAJOR SOURCE IF IT EMITS MORE THAN 100 TONS PER YEAR OF ANY ONE POLLUTANT WE HAVE CHECKED TWO THINGS--PARTICULATES AND NOX EMISSIONS RAF AVERAGED 44 ROTARY DRYER DATA POINTS FROM WHEN WE USED TO STACK SAMPLE IN 1978-1980 THESE AVERAGED 7 POUNDS PER HOUR THE VARIABILITY WAS LARGE USING THIS DATA AND EMISSION DATA FROM THE FLUID BED DRYER, RAF CALCULATED PARTICULATE EMISSIONS OF 123 TONS PER YEAR WE WILL HAVE TO ADD SILO AND BOILER PARTICULATES TO GET THE TOTAL OUR ACTUAL EMISSIONS MAY BE LOWER THAN 123 TONS PER YEAR WE SHOULD PROBABLY HIRE A CONTRACTOR TO STACK SAMPLE TO DETERMINE ACTUAL EMISSIONS. WLM STILL SAYS WE HAVE A PROBLEM BECAUSE

WE CAN LEGALLY EXCEED THE 100 TON PER YEAR NUMBER HE THINKS WE WOULD HAVE TO BE LEGALLY BOUND TO LESS THAN 100 TONS PER YEAR OUR PARTICULATE PERMIT LIMIT IS ABOUT 770 TONS PER YEAR. NOX EMISSIONS ARE ABOUT 45 TONS PER YEAR WITH PERMITTED EMISSIONS ABOUT 85 TONS PER YEAR

JCL AND WLM SAY THAT OKLAHOMA CITY IS NOT A MAJOR SOURCE, SO THEY DO NOT NEED A PSD PERMIT THEY SAY THAT OKLAHOMA CITY IS GETTING A NESHP AND A STATE PERMIT FOR THEIR CONDENSER PROJECT

B THE NEXT ISSUE IS THAT OF A MAJOR MODIFICATION THIS IS DEFINED AS "ANY PHYSICAL CHANGE IN OR CHANGE IS METHOD OF OPERATION OF A MAJOR STATIONARY SOURCE THAT WOULD RESULT IN SIGNIFICANT NET EMISSIONS OF ANY POLLUTANT SUBJECT TO REGULATION UNDER THE ACT " THE REGUALTIONS ALSO STATE THAT "A PHYSICAL CHANGE OR CHANGE IN METHOD OF OPERATION SHALL NOT INCLUDE (A) ROUTINE MAINTENANCE, REPAIR AND REPLACEMENT. "

C SIGNIFICANT FOR VINYL CHLORIDE MEANS EMISSIONS THAT EXCEED ONE TON PER YEAR OUR SLURRY EMISSIONS IN 1987 AVERAGED 208 PPM. THIS MEANS THAT MODIFIDATIONS THAT EXCEED ABOUT 9 6MM POUNDS PER YEAR ADDITIONAL PRODUCTION REQUIRE A PSD PERMIT

D IF OFFSETS ARE USED TO REDUCE EMISSIONS, A PSD PERMIT IS NOT REQUIRED HOWEVER, THIS EFFECTIVELY LOWERS THE LEGAL LIMITS FOR EMISSIONS

E ATTACHED IS A QUOTE THAT RAF RECIEVED ON PREPARATION OF THE PERMIT BY A CONTRACTOR AN ISSUE UNDER THE BACT ANALYSIS WILL BE THAT OF CONTINUOUS STRIPPING.

VELDON E MESSICK

C RAF. WLM, JCL. FGJ, JEN, EJM



Scott Environmental Technology Inc.

PLUMSTEADVILLE, PA 18949 PHONE (215) 766-8861 TWX 510-665-9344

March 29, 1988
SET Proposal No.
0113-03-2888-79

Mr. Dick Frohreich
Environmental Manager
Vista Polymers
Highway 25
Aberdeen, MS 39730

Dear Mr. Frohreich:

Presented herein is a summary of the services offered as assistance to Vista Polymers in the development of a Prevention of Significant Deterioration (PSD) permit for a planned plant expansion. Services are summarized by the major PSD permit areas and an estimated ceiling cost is presented for each area.

BACT Analysis

Scott will conduct an evaluation to determine what the Best Available Control Technology (BACT) will be for reduction of emissions from the subject facility. This will involve evaluation of several control options including analysis of costs, environmental residuals, and energy impacts of each option. A very important consideration will be coordination with the design engineers who are designing the plant expansion. In a report which will become part of the PSD permit application, Scott will summarize all of the options which were studied and present the rationale for selection of one option as BACT for this application.

Cost - Not To Exceed \$12,000

Air Quality Analysis

Scott will search and evaluate all available ambient vinyl chloride and PM-10 monitoring data in order to establish baseline pollutant concentrations in the area of the source. Five years, of meteorological monitoring data will also be obtained. Additional to this, Scott will obtain land use and population information for an area within 3000 meters of the source. In order to address the requirement of an emission inventory within the region of the source, Scott will obtain Mississippi Emission Data System (MEDS) information for the area. All sources in the area will be reviewed and summarized in a report along with the air quality and meteorological data.

Cost - Not To Exceed \$8,000

Mr. Dick Frohreich
Vista Polymers

March 29, 1988
0113-03-2888-79

Air Quality Modeling

Scott will conduct dispersion modeling of predicted source vinyl chloride and PM-10 emissions by the ISCST model in order to determine the impact of the source on the ambient air quality of the area. The results of the modeling will be compared to the available increment for each pollutant. The results will also be added to the background concentrations to evaluate potential violation of primary and secondary ambient air quality standards. Modeling will be conducted by two procedures. The first procedure will include a screening analysis using the EPA worst case meteorological conditions. Modeling will also be conducted using the five years of meteorological data obtained during the Air Quality Analysis. All modeling will be conducted in strict accordance with EPA modeling guidelines.

Cost - Not To Exceed \$6,000

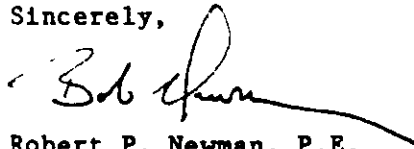
Secondary Impact Assessment

Scott will perform an analysis of the impact of the proposed source on the visibility, soils, and vegetation of the area. There are no firm EPA guidelines on this section of the permit application therefore the analysis will be conducted and presented according to the general guidelines of an environmental impact statement.

Cost - Not To Exceed \$4,000

This completes the summary of the services offered by Scott for this project. We appreciate this opportunity to be of service to Vista Polymers and we pledge our very best efforts toward the successful completion of the PSD permit application. If you have any questions or need any further information, please do not hesitate to contact me or Mr. Arthur Nunn.

Sincerely,



Robert P. Newman, P.E.
Marketing Manager
Environmental Services Group

RPN:tae

MANIFESTS

V MANIFESTS

Storage, shipment and disposal of hazardous wastes are regulated under RCRA. Shipment and delivery of hazardous wastes can only be made by authorized transporters and management facilities using the manifest procedures. The following is a list of wastes that we ship using the manifest system.

<u>WASTE</u>	<u>STATE MANIFEST USED</u>	<u>WHO SUPPLIES THE MANIFEST</u>
Waste Oil API Separator	Louisiana	Vista/LA State form
Parts Cleaner Solvent	Mississippi	Safety Kleen/MS State form
Lead Contaminated Bags	Alabama	Vista/CWM form
Plasticizer Filter Cake	Alabama	Vista/CWM form
Floor Sweeps*	Alabama	Vista/CWM form
API Sludge	Alabama	Vista/CWM form
P A Spill*	Alabama	Vista/CWM form
Asbestos	Alabama	Vista/CWM form
Stabilizer Spill*	Alabama	Vista/CWM form

The following is a copy of each of the types of manifest used in the above list.

* Temporarily shipped to Louisiana due to Alabama ban on hazardous materials.
Additional form, LA state form

STATE OF LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY
HAZARDOUS WASTE DIVISION
P O BOX 44307
BATON ROUGE LOUISIANA 70804

Please print or type (Form designed for use on site (12-ptch) typewriter)

Form Approved OMB No 2050-0039 Expires 9-

UNIFORM HAZARDOUS WASTE MANIFEST		1 Generator's US EPA ID No. MISSISSIPPI 017031113010101912		Manifest Document No.		2. Page 1 of 1		Information in the shaded area is not required by Federal law	
3 Generator's Name and Mailing Address TISTA POLYMERS BOX 91 - BERDEEN, MS 39730 ATT: L. G. JOHANSON						A. State Manifest Document Number LA 1095107			
4 Generator's Phone (601) 369-8111						B. State Generator's ID			
5 Transporter 1 Company Name BUTTLES TRUCK LEASING						6 US EPA ID Number AL01015704011		C. State Transporter's ID	
7 Transporter 2 Company Name						8 US EPA ID Number		D. Transporter's Phone 205-289-0670	
9 Designated Facility Name and Site Address STAUFFER CHEMICAL COMPANY AIRLINE HIGHWAY BATON ROUGE, LA						10 US EPA ID Number LA010108161134		E. State Transporter's ID	
								F. Transporter's Phone	
								G. State Facility's ID	
								H. Facility's Phone 504-356-7111	
11 US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)						12. Containers No. Type		13. Total Quantity	
a. FLAMMABLE COMBUSTIBLE LIQUID N. O. S. COMBUSTIBLE LIQUID, N. A 1993. TO D005R, D006R, D008R						1001 T 381/40 P		D005R D006R D008R	
b.									
c.									
d.									
J - Additional Descriptions for Materials Listed Above BARIUM, CADMIUM, LEAD						K. Handling Codes for Wastes Listed Above			
15 Special Handling Instructions and Additional Information STAUFFER REFERENCE #8502010 WASTE OIL & API SKIMMINGS									
16 GENERATOR'S CERTIFICATION I hereby declare that the contents of this manifest are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. I am a large quantity generator. I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practical method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize waste generation and select the best waste management method that is available to me and that I can afford.									
Printed/Typed Name JAMES M EDWARDS JR						Signature James M Edwards Jr		Month Day Yr 10/5/16 18	
17 Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Mike S. Portner						Signature Mike S. Portner		Month Day Yr 10/5/16 18	
18 Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name						Signature		Month Day Yr 11/1/11	
19 Discrepancy Indication Space									
20 Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19 Printed/Typed Name Bill Thompson									
						Signature Bill Thompson		Month Day Yr 10/5/17 18	

UNIFORM HAZARDOUS WASTE MANIFEST		1 Generator's US EPA ID No MSD007031230		Manifest Document No 61365		2 Page 1 of 1 information in the shaded areas is not required by Federal law	
3 Generator's Name and Mailing Address VISTA POLYMERS HWY 25 PO BOX 91 ABERDEEN MS 39730						A State Manifest Document Number	
4 Generator's Phone (601) 369-8111						B State Generator's ID	
5 Transporter 1 Company Name SAFETY-KLEEN CORP.				6 US EPA ID Number ILD051060408		C State Transporter's ID	
7 Transporter 2 Company Name				8 US EPA ID Number		D Transporter's Phone	
9 Designated Facility Name and Site Address SAFETY-KLEEN CORP. 7217 AIRWAYS ROAD SOUTHAVEN MS 38671				10 US EPA ID Number 6-094-01 MSD981030984		E State Transporter's ID	
						F Transporter's Phone	
						G State Facility's ID	
						H Facility's Phone	
11 US DOT Description (including Proper Shipping Name, Hazard Class and ID Number)						12 Containers No	13 Total Quantity
a WASTE PETROLEUM NAPHTHA X COMBUSTIBLE LIQUID UN1255 (EPA D001) 501						2	172
b							
c							
d							
J Additional Descriptions for Materials Listed Above						K Handling Codes for Waste	
15 Special Handling Instructions and Additional Information 8920 06091896 361365 6-094-01-6134 02 IF UNDELIVERABLE, RETURN TO GENERATOR. FOR RECYCLE							
16 GENERATOR'S CERTIFICATION I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.							
Printed/Typed Name JAMES M. EDWARDS JR.						Signature <i>James M. Edwards Jr.</i>	
17 Transporter 1 Acknowledgement of Receipt of Materials						Date 5/16/89	
Printed/Typed Name <i>Tony Dunlop</i>						Signature <i>Tony Dunlop</i>	
18 Transporter 2 Acknowledgement of Receipt of Materials						Date 5/16/89	
Printed/Typed Name						Signature	
19 Discrepancy Indication Space							
20 Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19							
Printed/Typed Name Cherrie Gunnels						Signature <i>Cherrie Gunnels</i>	
						Date 5/16/89	



HAZARDOUS WASTE MANIFEST

(As Required By The Alabama Department of Environmental Management)

Please print or type (Form designed for use on site (12-pitch) typewriter)

Form Approved OMB No. 2050-0088, Expires 9-30-88

UNIFORM HAZARDOUS WASTE MANIFEST		1 Generator's US EPA ID No	17 Manifest Document No	2 Page 1 of 1	Information in the shaded areas is not required by Federal law			
3 Generator's Name and Mailing Address Vista Dryers PO Box 71 Aberdeen MS 34730								
4 Generator's Phone () - - - -								
5 Transporter 1 Company Name Chemical Waste Management							6 US EPA ID Number MS10113713501252	
7 Transporter 2 Company Name							8 US EPA ID Number	
9 Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT INC Emelle Facility Alabama Highway 17 at Mile Marker 163 Emelle Alabama 35459		10 US EPA ID Number AL100106121241614						
11 US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12 Containers No Type					13 Total Quantity	14 Unit Unit/Vol
a Plastizer Filter Cake Non-Hazardous CWM Profile Number MAR7363		029 DM					159.5	G
b Hazardous waste sold N.O.S. ORM-E NA-9189 RQ (2005 0006) CWM Profile Number MSE69245009 DM							495	G
c G.I. Aluminum Powder Non-Hazardous CWM Profile Number MSH17365006 DM				250	G			
d CWM Profile Number								
15 Special Handling Instructions and Additional Information Transportation and disposal per the national contract								
6 GENERATOR'S CERTIFICATION I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled and are in all respects in proper condition for transport by highway according to applicable international and national government regulations I am a large quantity generator. I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.								
Printed/Typed Name Frank G. Pearson		Signature Frank G. Pearson		Month Day Year 04/21/89				
17 Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name WILEY CHILES		Signature Wiley Chiles		Month Day Year 10/21/89				
18 Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name J. Pearson		Signature		Month Day Year				
19 Discrepancy Indication Space IIA should be MHR 667363 per tank 4-24-89 114								
20 Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19 Printed/Typed Name Stall Signature Stall								

SHIPPING PAPERS

INTRODUCTION

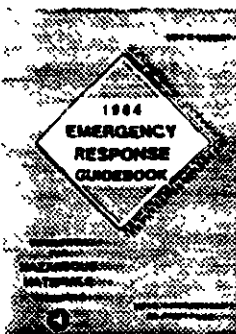
Biggest Source of Violation Activity and Shipment Delay

It has been this author's personal experience that the vast majority of violation activity and shipment delay is caused by Shipping Papers not prepared in accordance with 49 CFR (or other applicable regulations). Any Inspector, State Trooper, Enforcement Person, or Carrier Acceptance Person, worth their salt will start their inspection with the Shipping Paper. Obviously if everyone looks at it and it is not correct problems will result. We at GSI recommend as strongly as we can that emphasis be placed on insuring that the Shipping Papers are correct. This will help Emergency Response Personnel respond effectively to accidents or incidents involving the shipment, eliminate potential enforcement activity, and limit potential customer problems that result when a shipment is delayed.

Use By Emergency Response Personnel

Once the shipment leaves the Shipper's facility and enters the transportation system it is subject to those "conditions normally incident to transportation" as well as those that are not "normally incident" to transportation such as vehicle accidents, punctured drums, etc. In the event of an accident or incident involving the shipment Emergency

Response Personnel will have to make IMMEDIATE decisions as to how to handle it. The Shipping Paper provides VITAL INFORMATION needed to make these decisions such as but not limited to the Proper Shipping Name, Hazard Class, the Identification (ID) Number and the amount of material involved.



The ID (UN/NA) Number from Column #3A of the HMT-172.101 is a required entry on the Shipping Paper. It is keyed to the "Emergency Response Guidebook". This Guidebook gives Emergency Response personnel information relative to the Hazards associated with the material, recommended responses, and other actions such as evacuation etc. Obviously if the ID Number is not on the Shipping Paper or otherwise visible Emergency Responders will not have the benefit of this quick cross reference. Lives could hang in the balance.

"U.S. DOT vs "Normal" Shipping Paper"

The term "Shipping Paper" as normally used within the transportation system means the piece of paper or documentation used for piece count, billing, accountability and other purposes involved with the day to day transportation of Hazardous as well as non hazardous materials. As used in 49 CFR the term "Shipping Paper" means documentation containing the specific Hazardous Materials information required by 49 CFR.

Except for shipments of Hazardous Wastes (172.205) 49 CFR does not require the use of any specific form. The system is flexible enough to permit the use of ANY form so long as the required 49 CFR information is on the form (171.8). As a practical matter by Highway it is very common to see the normal "Straight Bill of Lading" used for shipments of both hazardous and non hazardous goods. On the other hand, although not required by 49 CFR, the air industry requires the use of a particular Document called the SHIPPER'S DECLARATION FOR DANGEROUS GOODS.

GSI CR: Hazardous Waste Manifest, B8
GSI CR: SHIPPER'S DECLARATION, C33

Definition of "DOT 49 CFR" Shipping Paper

To be in compliance with 49 CFR whatever "form" is used as the Shipping Paper MUST contain the information REQUIRED by:

172.202 containing the Basic Description requirements consisting of:

1. Proper Shipping Name (172.202(a)(1)).
2. Hazard Class (172.202(a)(2)).
3. ID (UN/NA) Number (172.202(a)(3)).
4. 1-3 above in sequence (172.202(b)).
5. Quantity of Material (172.202(a)(4)).

172.203 containing Additional Description requirements which MAY apply to a particular Basic Description.

172.204 containing the Certification and Signature requirements.

General Applicability

As a general rule if a Hazardous Material is offered for transportation the person offering it **MUST** describe the material on a Shipping Paper in the manner required by 49 CFR (172.200(a)).

Exceptions

"Normal" (Commercial) Shipping Papers are generally required to transport most materials, Hazardous as well as non hazardous. Except for Hazardous Wastes and Substances, "DOT Shipping Papers" ARE NOT normally required for shipments of materials:

1. Identified by the letter "A" or "W" in Column #1 of the HMT-172.101 except when offered or intended for transportation by the mode indicated, "A" for Air and/or "W" for Water.
2. That are ORM D's except when offered or intended for transportation by air. (172.200(b))

GS1 CR: "A", "W", "AW", A15

Multiple Page Shipping Papers

A Shipping Paper may consist of more than one page **PROVIDED** each page is numbered consecutively **AND** the First Page bears a notation specifying the total number of pages included in the Shipping Paper as follows:

Page 1 of 3

Hazardous Materials and NON Hazardous Materials On The Same Shipping Paper

When a Hazardous Material is shown on the same shipping papers with a non hazardous material the description of the **HAZARDOUS MATERIAL** must:

1. Be shown first (172.201(a)(1)(i)). OR
2. Entered in an ink of a contrasting color. (172.201(a)(1)(ii)). In this case the description can be located anywhere on the shipping paper and/or intermixed with the non hazardous

Straight Bill			
No. Of Units & Type	HM	DESCRIPTION AND CLASSIFICATION (Proper Shipping Name, Hazard Class, UN/NA Number)	Total Quantity (Wt/Vol)
1 Box		Grandmas Kites	100 lbs
9 Drums	X	Acetone, Flammable liquid, UN1090	4320 lbs
1 Drums	X	Flammable liquid, n.o.s. (Acetone, Xylene) Flammable liquid, UN1993	960 lbs

FIGURE SP-1

General Shipping Paper Description Requirements

All required shipping descriptions must:

1. Be printed (manually or mechanically), in english, and legible (172.201(a)(2)).
2. Contain no codes or abbreviations except as authorized or required (172.201(a)(3)). i.e. Abbreviations for the quantity (net or Gross) of the Hazardous Material being described (172.202(c)(1)); RQ for "Reportable Quantity" (172.203(c)(2)); Ltd Qty for "Limited Quantity" (172.203(b)).

material entries. OR

3. Be identified by the entry of an "X" placed **BEFORE** the Proper Shipping Name in a Column captioned "HM" (172.201(a)(1)(iii)). If this option is used the Hazardous Materials may be placed anywhere on the Shipping Paper as illustrated in Figure SP-1. "Grandma's Kites", the first entry on the Shipping Paper, is not a Hazardous Material; is listed first on the Shipping Paper, and the Hazardous Materials are not entered in an ink of a contrasting color so the "X" must be placed in the "HM Column for each of the Hazardous Material entries.

GSI COMPLIANCE PRACTICE- Use the "HM" Column Option. Put an "X" in the "HM Column" as a standard practice when entering Hazardous Materials on the Shipping Paper EVEN IF the Shipping Paper only has Hazardous Materials on it. This avoids having to select an Option and the decision as to whether or not the selection of one of the Options is necessary for a particular shipment.

THE A B C's OF THE BASIC DESCRIPTION (172.202)

To insure compliance with 49 CFR all Shipping Papers, including Hazardous Waste Manifests, must contain a **Basic Description** containing the following information in sequence:

A. Proper Shipping Name

The **FIRST** Item in the sequence is the Proper Shipping Name listed in Column #2 of the Hazardous Material Table 172.101 for the Hazardous Material (172.202(a)(1)). The entries Acetone and Flammable liquid, n.o.s. in Figure SP-1 show this entry.

GSI CR: Proper Shipping Name, A3; Marking, Proper Shipping Name, A27

B. Hazard Class

The **SECOND** Item in the sequence should be the **HAZARD CLASS** listed in Column #3 of the Hazardous Material Table 172.101 for the Hazardous Material (172.202(a)(2)). The entries Flammable liquid after the Proper Shipping Names in Figure SP-1 illustrate the Hazard Class entry.

GSI COMPLIANCE PRACTICE- Although there are some exceptions to this requirement we at GSI recommend that the **HAZARD CLASS** be used at all times.

GSI CR: Classification, A10; Placarding, A51

C. Identification (UN/NA) Number

The **THIRD** Item in the sequence is the Identification Number including the "UN" or "NA" prefix listed in Column #3(A) of the Hazardous Material Table 172.101 for the entry (172.202(a)(3)). This is illustrated by the entries UN1090 and UN1993 in Figure SP-1

GSI CR: Col. #3A A14, UN/NA No Marking A27

D. Required Sequence of Basic Description

The Proper Shipping Name, Hazard Class, and Identification Number **MUST BE IN SEQUENCE** with nothing between them. All the entries in Figure SP-1 are in this sequence (172.202(b))

Technical Name Exception

49 CFR currently (08/87) permits the "technical" or chemical group names of a material to be entered (in parentheses) between the Proper Shipping Name and Hazard Class (172.202(d)). The Flammable liquid, n.o.s. (Acetone, Xylene) entry in Figure SP-1 illustrates this entry for a Flammable liquid mixture containing "Acetone" and "Xylene".

GSI RECOMMENDATION- Include the "Technical" or chemical names in parenthesis for most Proper Shipping Names ending with the letters "n.o.s." as required by applicable UN regulations (ICAO by air and the IMDG Code for water).

As a practical matter most Proper Shipping Names ending with the letters "n.o.s." being offered for transportation by air or water under the appropriate International Regulations will require the addition of one or more chemical names in parenthesis immediately after the the letters n.o.s. in the listed Proper Shipping Name.

Pending rule changes to 49 CFR (HM-126C and HM-181) will require basically the same type of entry for domestic shipments within the next few years.

GSI CR: Air, C. N.O.S. Name Rule C13

E. Quantity of Material

Except for empty packagings, compressed gas cylinders, and packagings having a capacity of more than 110 gallons such as Cargo Tanks the "Total Quantity" of the material covered by the Basic Description, including the units of measurement, must be entered on the Shipping Paper (172.202(a)(4)). The **TOTAL QUANTITY** entry may:

1. Be given weight OR volume or as otherwise appropriate.
2. Appear either before OR after OR both before and after the Proper Shipping Name, Hazard Class and Identification Number information on the Shipping Paper and may be abbreviated (172.202(c)).
3. Be either the "net amount" of the material in the package or the "Gross Weight", the weight of the material in the package plus the packaging, as appropriate. Generally the "net" figure is used for air or Hazardous Waste shipments and the "Gross Weight" for Highway Shipments.

The entries in the "TOTAL QUANTITY" Column of Figures SP-1 through SP-4 illustrate these entries.

GSI Compliance Procedure- Always include the Quantity of the Material even if an Exception applies. As a practical

matter the "Gross Weight" is going to be included for most, non Cargo Tank, highway shipments and will be the Figure most often used.

GSI CR. Air- P. C38

Prohibited Entries

A material not meeting the definition of a Hazardous Material may not be described on a Shipping Paper using either a DOT Hazard Class or a UN/NA Number (172.202(e)). A package of "Paint" having a Flash Point of 25°F may not be described on a Shipping Paper by any of the following descriptions:

Paint, Flammable liquid, UN1263
Paint, Flammable liquid
Paint, UN1263

It should be described simply as Paint

THE A B C's OF ADDITIONAL DESCRIPTION REQUIRE- MENTS (172.203)

In any case where a Shipping Paper is required it will, at a minimum, contain a Basic Description. In addition, one OR more of the Additional Description requirements contained in Section 172.203 MAY or MAY NOT apply to a given Basic Description. Each paragraph in 172.203 represents a potential Additional Description Item that could be required. If one or more of the Additional Description Items specified in 172.203 applies to the the Hazardous Material described in the Basic Description the appropriate entries must be made. If none apply to the particular Basic Description then no Additional Description information has to be entered.

GSI COMPLIANCE PROCEDURE- As a general rule EXCEPT where specifically required to be placed

elsewhere the Additional Description information should be entered AFTER the Basic Description information on the Shipping Paper as shown by the Ltd Qty and RQ entries in Figure SP-2.

Additional Description Entries

A. DOT Exemptions

If the Basic Description describes a Hazardous Material being shipped under a DOT Exemption the notation "DOT-E" followed by the "Exemption Number" assigned must be entered in association with the Basic Description (172.203(a)). A shipment being shipped under "DOT Exemption # 1234" must have the entry DOT-E 1234 entered on the Shipping Paper after the Basic Description as shown for the Aldrin entry in Figure SP-2.

GSI CR. Air-Auth.Column, W C41

B. Limited Quantity

If a material is offered for shipment as a "limited quantity" the words Limited Quantity or Ltd Qty must be entered on the Shipping Paper after the Basic Description (172.203(b)). This entry is illustrated by the entry Ltd Qty after the Butane entry in Figure SP-2.

GSI CR: Limited Quantities, A19

C. Hazardous Substances

At a minimum the letters RQ must be entered on the Shipping Paper either before or after the Basic Description IF the material covered by the Basic Description is regulated as a Hazardous Substance as shown in the Aldrin entry in Figure SP-2 (172.203(c)(2)).

In addition, except for Hazardous Wastes, IF the name(s) of the constituent(s) causing it to be regulated as a Hazardous Substance, as listed in the Appendix to 172.101,

Straight Bill			
No. Of Units & Type	HM	DESCRIPTION AND CLASSIFICATION (Proper Shipping Name, Hazard Class, UN/NA Number)	Total Quantity (Wt/Vol)
2 Bcs	X	Aldrin, Poison B, NA2761, DOT-E1234, RQ	30 lbs
25 bcs	X	Butane, Flammable gas, UN1075, Ltd Qty	250 lbs
1 Bc	X	Hazardous substance, liquid, n.o.s., ORM-E NA9188 (n-Butyl phthalate) RQ	150 lbs
1 Bc	X	Magnesium metal, Flammable Solid, UN1869 Dangerous When Wet	60 lbs

FIGURE SP-2

A42 (0888)

is not part of the Proper Shipping Name it must be entered in parenthesis in association with the Basic Description as illustrated in the Hazardous substance liquid, n.o.s. entry in Figure SP-2 (172.203(c)(1)).

GSI CR. Haz. Substances, B1, Air, USG-01, C42, Hazardous Wastes, A44

D. Dangerous When Wet

If the package is required to be labeled with a "DANGEROUS WHEN WET" label the entry Dangerous When Wet **MUST** be entered on the Shipping Paper in association with the Basic Description (172.203(j)). This entry is shown in the Magnesium metal entry in Figure SP-2.

GSI CR. Labeling, A35, Air, USG-12, C42

E. Poisons-Inhalation Hazard

Poison- IF the material meets the definition of a Poison under 49 CFR and the fact that it is a "poison" is not disclosed by either the Proper Shipping Name, or the Hazard Class the word "Poison" must be entered on the SHIPPING PAPER in association with the Basic Description as shown in the Waste Allyl alcohol entry in Figure SP-3 (172.203(k)(2)).

GSI CR: Air, USG-11, C43

it is part of the Basic Description or has been added in accordance with 172.203(k)(2).

GSI CR: Air, USG-34, C43

Name- If the Proper Shipping Name does not contain the the name of the compound or primary constituent causing it to meet the definition of a "Poison", as defined in 49 CFR, the name of the compound or principal constituent causing it to meet the definition of a "Poison" must also be listed in association with (after) the Basic Description for the material. The name used may be either the technical name of the material or any name for the material that is listed in the NIOSH Registry (National Institute for Occupational Safety and Health) (172.203(k)(1)).

F. Hazardous Wastes

Shipments of Hazardous Wastes must be described on a specific form, the Uniform Hazardous Waste Manifest (EPA 8700-22), prepared in accordance with 40 CFR 262.20 (172.205(a)). The instructions for preparing this form for Blocks other than 11 are sufficiently explained in the Appendix to 40 CFR Part 262 and will not be explained in this text.

Except as noted below, the description of a Hazardous

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator US EPA ID No. Manifest Document No.		2. Page 1 of					
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID No.)				12. Containers No. Type		13. Total Quantity	14. Unit Wt/Vol	15. Waste No.	
a. Waste Allyl alcohol, Flammable liquid, UN1098, RQ Poison- Inhalation Hazard				10	DM	1500	P		
b. Hazardous waste solid, n.o.s., ORM-E, NA9189 RQ (EPA EP toxicity)				10	DM	4400	P		

FIGURE SP-3

Poison-Inhalation Hazard- If the Basic Description covers a material meeting the inhalation toxicity criteria of 173.3a(b)(2) packaged in primary containment units of more than one (1) liter capacity the words "Poison-Inhalation Hazard" must be entered in association with the Basic Description (172.203(k)(4)). The Waste Allyl alcohol entry in Figure SP-3 illustrates this point. The word "Poison" in this entry is not required if

Waste on the Manifest is the same as for any other Hazardous Material:

1. The word **Waste** must be added preceding the Proper Shipping Name if it is not part of the Proper Shipping Name appearing in Column #2 of the HMT-172.101 as illustrated by the Waste Allyl Alcohol entry in Figure SP-3. If the word **Waste** is part of the Proper Shipping Name appearing in Column #2 of the HMT-172.101 leave it where it is as illustrated by the

Hazardous waste solid, n.o.s. entry in Figure SP-3 (172.101(c)(10)).

2. Except for the requirement that the Quantity of Material covered by the Description be in Items 13 and 14 and that the Unit of Measurement be entered in Item 14 be as specified in the Appendix to Part 262 of 40 CFR all the Basic and Additional Description Items required by 49 CFR will be entered in Block 11 of the Uniform Hazardous Waste Manifest as illustrated in Figures SP-3 and SP-4 below.

Container Number and Type: Item 12 requires an entry for the "Number" (No.) and "Type" of containers being used to transport the Hazardous Waste. The entry for the "Type" of container must be as specified in the Instruc-

For Characteristic Waste the words:

EPA ignitability; EPA corrosivity; EPA reactivity; EPA EP toxicity, as appropriate
or

The appropriate D Number.

The letters RQ must also be added to the Basic Description of a Hazardous Waste that is regulated as a Hazardous Substance in the same manner as required for any other Hazardous Substance (172.203(c)(2)).

GSI CR: Hazardous Substances, C.A42

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.		Manifest Document No.		2. Page 1 of							
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID No.)						12. Containers No. Type		13. Total Quantity		14. Unit Wt/Vol		15. Waste No.	
a. Waste Flammable liquid, n.o.s., Flammable liquid, UN1993 (Acetone/Xylene) or (F003) RQ						1 TT		4000		G			

FIGURE SP-4

tions for Item 12 in the Appendix to Part 262 of 40 CFR. These entries are illustrated in Figures SP-3 and SP-4.

- 3 If the Hazardous Waste is also regulated as a Hazardous Substance and the Proper Shipping Name does not contain the name of the Hazardous Substance as listed in the Appendix to 172.101 one of the following must be entered in (parenthesis) as an Additional Description Item in Item 11 of the Uniform Hazardous Waste Manifest as illustrated in Figures SP-3 and SP-4 (172.202(c)(1)):

The Name of the Hazardous Substance as listed in the Appendix to 172.101

or

The Waste Stream Number if a Waste Stream is involved

or

Pages A45-A48 Reserved.

CERTIFICATION

The Certification must be on the Shipping Paper containing the Basic Description. The person who signs the Certification is saying on, BEHALF OF THE COMPANY, that everything has been properly described, packaged, marked, labeled etc.

Certification for Highway & Rail Transportation

If highway and/or rail is the mode of transportation the Certification in 172.204(a)(1) should be used. This Certification is commonly preprinted on Bills of Lading used for Highway and Rail transportation of Hazardous Materials.

Certification for Water Shipments

If water is involved in the transportation of the Hazardous Material the Certification in 172.204(a)(2) should be used because it is also in compliance with the provisions of IMO (Section 9, paragraph 9.4 of the General Introduction). Use of this Certification will also cover the highway portion of the transportation by inserting the words "highway and water" where the " " appears in the body of the Certification (172.204(a)(2)).

Certification by Air

If air is involved in the transportation of the Hazardous Material the Certification in 172.204(c)(1) AND 172.204(C)(3), with the appropriate entry deleted should be used. As a practical matter this information is preprinted on a red bordered (hatched) form known as the "SHIPPER'S DECLARATION" which is used by most air carriers in the world. This Certification also covers the highway portion of the transportation to and from the airport.

GSI CR: Air- Transport Details Box, C36; Certification, C41

SIGNATURE

The required Certification must be LEGIBLY signed by a principal, officer, partner, or employee of the shipper or their agent (172.204(d)(1)). Except for Hazardous Waste Manifests and Air Shipments the signature may be manual, by type writer, or by other mechanical means (172.204(d)(2)).

Hazardous Waste Manifests and Air Shipments

Hazardous Waste Manifests will have the name of the person signing the certification typed or printed along with a manual signature in Item 16 of the Uniform Hazardous Waste Manifest. For Air Shipments the SHIPPER'S DECLARATION FOR DANGEROUS GOODS will have the name and position of the person signing it printed or typed in the Signature Box in

addition to the manual signature of that person.

GSI CR: Air-Cert , AA -CC , Page C41

No Certification Required

Except for Hazardous Wastes no Certification is required for Hazardous Materials offered for transportation by motor vehicle AND transported in a cargo tank supplied by the carrier OR by the shipper as a private carrier unless the Hazardous Material is to be re-shipped or transferred to another carrier (172.204(b)(1)). No certification is required for the shipment of an empty tank car by rail (172.204(b)(2)).

ENVIRONMENTAL
OFFICE MAP

6/6/84

VI ENVIRONMENTAL COORDINATOR'S

OFFICE - LOCATION OF REFERENCE

MATERIALS

REGULATORY TELE-
CON LOG BOOK
SARA REPORTS
OF 87 & 88
MSDS BOOKS
WASTE WATER SYSTEM
EVALUATION
RCRA ORIENTATION

ENVIRONMENTAL
REGULATIONS
40 CFR
DOT 49 CFR
STATE LAWS
COMPLIANCE
PLAN
VCM HEALTH
EFFECTS

RCRA
PCBS
WASTE
PROFILE
SHEETS
MANIFESTS
GENERAL
WASTE
INFORMATION
MISC.
ORGANIZATIONS
MMA/CMA
VCSA
VI
GREEN PACE
SUPERFUND
CERCLA

WASTE
WATER
TREATMENT
NPDES
SPILLS
AIR PERMIT
RVCN
NESHAPS
NSDS
PSD
PERMIT
APPLICATIONS
UNDERGROUND
STORAGE-TS
PROP 65
QUAL. & ENVR.
AUDITS
10 YR. ENVR
STUDY
BLEEDER
VALVE
SURVEY
EUTAN PERMIT
LEAK PATROL
REPORTS
TSCA

SARA
HISTORICAL
COMMUNICATIONS
REPORTS
REQUIREMENTS

REPORTING AND
SPILL CHECKLISTS

VII REPORTING AND SPILL CHECKLISTS

The following table lists all environmental reports due during the year and the due date

<u>DATE</u>	<u>REPORT DUE</u>
Jan 28 and the 28th day of every month	NPDES, Discharge Monitoring Report form (EPA No 3320-1) to MDNR for preceding months water discharge data
March	NPDES, Quarterly BIS(2EH) phthalate, Di-n-octyl phthalate and VCM concentrations in outfall
March 1 (even no yrs)	RCRA Hazardous Waste Shipments Activities Report
March 1	SARA 312, Emergency and Hazardous Chemical Inventory forms to State ERC, Local EPC, and Local Fire Department
March 15	NESHAP, RVCM report for December, January, and February
March 31	NESHAP 1st quarter Bleeder Valve Survey
June	NPDES, Quarterly BIS(2EH) phthalate, Di-n-octyl phthalate and VCM concentrations in outfall
June 15	NESHAP, RVCM report for March, April, and May
June 30	NESHAP 2nd quarter Bleeder Valve Survey
June 30	NPDES, Bioassay of outfall using ceriodaphnia
June 30	SPCC Plan Survey
July 1	SARA 313, Toxic Chemical Release Reporting to EPA and State Officials
July 1	TSCA, Annual report for PCBs in service or projected for disposal for previous calendar year
September	NPDES, Quarterly BIS(2EH) phthalate, Di-n-octyl phthalate and VCM concentrations in outfall
September 15	NESHAP, RVCM report for June, July, and August
September 30	NESHAP 3rd quarter Bleeder Valve Survey
October 31	SARA 311, updated MSDS sheets to State ERC, Local EPC and Fire Department
December	NPDES, Quarterly BIS(2EH) phthalate, Di-n-octyl phthalate and VCM concentrations in outfall
December 15	NESHAP, RVCM report for September, October, November
December 31	NESHAP, 200 VCM Service Valve Survey and Bleeder Valve Survey 4th quarter
December 31	NESHAP Annual VCM Flange and Valve Survey
December 31	NPDES, Bioassay of outfall using pimephales promelas
December 31	SPCC Plan Survey

To Distribution

From F. G. Jeanson
Date January 4, 1989

Interoffice
communication

Subject RELEASE AND SPILL REPORTING

VISTA

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.

Distribution

1/04/89

Release and Spill Reporting

Page 2

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 (Bill Austin)

<u>Material</u>	<u>CAS Number</u>	<u>Reportable Quantity Pounds</u>
Ammonia	7664-41-7	100
Chlorine	7782-50-5	10
Di-n-octyl Phthalate	117-84-0	5000
Hydrazine	302-01-2	1
Hydroquinone	123-31-9	1
Sulfuric Acid	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 EP Toxicity	
Arsenic D004	1
Barium D005	1000
Cadmium D006	1
Lead D008	1
Characteristic of Ignitability	100
Characteristic of Reactivity	100

NATIONAL RESPONSE CENTERTYPICAL QUESTIONS800-424-8802

-
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

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: _____

SPILL/RELEASE REPORTTO BE FILLED OUT BY SHIFT SUPERVISOR

TIME _____ DATE _____

PERSON REPORTING NAME _____ DATE _____

SUPERVISOR NAME _____ DEPT _____

LOCATION _____

TYPE OF MATERIAL _____

ESTIMATED AMOUNT _____

DURATION _____

CAUSE _____

WIND DIRECTION, SPEED, BAROMETRIC PRESSURE _____

DID MATERIAL ENTER GROUND _____

DID MATERIAL ENTER STORM SEWER _____

DID MATERIAL LEAVE THE PLANT _____

IS MATERIAL ON SARA _____ OR CERCLA _____ LIST (SEE ATTACHED TABLES)

IF SO, DID THE SPILL/RELEASE EXCEED THE REPORTABLE QUANTITY _____

WHAT ACTION WAS TAKEN TO STOP SPILL _____

WHAT ACTION WAS TAKEN TO CLEAN-UP SPILL _____

DISTRIBUTION: RWS, DCS, FGJ, TFL, RBN, OPERATIONS SUPERINTENDENT, OPERATIONS ENGINEER,
DEPARTMENT SUPERVISOR

SPILL/RELEASE PREVENTION REPORTTO BE FILLED OUT BY DEPARTMENT SUPERVISORSPILL/RELEASE THAT OCCURRED _____

_____RECOMMENDATIONS OR ACTION TAKEN TO PREVENT RECURRENCE _____

DEPARTMENT SUPERVISOR _____

DATE _____

ENVIRONMENTAL COORDINATOR _____

DATE _____

OPERATIONS SUPERINTENDENT _____

DATE _____

PLANT SUPERINTENDENT _____

DATE _____

PLANT MANAGER _____

DATE _____

**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 ☐ Radiological Health Name: _____ Date: _____ Time: _____		
	11. Emergency Action Required: ☐ None ☐ State ☐ Local		
	12. Person taking report: 		

ATTACHMENT A

Superfund Reporting Checklist

	<u>Report?</u>
I. <u>Below RQ</u>	No
II. <u>Above RQ</u>	
1.0 <u>Air</u>	
A. <u>NESHAPS</u>	
1. <u>VCM</u>	
a). In VCM service	
i) Process Vent	
1. Less than 10ppm VCM for 3 hr. TWA	No
2. Exceeds 10ppm std by less than RQ	No
3. Exceeds 10ppm std by more than RQ	Yes
ii) RV/RD release	No
iii) RV/RD leak	No
iv) Other leaks	No
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
2. <u>BENZENE</u>	
a). In benzene service	
i) Process vent	
1. In compliance with standard	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

B. SIP

- 1. Release from specifically regulated point
 - a). In compliance with regulation No
 - b). Above regulatory limit by less than RQ No
 - c). Above regulatory limit 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. Spills1. Ground

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

b). Outside Plant

Yes

3.0 Seepage to the Ground

- | | |
|--|-----|
| A. From impoundment - episodic | Yes |
| B. From sewer lines - episodic | Yes |
| C. From underground pipeline - episodic | Yes |
| D. Initial detection of continuous release | Yes |
| E. Subsequent continuous releases | No |

4.0 Discharges to POTW's

- | | |
|--|-----|
| A. Pretreatment standard exists - exceed standard by RQ amount | Yes |
| B. No Pretreatment Standard - Spill RQ amount | Yes |

WLM07/089

To Distribution

From F G Jeanson
Date February 3, 1989

Interoffice
Communication

Subject PLANT ENTRY OF GOVERNMENTAL AGENCY PERSONNEL

VISTA

Each person from a Governmental Agency is to complete and sign the attached Request for Entry form before being allowed into the plant

If the person will not sign the form, ask what the problem is. He will likely have an objection because of Item 6, the indemnification section. Then ask him if he would sign the form if Item 6 is crossed out. If he says yes, cross out Item 6. Both the Agency person and the Plant representative are to initial the cross out.

If the person will not sign the form under any circumstances, contact the Manager. He will then determine whether to allow the person entry into the plant.

A supply of the Request for Entry forms will be kept by Terry Sullivan.

Contact me if you have any questions about using the form

F. G. Jeanson

F G Jeanson
Environmental Coordinator

tjs

C. RWS, DCS, JEN, JEL, DWH, PJK, JEB, HGC, TFL, GAM, BLT, SCH,
VLT, RBN, REP, RAH, TJS, ENGINEERS

REQUEST FOR ENTRY

1. My name is _____ I represent _____, which is established
(agency or bureau)
by the laws of the (United States) (State of _____). My official title or position is
_____. My business address is _____.

2. In my official capacity, I am requesting admission to _____, for the purpose of:
(plant or facility)

() a. gathering scientific research information and/or studying technology development, under

(statute or popular name of act)

() b. making a regularly scheduled inspection of the facilities, under _____
(statute or popular name of act)

() c. taking samples of water, air, or _____ (circle)
type of air monitoring equipment _____
type of water or soil sampling equipment _____
water chemical analyses (tests and methods) _____
soil chemical analyses (tests and methods) _____
location(s) for sampling _____

() d. making a special inspection of the facilities for the following purposes:

under _____
(statute or popular name of act)

() e. gathering evidence for pending or potential criminal or civil proceedings, under

(statute or popular name of act)

() f. other; specifically _____
under _____
(statute or popular name of act)

3. I specifically wish to see the following units or activities:

4. I agree to provide split samples of all samples of whatever nature obtained, and to furnish you all analytical results from all tests conducted.
5. I understand that I will be furnished a guide and such other assistance as I may require for information or safety. I agree to comply with all safety regulations and instructions, whether written or oral, while on the premises.
6. I agree to indemnify and hold you harmless from and against any loss, costs, expense or liability arising out of any loss, claim, or cause of action for loss of or damage to my property or equipment, or that of my employees or agents, and injuries to or death of persons caused by, resulting from or incidental to the entry authorized hereby; provided, however, that except for loss of or damage to my property or equipment, or that of my employees or agents, such indemnification and hold harmless shall not apply to claims for loss, damage, injury or death if caused by your sole negligence.
7. I, and my employees and agents, agree to treat and maintain as confidential property of the Agency, and, except as is necessary to perform the work envisioned hereunder, shall not use or disclose to others, either during the term of this entry or thereafter, any information (including any technical information, experience, or field data) regarding products, plans, programs, plants, processes, costs, equipment, operations, or customers which may be disclosed to or come within my knowledge, or that of my employees or agents, during the entry authorized hereby. The provisions of this paragraph shall not apply to any information referred to herein which I can establish (i) has been published and has become part of the public domain, other than by my or my employees or agents acts or omissions, (ii) has been furnished or made known to me by third parties (other than those acting directly or indirectly for or on behalf of you) as a matter of legal right and without restriction on disclosure, or (iii) is required by law to be disclosed.

(Date)

(Visitor)

(Time)

(Title)

Visit authorized by:

(Agency or Bureau)

(Plant or Facility)

APPENDIX

ACRONYMS

- 1 CAA - Clean Air Act
- 2 CERCLA - Comprehensive Environmental Response, Compensation, and Liability
Act
- 3 CFR - Code of Federal Regulations
- 4 CWA - Clean Water Act
- 5 BDAT - Best Demonstrated Available Technology
- 6 EP Toxicity - Extraction Procedure Toxicity
- 7 EPA - Environmental Protection Agency
- 8 FR - Federal Register
- 9 HSWA - Hazardous and Solid Waste Act of 1984
- 10 LEPC - Local Emergency Planning Committee
- 11 MDEQ - Mississippi Department of Environmental Quality
- 12 MDNR - Mississippi Department of Natural Resources, now MDEQ
- 13 MERC - Mississippi Emergency Response Center
- 14 NAAQS - Nation Ambient Air Quality Standard
- 15 NESHA - National Emission Standard for Hazardous Air Pollutants
- 16 NPDES - National Pollutant Discharge Elimination System
- 17 NSPS - New Source Performance Standard
- 18 OCPSF - Organic Chemicals, Plastics, and Synthetic Fibers
- 19 OSHA - Occupational Safety and Health Administration
- 20 PDS - Prevention of Significant Deterioration
- 21 RCRA - Resource Conservation and Recovery Act
- 22 RIM or RIL - Regulatory Interpretative Memorandum or Letter
- 23 ROL - Reactor Opening Loss
- 24 SARA - Superfund Amendment and Reauthorization Act

ACRONYMS - (Continued)

- 25 SDWA - Safe Drinking Water Act
- 26 SMU - Solid Waste Management Unit
- 27 SPCC - Spill Prevention, Control and Countermeasure
- 28 TC - Toxicity Characteristic
- 29 TCLP - Toxicity Characteristic Leaching Procedure
- 30 TSCA - Toxic Substances Control Act
- 31 TSDF - Treatment, Storage or Disposal Facility
- 32 UST - Underground Storage Tank

RESOURCES:

Environmental Department	Tom Grumbles	Houston	X3445
	Joe Ledvina	Houston	X3446
Legal Department	Bill McClain	Houston	X3278
	Dave Cohen	Houston	X3548
Engineering	Tom Heller	Houston	X6886
R & D	Allen Nielsen	Houston	X3308

REFERENCES:

AP-42	Compilation of Air Emission Factors
SW-846	Test Methods for Evaluating Solid Wastes
40 CFR	Code of Federal Regulations - Vol 40 (10 books)
FR	Federal Register - Daily
Newsletter	"Inside EPA" "Environmental Policy Alert" "Environmental Reporter"
White Books	Bureau of National Affairs

TRADE ASSOCIATIONS:

VI - Vinyl Institute
 SPI - Society of Plastics Industries
 CMA - Chemical Manufacturers Association
 SDA - Soap and Detergent Association
 CSMA - Chemical Specialty Manufacturers Association
 MMA - Mississippi Manufacturers Association
 LCA - Louisiana Chemical Association
 TCC - Texas Chemical Council
 MCIC - Maryland Chemical Industry Council
 AIM - Associated Industries of Mississippi
 VCSA - Vinyl Chloride Safety Association

VIII APPENDIX**Example Environmental Situations**

The following pages have seven environmental situations which could happen at this plant. The steps necessary to control and report the situations follow each situation.

For any environmental situation which occurs there are five steps to complete. Step one and two should be completed at the same time so that any aid needed in controlling the situation can be given. The five steps are:

- 1 CONTROL THE SITUATION
- 2 NOTIFY THE ENVIRONMENTAL COORDINATOR AND/OR THE CHIEF PROCESS ENGINEER
- 3 DETERMINE QUANTITY OF MATERIAL RELEASED
- 4 DETERMINE WHAT AGENCIES TO NOTIFY
- 5 REPORTING

1. Rupture Disk Failure

SITUATION

A rupture disk on D-700 reactor prematurely fails The relief valve doesn't lift What actions should be taken?

ACTION STEPS

1. CONTROL THE SITUATION

- a Kill batch
- b Recover reactor
- c As soon as time permits, replace rupture disk and give blown rupture disk to Environmental Coordinator or Chief Process Engineer, in the mean time, continue with list

2. NOTIFY ENVIRONMENTAL COORDINATOR AND/OR CHIEF PROCESS ENGINEER

3. DETERMINE QUANTITY OF MATERIAL RELEASED

- a. See example of next page

4. DETERMINE WHICH AGENCIES TO NOTIFY

- a Because the relief valve did not lift, this incident is not a release. It is a leak which should be included in the yearly SARA 313 Emissions Report (Fugitive).

5. REPORTING

- a Since this incident is not a release, there are no immediate reporting requirements Do not forget to include pounds leaked as part of the fugitive emissions in the SARA 313 Emissions Report

2. Reactor Leaks to Sewer

SITUATION

An operator charging a reactor shuts off the high pressure service water and opens the catalyst bomb drain without shutting the automatic valve to the reactor. The reactor contents leak to the sewer. What do we do now?

ACTION STEPS

1. CONTROL THE SITUATION

- a. Prevent further release
 - 1. Close automatic valve
 - 2. Close backup manual valve is necessary
- b. Flush sewer with water to prevent VCM vapor cloud

2. NOTIFY ENVIRONMENTAL COORDINATOR AND/OR CHIEF PROCESS ENGINEER

3. DETERMINE QUANTITY OF MATERIAL RELEASED

- a. In this situation VCM is released. A good estimate of the quantity can be obtained by the following formula.

$$\frac{(\text{ppm of VCM in water}) \times (\text{gallons of water}) \times (8.34 \text{ gal/lb})}{1,000,000 \text{ parts}}$$

- pounds of VCM released

4. DETERMINE WHICH AGENCIES TO NOTIFY

- a. If pounds of VCM released is over 1 pound, the release is reportable under CERCLA 302(a) materials
- b. If pounds of VCM release is under 1 pound, stop after completing 5 (a).

5. REPORTING

- a. Supervisor or Area in which release occurred
 - 1. Spill/Release Report
 - a. See Section 7, Page 8 of this manual for copy of report
 - b. Report needs to be filled out as soon as situation is under control
- b. Environmental Coordinator or Chief Process Engineer
 - 1. Call the National Response Center
 - a. 1-800-424-8802
 - b. Notified immediately
 - c. Typical questions asked are located in Section 7, Page 9 of this manual
 - d. Questions need to be answered before calling
 - e. No written report is needed

2 Reactor Leaks to Sewer (Continued)

5 REPORTING

- 2 Mississippi Department of Environmental Quality, Bureau of Pollution Control
 - a See Section 3, Page 2 for address, phone number and Administrator
 - b Send copy of report sent to EPA, Section IV
- 3 EPA, Region IV - send report
 - a Report per Regulation 61 64 (a)(3) which reads

Within 10 days of any discharge to the atmosphere from any manual vent valve, the owner or operator of the source from which the discharge occurs shall submit to the Administrator a report in writing containing information on the source, nature and cause of the discharge, the date and time of the discharge, the approximate total vinyl chloride loss during the discharge, the method used for determining the vinyl chloride loss (the calculation of the vinyl chloride loss), the action that was taken to prevent the discharge, the measures adopted to prevent future discharges

- b This example violates Regulation 61 65 (b)(5) manual venting of gases which reads

Manual Venting of Gases Except as provided in 61.64 (a)(3), all gases which are manually vented from equipment in vinyl chloride service are to be ducted through a control system from which the concentration of vinyl chloride in the exhaust gases does not exceed 10 ppm (average for 3-hour period), or equivalent as provided in 61 66

- c See Section 3, Page 2 for address and phone number and Administrator
- 4 Spill Prevention Report
 - a See Section 7, Page 9 of this manual for copy of this report
 - b Report must be completed before reporting to EPA

3 VCM Relief Valve Lifts

SITUATION

A D-745 relief valve lifts caused by over pressure VCM is emitted to the air
What now?

ACTION STEPS

1. CONTROL THE SITUATION

- a Kill reactor and split batch to open reactor if available
- b Recover reactor that relief valve lifted on first
- c Monitor VCM levels throughout the unit. Use judgement to determine if evacuation alarm is necessary
- d Determine wind direction
- e If release is considered to be big enough, tell people in the neighborhood via plant emergency speaker
- f If levels are high evacuation of the neighborhood should be considered This decision should be made in consultation with as many members of Plant Management as possible
- g If situation is determined as emergency
 - 1 See Emergency Plant for further actions
 - 2 Contact LEPC or Police Department
 - 3 Notify Mississippi Emergency Response Commission
1-800-222-6362

2. NOTIFY ENVIRONMENTAL COORDINATOR AND/OR CHIEF PROCESS ENGINEER

3. DETERMINE QUANTITY OF MATERIAL RELEASED

- a. Estimate time relief valve was open using reactor pressure indication, eye witness accounts, and any other information available
- b Use orifice, pressure, and time release data to estimate pounds of VCM released

4. DETERMINE WHICH AGENCIES TO NOTIFY

- a If pounds of VCM released is over 1 pound, the release is reportable under CERCLA 302(a) materials.
- b If pounds of VCM released is under 1 pound, stop after completing 5 (a)

5. REPORTING

- a. Supervisor of Area in which release occurred
 - 1 Spill/Release Report
 - a. See Section 7, Page 8 this manual for copy of report
 - b Report needs to be filled out as soon as situation is under control

3 VCM Relief Valve Lifts (Continued)

5 REPORTING

b Environmental Coordinator or Chief Process Engineer

1 EPA, Region IV

a See Section 3, Page 2 for address and phone number and Administrator

b Report per Regulation 61 65 (a) which reads

Relief Valve Discharge Except for an emergency relief discharge, there is to be no discharge to the atmosphere from any relief valve on any equipment in vinyl chloride service. An emergency relief discharge means a discharge which could not have been avoided by taking measures to prevent the discharge, the owner or operator of the source from which the relief valve discharges occurs shall submit to the Administrator a report in writing containing information on the source, nature and cause of the discharge, the date and time of the discharge, the approximate total vinyl chloride loss during the discharge, the method used for determining the vinyl chloride loss (the calculation of the vinyl chloride loss), the action that was taken to prevent the discharge, and measures adopted to prevent future discharges.

2 Mississippi Department of Environmental Quality, Bureau of Pollution Control

a. See Section 3, Page 32 for address, phone number, and Administrator

b Send copy of report sent to EPA, Section IV

3 Spill Prevention Report

a See Section 7, Page 9 of this manual for copy of the report

b Report must be completed before reporting to EPA

4. Oil on Outfall

SITUATION

A drum of Lube oil falls from a fork truck crossing the railroad tracks north of the 600 series silos. The barrel bursts open and oil goes into a sewer. You are in charge, what do you do?

ACTION STEPS

1 CONTROL THE SITUATION

- a Prevent further spill
- b Prevent oil from entering sewers by use of dikes, absorbent booms or clay, or other methods available
- c Determine type of sewer
 - 1 Process
 - a Go to Step 2 (Notify Environmental Coordinator and stop
 - 2 Storm
 - a Go to next step
- d. Check place where water leaves plant for oil. Even if oil is not observed, place absorbent boom in the stream
- e. Check Storm Water Pit to which sewer drains for oil
- f If oil is present, use the following as needed
 - 1. Absorbent booms on outfall
 - 2. Pump Storm Water Pit to process sewer
 - 3 Vacuum Truck (See SPCCP Section 2, Page 25 of this manual)

2 NOTIFY ENVIRONMENTAL COORDINATOR AND/OR CHIEF PROCESS ENGINEER

3 DETERMINE QUANTITY OF MATERIAL RELEASED

- a Each situation is different. Use your best judgement

4. DETERMINE WHICH AGENCIES TO NOTIFY

- a Any oil sheen leaving the plant boundary and entering a water stream must be reported per the Clean Water Act and the Aberdeen Plant Spill Prevention Control and Countermeasures Plan, Section 2, page 16 of this manual

5 REPORTING

- a Supervisor of Area in which release occurred
 - 1 Spill/Release Report
 - a See Section 7, Page 8 of this manual for copy of report
 - b Report needs to be filled out as soon as situation is under control

4 Oil on Outfall (Continued)

5 REPORTING

b. Environmental Coordinator or Chief Process Engineer

1. National Response Center - If oil leaves the plant property
 - a. 1-800-424-8804
 - b. Notify immediately
 - c. Typical questions asked are located in Section 7, Page 6 of this manual
 - d. Questions need to be answered before calling
 - e. No written report is needed
2. Mississippi Department of Environmental Quality, Bureau of Pollution Control
 - a. See Section 3, Page 2 for address, phone number, and Administrator
 - b. Notify within 24 hours of incident
3. Spill Prevention Report
 - a. See Section 7, Page 9 of this manual for copy of report

5 Blend Tank Overflow

SITUATION

A blend tank overfills and slurry flows into a storm sewer What actions are required?

ACTION STEPS

Any waste water that discharges outside of the plant boundary that normally goes to a process sewer is considered a bypass

1 CONTROL THE SITUATION

- a Prevent additional material from entering Storm Sewer by use of dikes, valving, or any other manner possible

2 NOTIFY ENVIRONMENTAL COORDINATOR AND/OR CHIEF PROCESS ENGINEER

3. DETERMINE QUANTITY OF MATERIAL RELEASED

- a Estimate quantity of waste water in pounds and gallons
- b Estimate quantity of VCM

4 DETERMINE WHICH AGENCIES TO NOTIFY

- a Under the Clean Water Act any Waste Water Bypass must be reported to the Mississippi Department of Environmental Quality (MEDQ)
- b Under CERCLA 302 (a) if more than 1 pounds of VCM is released, the incident is reportable as explained in this manual under the situation REACTOR LEAKS TO SEWER

5 REPORTING

- a Environmental Coordinator or Chief Process Engineer
 - 1 Mississippi Department of Environmental Quality, Bureau of Pollution Control
 - a See Section 3, Page 2 for address, phone number, and Administrator
 - b Notify within 24 hours of incident

6 Acid Spill on Slag

SITUATION

A H₂SO₄ truck entering the plant hits the weighscale building and breaks off a valve. The acid spills onto the concrete and slag. What would you do?

ACTION STEPS

1 CONTROL THE SITUATION

- a Isolate and rope off area
- b Any personnel in the area must wear protective equipment including breathing apparatus
- c Prevent further spill if possible
- d Contain spill by use of dikes, damming drains and ditches, etc
- e Notify the Safety Director and Environmental Coordinator as soon as possible
- f Neutralization of liquid inside containment dike
 - 1 Dilute liquid with water to raise pH
 - 2 Add Soda Ash (only if dilution does not work) until pH is above 6.0
 - 3 Pump liquid in dike to Process Sewer
- g Neutralization of soil/slag
 - 1 Test pH of soil
 - a The soil needs to be tested to determine if it is contaminated. If the pH is greater than 5 and less than 10, no treatment is necessary
 - b If the soil pH is less than 5 or greater than 10, neutralization of the soil should be done. See Environmental Coordinator for proper neutralization techniques

2 NOTIFY ENVIRONMENTAL COORDINATOR AND/OR CHIEF PROCESS ENGINEER

3 DETERMINE QUANTITY OF MATERIAL RELEASED

- a Estimate quantity of H₂SO₄ that left plant boundary without being treated. Consult Environmental Coordinator for help

4 DETERMINE WHICH AGENCIES TO NOTIFY

- a If greater than 1000 pounds of Sulfuric Acid is spilled on concrete and totally contained before it reaches the soil, the spill does not need to be reported to any Agency
- b If greater than 1000 pounds of Sulfuric Acid is spilled on the ground but the spill does not leave the plant boundary, it needs to be reported under CERCLA 302 (a) only
- c If greater than 1000 of Sulfuric Acid leaves the plant boundary, the spill also needs to be reported under SARA

6. Acid Spill on Slag (Continued)

5. REPORTING

- a. Supervisor of Area in which release occurred
 - 1. Spill/Release Report
 - a. See Section 7, Page 8 of this manual for copy of report
 - b. Report needs to be filled out as soon as situation is under control
- b. Environmental Coordinator or Chief Process Engineer
 - 1. In-Plant Spill Prevention Report
 - a. See Section 7, Page 9 of this manual for copy of report

CERCLA 302 (a)

- 1. National Response Center
 - a. 1-800-424-8802
 - b. Notify immediately
 - c. Typical questions asked are located in Section 7, Page 6 of this manual
 - d. Questions needs to be answered before calling
 - e. No written report is needed

SARA

- 1. Emergency Coordinator, Local Planning Committee
 - a. Immediate notification
 - Jerome Husky (601) 369-6439
 - b. Written notification

A written follow up 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. Action taken to respond to and contain therelease.
- 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 sent to Emergency Coordinator of the Local Emergency Planning Committee and to W. E. Austin, Special Projects Office, SARA Title III, Mississippi Emergency Response Commission, P. O Box 4501, Fondron Station, Jackson, Mississippi 39216-0501. The written report should be submitted within ten days as a maximum.

7. Waste Water Permit Violation

SITUATION

The test results from EnviroLab returns with a BOD of 45 ppm at Outfall 001 (Pond 6 effluent) What should we do?

ACTION STEPS

1 CONTROL THE SITUATION

- a At this point there is not much that can be done since the BOD test is a five day test (results are 5 days old when they are reported to us)
- b Make sure all the aerators are on and check for any visible oil
- c Investigate why the BOD is high Were there any spills?
- d The daily max values are not as important to the EPA and MDEQ as the monthly average To decrease the monthly average, take extra (more than one a week) samples while the BOD level is below the monthly permit level

2. NOTIFY THE ENVIRONMENTAL COORDINATOR AND/OR CHIEF PROCESS ENGINEER

3. DETERMINE QUANTITY OF MATERIAL RELEASED

- a The ppm of BOD in the Outfall 001 is reported by EnviroLab, 1-323-7744, our contact is Bob Schubert The co-op process engineer receives results every Monday 24 hours composites are samples from Tuesday morning to Wednesday
- b The pounds/day of BOD in the stream 001 is calculated by

$$\text{pounds/day} = \text{ppm} \times \text{GPM} \times 0.012017$$

The GPM of the Outfall 001 can be obtained from the totalizer located at the outfall and the coop keeps a record of these results

4 DETERMINE WHICH AGENCIES TO NOTIFY

- a Since 45 ppm is above the permit limit of Outfall 001 (see p 4-29), it is necessary to contact the State of Mississippi Bureau of Pollution Control, Industrial Water Section Be sure to check the BOD pounds/day and COD pounds/day for compliance before reporting

5. REPORTING

- a Environmental Coordinator
 - 1. NPDES Monthly Report



TECHNICAL INFORMATION

COMMUNITY HEALTH EFFECTS
OF
VINYL CHLORIDE

Prepared By:

The Vinyl Institute
Health, Safety, & Environment Committee

Issued: August 1, 1986

I. SUMMARY

This document reviews the toxicity and human health effects of ambient exposure to vinyl chloride (VC), the raw material used in the production of polyvinyl chloride (PVC). It summarizes the extensive and rigorous federal regulation of the VC/PVC industry, and compares quantitative risk assessments with actual health observations of individuals in non-occupational settings.

A review of the world scientific literature shows no community health impacts associated with exposure to VC emissions from VC/PVC manufacturing facilities.

II. INTRODUCTION

Vinyl chloride is the basic building block for producing the most versatile plastic yet developed -- polyvinyl chloride and its copolymers with other monomers. Most of the seven billion pounds of VC produced annually in the United States is converted into PVC used in thousands of products in the home and in industry -- products such as wallcoverings, upholstery, flooring, house siding, water pipes, sewer pipes, luggage, clothing, automotive parts, medical devices, food wrap, windows, doors, wire insulation, garden hoses, and phonograph records.

PVC is a polymer produced from VC through a chemical reaction called polymerization. VC is converted into PVC by suspension, emulsion, bulk or solution polymerization methods. PVC resins can be extruded, molded or calendared into diverse shapes, sizes, and colors. Mechanical characteristics can be controlled to produce forms that are rigid, flexible, or in a liquid form such as latexes, pastes, and adhesives.

Vinyl chloride became of industrial importance approximately fifty years ago when Semon (1933) discovered that the polymer could be converted into useful articles by plasticization with phthalate esters. Commercial development began first in Europe and then in the United States in the late 1930's. It was not until the early 1950's that widespread consumer applications developed. PVC is now a mature product, and its growth rate falls in step with the Gross National Product.

III. HEALTH HISTORY

Acute Toxicity

Vinyl chloride is a strong anesthetic at 8-12% in animals and humans. Death follows rapidly after unconsciousness sets in if exposure is not reduced quickly (Patty et al, 1930). No major histological changes were reported after 100 days at exposures of 50,000 ppm (Kuebler, 1964). Reversible liver effects at 100-500 ppm led to a recommendation of a 50 ppm TWA exposure limit (Torkelson, Oyen, and Rowe, 1961), but the American Conference of Governmental Industrial Hygienists adopted instead a recommendation by Yale scientists of 500 ppm. This is the value later accepted by OSHA and it served until 1974. Lehman and Flury (1943) termed vinyl chloride to be "one of the least dangerous of the chlorinated hydrocarbons".

Community Health Effects of Vinyl Chloride

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There are no other known acute human physiological effects from vinyl chloride exposure. The odor threshold is about 1,000 ppm. The high heat of vaporization causes a substantial part of a large spill to liquify and presents the danger of frostbite. Vinyl chloride is flammable over the range of 3.6-33% in air, and extreme care must be taken to avoid spills and leaks for that reason. Most measurement and warning systems were designed to hold plant atmospheres below the flammable limits. Retrospective estimates of typical time-weighted average personal exposures for polymerization workers in England have been estimated (Barnes, 1980) as follows:

1945 to 1955	- 1,000 ppm (or above)
1955 to 1960	- 400 to 500
1960 to 1970	- 300 to 400
Mid 1973	- 150
1975	- 5

In some jobs, particularly the cleaning of polymerization reactors, exposures in the thousands of ppm range were experienced for short periods. (See Purchase, et al, 1985 and Barr, 1986 for reviews of the toxicity of VC).

Chronic Health Effects

The first clear indication of chronic health problems associated with VC came in the 1960's in men who entered VC polymerization reactors to remove build-up of polymer from the walls. Some of these men developed acro-osteolysis, a disease resulting in softening of bones in the fingers (Suci, et al, 1963; Harris and Adams, 1967; Cook, et al, 1981). Modification of working practices has led to the elimination of this disease in workers in PVC plants. In the late 1960's, Professor P.L. Viola of the Solvay Company tried to reproduce acro-osteolysis in rats by exposing them to high concentrations of VC for long periods. He failed to produce acro-osteolysis, but he reported an increase in incidence of a variety of tumors at various sites. For the first time, it had been suggested that VC was an animal carcinogen. (Viola, 1969, 1970; Viola, Bigotti and Caputo, 1971).

As a direct result of the Viola work, four West European VC/PVC manufacturing companies in Italy, France, Belgium, and England supported a comprehensive study of the animal toxicology of VC by Professor G. Maltoni, Director of the Institute of Oncology at Bologna. Maltoni's work which extended over eight years has proved to be the most comprehensive study of VC toxicology (Maltoni et al, 1984). By the end of 1972, Maltoni had found a rare tumor, angiosarcoma of the liver (ASL), in some of the exposed rats and confirmed that VC is indeed an animal carcinogen. These early findings were reported at an international symposium in 1973 (Maltoni, 1977). Maltoni recommended epidemiological investigations and medical controls of exposed workers and early in 1974, a U.S. company announced that they had found three ASL cases in employees at one of their PVC polymerization plants. This finding led to the conclusion that VC was a human carcinogen because it gave rise to a rare tumor whose only other known etiological agents in man were thorium dioxide, arsenic and possibly anabolic steroids.

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Page Three

ASL is a very rare tumor. Less than 20 cases per year from all these causes occur in this country. A review (Popper, et al, 1978) of all cases reported in the United States for the period 1964-1974 revealed 167 cases, of which 19 were ascribed at that time to occupational VC exposure, 26 to thorium dioxide given medically, and 9 to arsenic in Fowler's solution, also used medically. The remainder were of unknown etiology, with no connection to VC. The high level of interest in this specific tumor is such that any subsequent cases associated with environmental exposure to VC would most certainly have been reported, and none have. For a time, NIOSH published a summary of VC-related cases (Falk, et al, 1981), but this task was taken over first by John Stafford of ICI, England (Foreman, et al, 1985) and later by Brian Bennett also of ICI. The 1986 update of VC-related ASL cases shows a total of 38 cases in the United States and 120 worldwide. All of these cases involve high occupational exposures to VC.

The average ASL latency period (years from first exposure to diagnosis) in the United States has been 25 years, but with a median of about 22 years. The latency period in Europe, particularly in Germany, has been somewhat shorter, approximately 19 years. All the U.S. occupational cases, and almost all such cases in the rest of the world are closely associated with the job of reactor cleaning, which was once done manually at the end of the polymerization cycle. There is clustering of cases in relatively few plants and the majority of plants have had no cases. Differing work programs and job progressions may have had some effect on reducing rates at various plants.

An industry-sponsored epidemiological survey of workers in the VC/PVC industry covered 8,384 men with at least one year of exposure before 1973 (Tabershaw and Gaffey, 1974). The expected excess of ASL was found. There were also suggestions of an excess of cancers at other sites. This study was expanded to 10,173 workers (Cooper, 1981), where suggested excess of brain and respiratory cancers continued to be seen without, however, an association between the brain cancer and exposure. In addition, most of the lung cancer cases come from the same facility, with many plants having no cases. A follow-up study of this expanded cohort to determine the status of the workers as of the end of 1980 is underway.

Several studies have been made of the general population using ASL as the marker disease in an effort to detect an association with possible environmental exposure to VC. There was no association with living near a plant manufacturing or using VC in the general U.S. survey conducted by the Center For Disease Control (Popper et al, 1978; Falk, et al, 1981). Brady et al, (1977) surveyed 26 ASL deaths in New York State between 1970 and 1975, and found five who lived nearer plants handling VC than did their matched controls, but could not establish a direct connection with the disease to exposure. Ten cases of ASL in Wisconsin were examined for possible connection with VC exposure, and none was found (Fiechtner et al, 1976). Baxter et al, (1977) found no relationship between distance of residence from VC emitters and the 47 cases of ASL in the general population of Great Britain reported in 1963-1973. A later update (Baxter et al, 1980) found one case where the person had lived the last six years of his life near a PVC plant and three cases where the men had worked in the plastics fabricating industry but for whom there were no records to indicate exposure to VC.

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Page Four

The lack of relationship between residence near vinyl chloride operations and cases of unknown etiology was confirmed. Saric et al, (1976) studied the deaths during the years 1968-1971 in an area surrounding a PVC plant that had been in operation since 1949 and in which three workers had died of ASL. No relationship was found for liver or for lung or bronchial cancer and place of residence for the general population. A similar study for communities near a Swedish plant that had operated since 1945 and had found four ASL cases showed (Elinder and Pershagen, 1978) no unexpected elevation of fetal mortality, deaths from all cancers, or cancer of the liver or lungs during the years 1961-1974. Pancreatic cancer in males was elevated in the age group over 60. All ASL cases in Holland since 1950 (27 cases) were studied, and none had any traceable contact with VC (Dalderup et al, 1976). Iturra (1976) observed an excess of cancer deaths in a city in Canada with a PVC plant compared to a similar nearby city. This difference was principally found in males aged 20 to 64, which is not indicative of a general pollution effect. The author drew no conclusion as to why the condition existed.

Representatives of the Environmental Protection Agency have stated that it has been unable to establish a link between living near VC manufacturing and using plants and ASL.

There are about 20 cases of ASL per year in the United States that cannot be ascribed to one of the known causes of the disease. There are also about 5 in Europe each year. Accordingly, there will be one case of ASL among the 5 million - 5 mile neighbors of VC/PVC facilities about every two years by chance alone. This has been seen in the studies in New York by Brady, et al, (1970), and in Connecticut (Heath and Landrigan, 1974). These states have cancer registries, which are of great value. In one case, a jury award was made to the estate of an individual who died of ASL, and who had lived the last four years of his life near a PVC plant. Inasmuch as that person also had occupational exposure to VC and exposure to other ASL causative agents, it cannot be concluded that ambient VC exposure caused his ASL (In re Gresso, Civil Action No. 78-1562, D.N.J.).

A thorough study (Chiazze, et al, (1977), Chiazze, (1980)) of more than 15,000 employees of PVC fabricators found no evidence of VC-related health effects in that group, which was estimated to have been exposed to at least 15 ppm VC for many years.

The disease ASL is often difficult to diagnose (Block, 1974; Heath, Flak and Creech, 1975), is almost invariably fatal within a short time, and presents a variety of symptoms, including portal fibrosis and hypertension with splenomegaly and varices, proliferation of the sinusoidal lining, megalocytosis, and thrombocytopenia (Thomas and Popper, 1975; Gedick et al, 1975). Metastasis is frequently involved. These symptoms are very similar to those seen in the mouse (Schaffner, 1978) and rat (Feron and Krees, 1979) and the pathology also is similar (Gordon et al, 1973). No really adequate early warning tests have been devised (Whelan et al, 1976; Langbein et al, 1983; Tamburro and Greenberg, 1981), although the gammaglutamyl transpeptidase test is promising, together with ICG clearance and SGOT. Radiographic liver scans and tomography and sonography (Kolschitz et al, 1981) are said to be useful confirmatory tests.

Community Health Effects of Vinyl Chloride
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In summary, VC is a classical procarcinogen, and is clearly a human carcinogen, causing ASL in a small percentage of highly exposed workers. There is suggestive evidence that it may be a weak general carcinogen at high concentrations, perhaps through an immunosuppressive mechanism, but more data are required to confirm this suspicion. Several studies of large populations have not shown a connection between general ambient exposure and an increased incidence of cancer.

IV. FEDERAL REGULATION OF VC/PVC INDUSTRY

The primary federal agencies regulating the VC/PVC industry are the Occupational Safety and Health Administration (OSHA), which is part of the U.S. Department of Labor, the U.S. Environmental Protection Agency (EPA), and the Food and Drug Administration (FDA). OSHA regulation focuses on worker health while EPA addresses the control of chemicals outside the workplace. FDA oversees uses of PVC that involve foods, drugs, cosmetics, and medical devices.

A. The Occupational Safety and Health Administration

The allowable occupational exposure for vinyl chloride of 1 ppm on an 8-hour time weighted average (TWA) is set by the OSHA workplace standards at 29 C.F.R. 1910.1017. This was adopted in 1974, after extensive public hearings, and became effective in April 1975. OSHA first set an emergency temporary standard of 50 ppm and proposed a permanent limit of nondetectable exposure by a test sensitive to 1 ppm. OSHA then promulgated a final standard of an 8-hour TWA of 1 ppm, and a 15-minute ceiling of 5 ppm.

In brief, the regulation sets:

1. A level of 0.5 ppm VC below which no action is required. This generally exempts most PVC fabrication plants and laboratories and many monomer plants.
2. A regulated area where exposures are above 0.5 ppm which restricts entry to authorized persons.
3. Medical examination requirements and exposure record retention for specified employees.
4. A list of acceptable respirators.
5. Monitoring and alarm systems for the workplace, and routine measurement of worker exposure.
6. Labeling and signs for regulated areas and containers of vinyl chloride and PVC.
7. Work procedures for hazardous operations.
8. Training programs for employees.

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OSHA also has a Hazard Communication Standard (HCS), 29 C.F.R. 1910.1200, which provides labeling requirements complementary to the OSHA Vinyl Chloride Standard. Articles made from PVC are exempt from labeling requirements under the standard.

B. Environmental Protection Agency

EPA regulates the release of vinyl chloride under several statutes, including the Clean Air Act, Clean Water Act, Safe Drinking Water Act, Resource Conservation and Recovery Act (RCRA), Comprehensive Environmental Response, Compensation and Liability Act (CERCLA or Superfund), and the Toxic Substances Control Act (TSCA).

1. Air Standard (40 CFR 61.60)

The EPA standard established in 1976 specified the following conditions:

- a. Fugitive emissions controls by leak patrols and design standards for pump and compressor seals, agitators, and loading devices.
- b. Work practices for vessel openings and sampling.
- c. Stripping requirements for residual monomer in resins and wastewater.
- d. Abatement of specified point source emissions to 10 ppm.
- e. Prohibition of relief valve discharges, except for emergencies.
- f. Extensive monitoring, reporting and recordkeeping requirements.
- g. Specific analytical procedures.

EPA estimated that this standard would result in a 95% reduction of VC emissions to the atmosphere from VC/PVC manufacturing plants and reduce the 5 mile annual average VC ambient air concentration from 17 parts per billion (ppb) to less than 1 ppb.

2. Water Regulations

Vinyl chloride is listed as a priority pollutant under Section 307(a) of the Clean Water Act, and a Water Quality Criteria Document has been prepared. This subjects VC and PVC manufacturing plants to special considerations when waste water discharge permits are issued pursuant to EPA regulations.

As part of its regulation of carcinogens in drinking water, EPA has published a final Recommended Maximum Contaminant Level (RMCL - a non-binding guideline) for VC in drinking water of zero (see 50FR 46880, Nov. 13, 1985 for this amendment to 40 CFR 141.50.)

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However, EPA indicated that a "justifiable" way to determine the absence of vinyl chloride would be by setting a defined, state-of-the-art detection limit sensitive to approximately 1 ppb. (49FR 24,330, 24,347 - June 12, 1984). EPA has also proposed a maximum contaminant level of 1 ppb for vinyl chloride in drinking water. (See 50 FR 46,902 - Nov. 13, 1985).

3. Waste and Spill Regulation

The EPA issued a rule under which certain VC manufacturing distillation residues are listed as hazardous wastes when disposed (49 FR 5308). This rule requires that all such wastes are to be disposed of only by RCRA-approved procedures.

When disposed of, commercial grade VC is classified as a hazardous waste under the Resource Conservation and Recovery Act (RCRA), because of its toxic and ignitable characteristics. Any disposal is subject to regulation under RCRA.

EPA has proposed additional RCRA regulations (51 FR 21648, June 13, 1986) which apply to all wastes containing VC. These proposed regulations define wastes as hazardous when the VC level in the extract by a specified test method exceeds 50 ppb. Congress has specified an interim 1 pound reportable quantity for vinyl chloride. Releases to the environment in excess of 1 pound are regulated under CERCLA.

4. New Product Manufacture

The EPA also administers the Toxic Substances Control Act (TSCA) which establishes health and environmental regulations for both new and existing substances. No one may manufacture or use a substance which is not on the Agency's official inventory, unless the Premanufacturing Notice procedures are followed.

C. Food and Drug Administration

PVC is widely used for food contact applications. In early 1986, the Food and Drug Administration (FDA) confirmed the safety of PVC for all food-contact applications and withdrew an outstanding proposal to limit its use in food packaging. (See 51 FR 4173 - February 3, 1986). An accompanying new proposal would set various residual vinyl chloride levels for different food contact materials. Among other things, FDA found that "vastly improved production technology (since 1975) has made it possible for manufacturers to succeed in reducing the level of residual vinyl chloride monomer in vinyl chloride polymer."

The comment period on the February 3, 1986 FDA proposal closed on June 5, 1986 without any adverse comments on the health or safety of PVC. This FDA proceeding lends further support to the inherent safety of human exposure to PVC. FDA regulates the use of PVC in medical devices and drug packaging on a case-by-case basis.

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V. COMMUNITY HEALTH CONCERNS

As was discussed in Section IV, VC is a very strictly regulated substance. The EPA estimated that the 1976 standard would reduce the annual average exposure of the persons living within 5 miles of VC/PVC facilities by 95% (from 17 ppb to about 0.85 ppb.) An EPA report (1985) states that current industry performance has resulted in actual emissions that are significantly less than that predicted amount.

Many authors have attempted to develop quantitative risk assessments for low level exposures to VC. (See Barr, 1982 and Purchase, 1985 for reviews). Some have incorporated human data (Gehring, et al, 1979, Anderson, et al, 1980, Purchase, et al, 1985) and only these predict results which are compatible with the absence of any observed effects on humans from ambient exposures. The remaining estimates all used variations of the EPA upper limit model (Anderson, 1983) and overstate the probability of risk by several orders of magnitude.

There is no confirmed case on record in which a member of the general population has been harmed by exposure to vinyl chloride. That fact sets the upper limit of lifetime risk at less than 0.3 predicted cases of cancer per 1 million for exposure to 1 ppm of VC. Because the data show that industry emissions have been reduced by 99.99% (rather than the 95% estimated by EPA), the actual risk is less than 0.1 case of cancer in the next 70 years among the 5 million presumed to be exposed to VC from living within 5 miles of a VC/PVC facility.

Dr. Richard Wilson of Harvard (1979) has attempted to help people understand this method of stating the risks of every day occurrences. Each of the following activities for example, is predicted to result in one death per million people: smoking 1.4 cigarettes (due to cancer, heart disease); drinking $\frac{1}{2}$ liter of wine (due to cirrhosis of the liver); traveling 6 minutes by canoe, 10 miles by bicycle, 300 miles by car, or 1,000 miles by jet (due to an accident); and having one chest X-ray taken in a good hospital (due to cancer caused by radiation).

We conclude, therefore, that there is no basis for concern by persons living near VC-using or producing facilities for any health effects from exposure to ambient concentrations of VC now being experienced.