

ENVIRONMENTAL QUALITY MANUAL

CONOCO CHEMICALS COMPANY

ABERDEEN CHEMICAL PLANT

August 1983

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POLICY

ENVIRONMENTAL POLICY

As an energy company, Conoco's activities have an impact on the environment in which the Company operates--on the land, air, water and the life forms found there. It is the policy of the company to conduct all operations in a lawful and environmentally responsible manner. Specifically, it is Conoco policy to:

- 1) Comply fully with all environmental laws and regulations related to environmental quality in all of its activities.
- 2) Employ Conoco's scientific and technical skills to reduce pollution and promote environmental conservation in the Company's operations.
- 3) Use accepted reclamation practices to restore production and mining sites.
- 4) Maintain an environmental quality assurance program to ensure that operations are in compliance with Conoco policies, permit limitations, and other regulatory requirements.
- 5) Routinely review Conoco's products, processes, and control facilities as new information is available for the purpose of making environmental quality improvements beyond those legally required where such improvements bear a reasonable relationship to their cost.
- 6) Train Conoco employees involved in environmental quality activities, and keep them abreast of new developments relating to that responsibility.
- 7) Maintain contingency plans to clean up spills of oil or other materials caused by the Company. Such plans include providing competent personnel and effective equipment.
- 8) Determine that each new and existing product can be made, used, handled, and disposed of safely and consistent with appropriate environmental quality, public health, and safety criteria.
- 9) Cooperate with government to help promulgate sound environmental laws and regulations and inform government of the impact of such laws and regulations on the Company.
- 10) Communicate Conoco's environmental commitment to employees, stockholders, and the general public.
- 11) Monitor public attitudes on environmental matters so that the Company's environmental policies and public statements can be responsive to those attitudes.

EMERGENCY
CALL OUT

EMERGENCY CALLOUT RELATING TO POLLUTION INCIDENTS

An emergency is considered to be "a condition or situation requiring assistance over and above that which can be supplied in the normal manner". With respect to pollution incidents, an emergency situation will exist when there is an immediate threat to people, property, equipment or the environment. In general, it is always the responsibility of the Supervisor to recognize when a pollution incident has occurred, and to notify the correct management personnel of the incident. It is not the responsibility of the Supervisor or any other Operations personnel to contact Government agencies or the Press. All contact with the Government or the Press must be made ONLY by Plant Management. If there are ever any questions concerning response to a pollution incident, Process Engineering should be contacted for assistance.

The following pollution incidents will require emergency callout as outlined below. The first person on the call list should contact the second person, etc.

- | | |
|--|--|
| 1) A minor VCM release to the atmosphere. | a) Shift Supervisor
b) Operations Supervisor-Primary
Operations Superintendent-Alternate
c) Plant Superintendent
d) Environmental Engineer-Primary
Chief Process Engineer-Alternate
Senior Process Engineer-Alternate |
| 2) A massive VCM release to the atmosphere. | a) Follow Emergency Callout Procedure in the Plant Fire Prevention and Emergency Plan. |
| 3) A massive resin discharge to the atmosphere. | a) Shift Supervisor
b) Operations Supervisor-Primary
Operations Superintendent-Alternate
c) Plant Superintendent
d) Environmental Engineer-Primary
Chief Process Engineer-Alternate
Senior Process Engineer-Alternate |
| 4) An oil spill which cannot be contained within the Plant boundaries. | a) Shift Supervisor
b) Operations Supervisor-Primary
Operations Superintendent-Alternate
c) Plant Superintendent
d) Environmental Engineer-Primary
Chief Process Engineer-Alternate
Senior Process Engineer-Alternate |
| 5) A chemical spill (i.e. caustic soda, acid) to the storm sewer. | a) Shift Supervisor
b) Utilities Supervisor-Primary
Mechanical Superintendent-Alternate
c) Plant Superintendent-Alternate
d) Environmental Engineer-Primary
Chief Process Engineer-Alternate
Senior Process Engineer-Alternate |

EMERGENCY CALLOUT RELATING TO POLLUTION INCIDENTS (Continued)

- 6) A massive chemical spill to the process sewer.
- a) Shift Supervisor
 - b) Utilities Supervisor-Primary
Mechanical Superintendent-Alternate
 - c) Plant Superintendent
 - d) Environmental Engineer-Primary
Chief Process Engineer-Alternate
Senior Process Engineer-Alternate
- 7) A wastewater bypass or other wastewater permit violation.
- a) Supervisor
 - b) Operations or Mechanical Superintendent
 - c) Plant Superintendent
 - d) Environmental Engineer-Primary
Chief Process Engineer-Alternate
Senior Process Engineer-Alternate
- 8) A PCB oil spill.
- a) Supervisor
 - b) Mechanical Superintendent-Primary
 - c) Plant Superintendent
 - d) Environmental Engineer-Primary
Chief Process Engineer-Alternate
Senior Process Engineer-Alternate
- 9) A hazardous waste spill that cannot be contained by readily available means.
- a) Shift Supervisor
 - b) Operations Supervisor-Primary
Operations Superintendent-Alternate
 - c) Plant Superintendent
 - d) Environmental Engineer-Primary
Chief Process Engineer-Alternate
Senior Process Engineer-Alternate
- 10) A non-permitted and non-routine discharge of any hazardous substance to the environment (See SUPERFUND Section).
- a) Shift Supervisor
 - b) Operations Supervisor-Primary
Operations Superintendent-Alternate
 - c) Plant Superintendent
 - d) Environmental Engineer-Primary
Chief Process Engineer-Alternate
Senior Process Engineer-Alternate

PHONE NUMBERS

The following phone numbers may be needed during a pollution incident:

Plant Superintendent	Charlie Miller	369-9100
Vinyl Superintendent	Pete Markey	369-6019
Compound Superintendent	Paul Kober	369-7096
Chief Process Engineer	Dick Frohreich	1-328-3628
Mechanical Superintendent	Rick Snowden	1-327-7382
Environmental Engineer	Dave Mahler	1-327-4540
Senior Process Engineer	Veldon Messick	1-327-0741
Safety Director	Al Sather	369-9271
Plant Manager	John Friend	369-7377
Chief Plant Chemist	Larry Stoltz	
Warehouse Supervisor	Rex Shackelford	1-205-698-8459
Vinyl Supervisor	Doug Miller	369-9234
Compound Supervisor	Ronnie Gilreath	369-7745
Maintenance Supervisor	Jerry Horstman	369-6005
I & E Supervisor	Charlie Davis	369-8780
Utilities Supervisor	Dennis Knight	1-205-698-9545
Contract Supervisor	Gilbert Morgan	369-6522
Mississippi Department of	Business Hours	1-961-5171
Natural Resources	Non-Business Hours	1-961-5340
Jerry Banks (Primary Air Contact)		
Robert May (Primary Water Contact)		
Cindy Rich (Primary Hazardous Waste Contact)		
Dwight Wylie (Alternate Air Contact)		
Bill Barnett (Alternate Water Contact)		
David Lee (Alternate Hazardous Waste Contact)		
National Response Center		1-800-424-8802
EPA - Atlanta		1-404-881-4062

PLANT ENTRY

PLANT ENTRY BY POLLUTION CONTROL AGENCIES

Government pollution control personnel or their agents are not to be allowed entry into the Plant unless they are accompanied by authorized Plant personnel. Before entry, the person(s) requesting entry must complete and sign the Request For Entry form, and the form must be given to Process Engineering. At least one of the following Plant personnel or an appointee must be contacted and present before entry into the Plant is made:

- 1) Plant Superintendent
- 2) Environmental Engineer
- 3) Chief Process Engineer
- 4) Plant Manager
- 5) Operations Superintendent

While in the Plant it is the responsibility of the person accompanying the visitor(s) to make sure that the visitor(s) abides by all Plant Safety rules. It is Conoco's policy to cooperate with regulatory agencies whenever possible. Toward this goal all employees who come into contact with these people will be cooperative and courteous. All questions will be answered honestly.

Under routine circumstances the following responsibilities are assigned to handle these visits, in accordance with the Plant Security Plan. The Plant Manager will be contacted by the individual assigned and advised of all but the most routine visits. A preliminary meeting with the visitor, the employee responsible for handling the visit and the Manager may be required at that time.

<u>AGENCY</u>	<u>RESPONSIBILITY</u>	<u>ALTERNATE RESPONSIBILITY</u>
1) <u>EPA - NESHAPS,</u> <u>RCRA, Water</u>	Environmental Engineer	Chief Process Engineer
2) <u>Miss. Department Of</u> <u>Natural Resources</u>	Environmental Engineer	Chief Process Engineer
3) <u>Coast Guard</u>	Chief Process Engineer	Plant Manager

Only the Manager is authorized to:

- 1) Commit the company to special demands such as compliance programs.
- 2) Release information which might reveal a trade secret.
- 3) Permit photographs of Plant facilities.

REQUEST FOR ENTRY

1. My name is _____. I represent _____,
(agency or bureau)

which is established by the laws of the (United States) (State of _____)
_____. My business address is _____

2. In my official capacity, I am requesting admission to _____,
(plant or facility)

for the purpose of:

() 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. Making a special inspection of the facilities for the follow-
ing purposes:

under _____
(statute or popular name of act)

() d. 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 test conducted. Samples will be analyzed for the following parameters: _____

using the following methods _____

by _____

(Analytical laboratory performing analyses)

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)

(Agency or Bureau)

PUBLIC
COMPLAINTS

PUBLIC POLLUTION COMPLAINTS

All calls received at the Plant are handled by the guard at the front gate. When handling a public complaint the following guidelines should be followed:

- 1) Be sure to request and accurately record the caller's name, address and telephone number.
- 2) Be polite and courteous, but don't make any statements admitting responsibility.
- 3) If the Plant is obviously in an upset condition, assure the caller that the Plant personnel are working as quickly as possible to return the units to routine operation.
- 4) Tell caller that someone from the Plant will contact him to discuss the complaint.

After receiving the complaint fill out the Citizen Complaint Report. Immediately notify the Safety Supervisor, and distribute the Citizen Complaint Report to the Plant Manager and Department Heads. The original report should be given to the Safety Supervisor. If the complaint is the result of an upset condition in the Plant, notify the Shift Supervisor so that steps can be taken to correct the condition if possible.

The Safety Supervisor will then call the Plant Manager or the Plant Superintendent to discuss the problem, and the complainant will be called back by a designated person.

NAME:

DATE:

ADDRESS:

TIME:

TEL. NO.: _____

COMPLAINT:

REPORT TAKEN BY:

TEMPERATURE:

WIND SPEED:

WIND DIRECTION: FROM TO

1. Tell caller that someone from the plant will contact him to discuss the complaint.
2. Immediately notify Shift Supervisor and Safety Supervisor.
3. Send original to Safety Supervisor.
4. Send copies of complaint to: Plant Manager, Department Heads.

RESIN
DISCHARGE

PVC RESIN DISCHARGE GUIDELINES

The Plant has an air permit from the State Of Mississippi which outlines the quantity of certain air contaminants that the Plant can discharge to the air. This permit is primarily concerned with particulate emissions, such as PVC dust. Particulate emission sources around the Plant are the PVC dryer stacks, the PVC and compound storage silo baghouses, miscellaneous ventilation systems in the compound area and open resin piles or spills. In general, process equipment in the Plant is capable of meeting all of the applicable emission limitations in the air permit, however process equipment malfunctions may result in air permit excursions that must be reported to the State. The following guidelines must be noted with regards to PVC dust emissions to the air.

- 1) If a dryer or silo dust collector bag ruptures, notify the Shift Supervisor and take immediate action to stop the discharge.
- 2) If a resin discharge appears to have been massive, i.e. a cloud of resin blows out of the Plant, notify the Operations Supervisor or Superintendent. Process Engineering must then be contacted so that they can notify the State of the discharge as soon as possible.
- 3) If resin is spilled on the ground or on building structures, take immediate steps to keep the resin from blowing out of the Plant. During or after cleanup wash the area down with water.
- 4) If slurry is spilled on the ground or on building structures, wash the slurry down before it can dry out and become an open dust source.

VCM
REGULATIONS

VCM REGULATIONS

The Federal Government has developed regulations which limit the quantity of VCM that can be emitted to the atmosphere. Compliance with these limitations is accomplished by using the Standard Operating Procedures.

Emissions From The Reactors

VCM emissions from each reactor are limited to 420 pounds per million pounds of PVC produced. In order to comply with this requirement, every PVC batch is steam stripped, sampled during dump and subsequently analyzed for VCM residual. The Plant is required to report the daily VCM residual averages to the State every six months.

Emissions From Relief Valves

Discharges of any amount of VCM through relief valves on equipment in VCM service is prohibited with the exception of emergency relief valve discharges. The person who detects the release must notify the Shift Supervisor and take any steps that are necessary to stop the discharge. The Shift Supervisor must then notify the Operations Supervisor and the Operations Superintendent.

Within ten days of any relief valve discharge to the air, the Plant must submit a written report to the State concerning the discharge. The report must describe the source, nature and cause of the discharge, the date and time of the discharge, the approximate total VCM loss during the discharge, the method used for determining the VCM loss and the action that was taken to prevent future discharges.

Emissions From Equipment Venting

The venting of equipment in VCM service to the atmosphere is prohibited, unless the equipment has been recovered and purged out properly. If pressure must be reduced in a piece of equipment in VCM service, the equipment should be vented to another piece of equipment in VCM service, one of the recovery systems or one of the incinerators.

The VCM incinerators are used to burn gases which must be vented from VCM containing equipment in the Plant. The incinerator reduces the VCM concentration in the gases to less than 10 ppm, which is the maximum VCM concentration that should be discharged from the incinerators. One of the fixed point monitor points is tied into the incinerator exhaust stacks to monitor the VCM emissions. In addition, weekly grab samples are taken from the incinerator exhaust by Process Engineering and analyzed for VCM. If there is 10 ppm of VCM or more in the incinerator exhaust, the incinerator should be taken out of service and the Operations Supervisor or Operations Superintendent should be contacted. Periods during which the VCM concentration in the incinerator stack exceeds 10 ppm, averaged for an hour and commencing on the hour, must be reported to the State in the Semi-Annual Report.

Emissions From Process Waste Water

The release of process wastewater which contains more than 10 ppm VCM is prohibited, with the exception of stripped reactor slurry. In general, water which has been in contact with VCM must be either steam stripped in process equipment before the equipment is opened, or transferred to the blowdown tank or water strippers.

Emissions From Equipment Opening

EPA regulations limit the amount of VCM that can be emitted from equipment that is opened to the atmosphere for any reason. The procedure for opening equipment in VCM service depends on the size of the equipment.

Small pieces of equipment and piping which contain less than 25 gallons of VCM at atmospheric temperature and pressure (0.4 pounds of VCM) can be opened when the following requirements are met:

- 1) The equipment does not contain any liquid VCM.
- 2) Any VCM-contaminated wastewater contained in the equipment has been either steam stripped or transferred to the blowdown tank or water strippers.

Larger pieces of equipment and piping which contain more than 25 gallons of VCM at atmospheric temperature and pressure (0.4 pounds of VCM) can be opened when the following requirements are met:

- 1) The equipment does not contain any liquid VCM.
- 2) The equipment has been depressured and then either steam stripped or flushed to a VCM containment system until the VCM content is less than 2% (20,000 ppm), as verified by a portable hydrocarbon analyzer or Test Method 106. Alternatively, other Plant procedures may be used to recover the equipment, where applicable.
- 3) Any VCM-contaminated wastewater contained in the equipment has been either steam stripped or transferred to the blowdown tank or water strippers.

It should be noted that opening of equipment at the VCM concentrations allowed by EPA regulations can result in employee exposure to VCM. When opening equipment, all efforts should be made to reduce the VCM content in the equipment to as low as possible.

Emissions From Railcar Unloading

The EPA allows the Plant to vent a small amount of VCM to the atmosphere whenever a VCM unloading hose is disconnected from a railcar. In order to be in compliance with this regulation, the pressure in each unloading hose must be reduced to at least 10 in. Hg vacuum using the Emission or Large Recovery System before uncoupling with the railcar.

Emissions From Rotating Equipment

EPA regulations require double mechanical seals on rotating shafts on equipment in VCM service. The pressure between the two seals must be kept higher than the VCM pressure in the equipment with a high pressure fluid such as water or DOP. If a seal develops a leak under these conditions, the seal fluid leaks into the equipment instead of the VCM leaking out of the equipment. Equipment must not be operated if the seal fluid is not at a higher pressure than the VCM pressure in the equipment.

Alternatively, the pressure between the two seals can be lower than the VCM pressure in the equipment, if the seal fluid or the space between the two seals is vented to a recovery system or other closed system.

VCM Leaks

EPA regulations require the Plant to have a program to detect and eliminate VCM leaks. Major leaks are found by the fixed point monitoring system. If any fixed point monitoring sample point indicates three consecutive readings above 5 ppm, a panel leak alarm sounds and the operating personnel must locate and repair the leak. A leak reporting form must be completed for every leak detected by the fixed point monitor. If operations cannot repair the leak, a work order must be written and the leak must be repaired by Maintenance.

Smaller leaks are detected during an area survey with a portable analyzer. The Plant program requires that certain valves and flanges be checked weekly during this survey. A leak reporting form must be completed for every leak detected with a portable analyzer.

Massive VCM Release

Should a massive release of VCM occur, efforts must be made to prevent further emissions and evacuate personnel. An employee who observes a massive release of VCM must take measures to stop the flow if possible and contact the Shift Supervisor. The Shift Supervisor will evaluate the situation and contact the Operations Supervisor or Superintendent. Procedures for handling massive releases of VCM are outlined in the Emergency Plan Section of the Plant Health And Safety Manual.

Immediately after a massive release of VCM, the Plant Manager or his designee must report the incident to OSHA and the State. In addition, the release must be reported to the National Response Center as required by the SUPERFUND regulations.

WASTEWATER

PLANT WASTEWATER DISCHARGE REQUIREMENTS

The Plant has a wastewater permit from the State Of Mississippi which outlines the quantities of water contaminants that the Plant can discharge to James Creek, and the frequency by which the Plant must monitor the discharge for these contaminants. These quantities and other discharge requirements are summarized below:

I. OUTFALL 001 (Bioponds)

<u>Parameter</u>	<u>Limitation</u>	<u>Monitoring Frequency</u>
BOD, Monthly Average		
- December 1 through April 3	32 ppm (431 lbs/day)	Once/Week
- May 1 through November 30	26 ppm (357 lbs/day)	Once/Week
BOD, Daily Maximum		
- December 1 through April 30	43 ppm (800 lbs/day)	Once/Week
- May 1 through November 30	40 ppm (774 lbs/day)	Once/Week
COD, Monthly Average		
- December 1 through April 30	1,461 lbs/day	Once/Week
- May 1 through November 30	1,212 lbs/day	Once/Week
COD, Daily Maximum		
- December 1 through April 30	2,712 lbs/day	Once/Week
- May 1 through November 30	2,523 lbs/day	Once/Week
Suspended Solids, Monthly Average	674 lbs/day	Once/Week
Suspended Solids, Daily Maximum	1,396 lbs/day	Once/Week
Ammonia, Monthly Average	13 lbs/day	Once/Week
Ammonia, Daily Maximum	28 lbs/day	Once/Week
Flow	--	Continuously
Temperature	$\leq 95^{\circ}$ F	Once/Week
ph	6.0 - 8.5	Once/Week
Dissolved Oxygen	≥ 7.0 ppm	Once/Week

II. OUTFALLS 002, 003 (Storm Sewers)

Suspended Solids, Monthly Average	100 ppm	Twice/Month
Suspended Solids, Daily Maximum	200 ppm	Twice/Month
Flow	--	Twice/Month
Temperature	$\leq 95^{\circ}$ F	Twice/Month
ph	6.0-8.5	Once/Month

PLANT WASTEWATER DISCHARGE REQUIREMENTS (Continued)III. OUTFALL 004 (Breathing Air Compressor)

<u>Parameter</u>	<u>Limitation</u>	<u>Monitoring Frequency</u>
Flow	--	Twice/Month
Temperature	$\leq 95^{\circ} \text{ F}$	Twice/Month
ph	6.0-8.5	Once/Month

IV. RAW WASTEWATER BYPASS

The bypassing of raw, untreated wastewater around the bioponds is prohibited, except where unavoidable to prevent loss of life or severe damage to Plant facilities. The diversion of raw wastewater, in any quantity or quality, around the bioponds and out of the Plant is considered to be a bypass. This includes wastewater spillage as a result of heavy rains, equipment malfunctions, sewer failures, pumping, dredging, etc.

V. NON-COMPLIANCE NOTIFICATION

If any Plant employee becomes aware of an existing or imminent wastewater permit excursion condition, he should notify his Supervisor immediately. If there is any immediate action that can be taken to correct the condition, the employee or his Supervisor should take the appropriate action steps as soon as possible. The Supervisor should then contact the Operations Superintendent or the Plant Superintendent, who will contact Process Engineering for assistance. The Plant must notify the State in writing of any permit excursion within five days of becoming aware of the excursion. In the case of a wastewater bypass, the State must be notified in writing within three days of the bypass.

OIL SPILLS

SPILL PREVENTION CONTROLAND COUNTERMEASURE PLAN

FEBRUARY 1, 1983

WORK BY: Dave Mahler
Dave Mahler
Environmental Engineer

APPROVED BY: R. A. Frohreich
R. A. Frohreich
Chief Process Engineer

CERTIFIED BY: James L. White
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P. E. MS No. 5609
7/20/83



SPILL PREVENTION CONTROL AND COUNTERMEASURE PLANCONTENTS

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SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN

I. INTRODUCTION

Federal regulations require that facilities which could reasonably be expected to discharge oil prepare an 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 oils during routine 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-Alcohol 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. Diesel Oil Storage Area

The two small diesel oil storage tanks on the north side of the Tank Farm are enclosed by concrete curbing. There is a valve between the plasticizer-alcohol Tank Farm and the diesel oil storage area which can be opened in order to drain the diesel oil storage pad to the Tank Farm.

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLANC. 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 onto 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 corner 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 PLANH. 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 is a small drum storage pad at each of the reactor units which is 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. Glycerine Storage Area

Glycerine drums are stored on a concrete pad at the north side of the V-11 dryer building. The pad is enclosed by a trench which drains to the process sewer. In the event of a spill within the area, there is a drain valve which can be closed if necessary.

L. Firewater System Diesel Oil Storage Tanks

There are two small diesel oil storage tanks at the firewater pond deluge building and at the 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.

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 PLANN. Storm Water Runoff

If there is an oil spill outside of any 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.

III. INSPECTIONSA. Dikes And Trenches

All dikes and trenches around potential oil spill areas are to be inspected semi-annually by Process Engineering. 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 Process Engineering. If oil is observed on the basins during these inspections, or during an inspection by any other employee, the Environmental Engineer 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, Process Engineering 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 spilled 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, Safety and Process Engineering must be contacted for assistance.

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLANV. 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.

Chief Process Engineer	Dick Frohreich	1-327-6070
Environmental Engineer	Dave Mahler	1-327-4540
Senior Process Engineer	Veldon Messick	1-327-0741
Plant Superintendent	Charlie Miller	369-9100
Plant Manager	John Friend	369-7377
Vinyl Operations Superinten-	Pete Markey	369-6019
dent		
Compound Operations Superin-	Paul Kober	369-7096
tendent		
Mechanical Superintendent	Rick Snowden	1-327-7382

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

Robert May	Wastewater Specialist
Bob Rogers	Emergency Coordinator
Bill Barnett	Wastewater Coordinator

National Response Center

All Hours	1-800-424-8802
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VI. TRAINING

Employees engaged in the operation and maintenance of equipment which could reasonably be expected to spill oil must be trained in the SPCC Plan. This training is to be conducted during the annual pollution training. Records of the employees who attend these training sessions are to be kept for at least three years.

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLANAPPENDIX AAVAILABLE SPILL CLEAN-UP EQUIPMENT

- (1) VACUUM TRUCKS - Vacuum trucks are available from the following truck service companies:
- A. Nason 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 Incorporated (I.M.C.C.I)
LOCATION: Besemer, AL
PHONE: 205-428-0621
ARRIVAL TIME: 6 Hours
 - D. Hydro-Tech Inc. - LOCATION: Mobile, AL
PHONE: 205-456-8477
ARRIVAL TIME: 6 Hours
- (2) SKIMMING PUMP - Skimming pumps available from the Nason 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 in drums at the following locations in the plant.

<u>AREA</u>	<u>LOCATION</u>
<u>Vinyl Area</u>	
New Reactor Module	743 Reactor
Old Reactor Module	D-500 Reactor
<u>Compound</u>	
	(1) Line III and Line V Area
	(2) Second Floor Outside Compound
	Control Room
<u>Plasticizer</u>	Plasticizer Lab
<u>V-11 Area</u>	Air Compressors
<u>Shop</u>	East Shop Area
<u>Warehouse</u>	PVC Baggers

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN
APPENDIX B
SPCC PLAN DIKE AND TRENCH INSPECTION REPORT

Date: _____

Inspector: _____

Item

Status

Plasticizer Tank Farm Dike: _____

VCM Tank Farm Dike: _____

Lagoons Acid Dike: _____

Alcohol Unloading Area: _____

Curbed Area East Of P-1: _____

Diesel Oil Storage Areas: _____

Waste Oil And Slop Oil Dikes: _____

Empty Drum Storage Pad: _____

Lubricating Oil Storage Area: _____

Reactor Drum Storage Pads: _____

Glycerine Drum Storage Area: _____

Large Drum Storage Area By East Warehouse: _____

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.

HAZARDOUS
WASTE DISPOSAL

RCRA HAZARDOUS WASTE
TRAINING MANUAL
ABERDEEN CHEMICAL PLANT

March 4, 1983

RCRA HAZARDOUS WASTE
TRAINING MANUAL
ABERDEEN CHEMICAL PLANT

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- V. HAZARDOUS WASTE MANAGEMENT - HAZARDOUS WASTE DRUM STORAGE AREA
- VI. HAZARDOUS WASTE MANIFESTS

RCRA HAZARDOUS WASTETRAINING MANUALABERDEEN CHEMICAL PLANTI. INTRODUCTION

The management of hazardous waste is regulated by the Resource Conservation and Recovery Act of 1976 (RCRA). This law requires all facilities which treat, store or dispose of hazardous waste to conduct classroom training for facility personnel who handle hazardous waste. This training is necessary to ensure that facility personnel are familiar with the hazardous waste management and emergency procedures relevant to the positions in which they are employed.

This manual provides an outline of the training which facility personnel who handle hazardous waste receive. All personnel who attend the training sessions receive general training in the areas of hazardous waste recognition, packaging, labeling, storage and emergency procedures. More specific training is given to the individual departments, with emphasis on the hazardous waste management procedures relevant to their area(s).

II. HAZARDOUS WASTES IN THE ABERDEEN CHEMICAL PLANT

It is important for plant personnel to recognize which wastes in the plant are hazardous, in order to avoid the possibility of improper waste disposal. The following materials are hazardous wastes when discarded.

A. Plasticizer Filter Cake

Plasticizer filter cake contains a significant amount of DOP, which has been identified by EPA as a toxic hazardous waste when disposed of.

B. API Solids

The sludge that accumulates on the bottom of the API Separator contains a significant amount of DOP, and is therefore a hazardous waste.

C. All Other DOP-Contaminated Wastes

Any material which contains a significant amount of DOP and is discarded must be considered to be hazardous waste. This includes, but is not limited to DOP spill cleanup residues, DOP-saturated sludge generated during process equipment cleanout, or DOP-saturated absorbent booms.

D. Waste Phthalic Anhydride

Phthalic anhydride has been identified by EPA as a toxic hazardous waste when disposed of, therefore any spilled phthalic anhydride which is cleaned up and discarded must be considered to be a hazardous waste.

RCRA HAZARDOUS WASTETRAINING MANUALABERDEEN CHEMICAL PLANTE. Barium, Cadmium, or Lead Stabilizer Wastes

Any barium, cadmium, or lead stabilizers which cannot be used and are discarded must be disposed of as hazardous waste. Likewise, any waste materials contaminated with significant amounts of these stabilizers must be disposed of as hazardous waste as well.

F. Unknown Materials

Waste materials which have an unknown composition should be analyzed before disposal. If there are any questions about a waste material, contact Process Engineering for assistance.

III. HAZARDOUS WASTE PACKAGING AND LABELING REQUIREMENTS

Hazardous wastes which are disposed of in drums must be properly packaged and labeled before they can be stored at the Plant's hazardous waste drum storage area and subsequently shipped to an off-site hazardous waste disposal facility.

A. Packaging

All hazardous wastes must be packaged in 55 gallon steel drums before disposal, unless the waste is shipped in bulk form. All drums which are used for hazardous waste disposal must be in good condition and must not leak. If a drum leaks, the material must be transferred to a good drum. Appropriate safety gear should be worn when filling drums with hazardous waste (i.e. gloves, disposable coveralls or a dust respirator). Drums with open tops must be secured with a metal rim and bolt; all drums must be entirely closed and clean of waste material on the outside of the drums. The drums must then be palletized using pallets which are in good condition, and then banded around the middle in groups of four with metal or plastic banding.

B. Labeling

The proper labeling of hazardous waste drums is of the utmost importance. Each drum of waste must have clearly visible the common plant name, the EPA identification code numbers, and the DOT regulation names and identification numbers. Each drum must have a hazardous waste label and any other label required by DOT. The attached table gives code number and names for this label as well as the DOT and plant labeling requirements. The accumulation date must be placed on the hazardous waste label. This is the date material was first placed in the drums. The EPA I.D. number for the plant is MSD007031230. The manifest document number will be assigned when the waste is removed from the drum storage area for disposal at a hazardous waste disposal site. The current disposer, Chemical Waste Management, requires that their approval code for each specific waste be placed on top of each drum before they will accept the material. These codes are given on the attached table.

HAZARDOUS WASTE DISPOSAL DRUM LABELING REQUIREMENTS

COMMON PLANT NAME NOTE (1)	PROPER DOT SHIPPING NAME	DOT LABEL	DOT HAZARD CLASS	DOT IDENTIFICATION NUMBER	EPA WASTE NUMBER	CHEMICAL WASTE MANAGEMENT APPROVAL CODE
Phthalic Anhydride	Hazardous Waste, Solid, N.O.S.	None	ORM-E	NA9189	U190	0103030724
API Solids	Hazardous Waste, Solid, N.O.S.	None	ORM-E	NA9189	U028	0104030724
Plasticizer Filter Cake	Hazardous Waste, Solid, N.O.S.	None	ORM-E	NA9189	U028	Note (2)
Barium, Cadmium Stabilizer	Hazardous Waste, Liquid, N.O.S.	None	ORM-E	NA9189	D005 D006	Note (2)

NOTES:

- (1) Must be stenciled on drum.
- (2) CWM Approval code has not yet been received.

RCRA HAZARDOUS WASTETRAINING MANUALABERDEEN CHEMICAL PLANTIV. HAZARDOUS WASTE MANAGEMENT - API SEPARATOR

The API Separator must be managed as a hazardous waste storage tank since hazardous waste accumulates on the bottom of the separator.

The job title for the facility personnel who manage the API Separator is utility technician. It is the responsibility of the utility technician to monitor the operation of the API Separator. The following procedures further detail the responsibilities of the utility technician relevant to the RCRA regulations.

A. API Separator Operation

Organic material from the plasticizer tank farm and the plasticizer building flows into the API Separator where organic and aqueous materials are separated. The API Separator must be skimmed periodically, to recovery any plasticizers which float to the surface of the separator. After being skimmed these plasticizers are transferred back to the plasticizer building to make a plasticizer product. The water phase flows to the bioponds for physical and biological treatment prior to discharge to James Creek.

According to RCRA regulations, the API Separator must be operated with a minimum freeboard of two feet. The normal level of the API Separator is much below this, however if the outlet pipe plugs or if the plant sewers back up, it is possible for the API Separator water level to rise. If the water level rises until there is less than two feet of freeboard, the utility supervisor and the plasticizer operator should be notified immediately. During periods of high level the water level should be monitored closely, and all feed to the API separator cut off if necessary. If an overflow situation is imminent, the Plant Superintendent must be notified so that plant operations can be cut back until the problem is solved.

The water level in the API Separator must be inspected daily and recorded on the utility daily logsheet. In addition, the Process Engineering group must inspect the API Separator weekly for obvious signs of leakage. The results are to be recorded on the "Hazardous Waste Weekly Survey".

The solids that collect in the API Separator consist of sand, dirt, carbon black, PVC resin, alcohols and plasticizers. The solids must be periodically removed to allow the API Separator to operate properly. The solids are removed with a vacuum truck, and sent to a

RCRA HAZARDOUS WASTE
TRAINING MANUAL
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IV. HAZARDOUS WASTE MANAGEMENT - API SEPARATOR (Continued)

B. API Solids

secure hazardous waste landfill. The following procedure should be used to clean out the API Separator.

- 1) Measure the volume of the sludge in the API Separator, and determine the number of vacuum trucks that will be needed. If the vacuum trucks come from Chemical Waste Management, it may be necessary to order the trucks two weeks in advance.
- 2) The plasticizer operation must be shutdown before the API Separator is cleaned out. Skim the API Separator until it is free of oil before taking the API Separator out of service.
- 3) Block off the inlet to the API Separator, and pump the standing water out of the API Separator until only oil and sludge remain. The water must be pumped to the process sewer.
- 4) Vacuum the sludge out of the API Separator using air lances or water hoses to fluidize the sludge as necessary. If the sludge is too thick at the north end, dilute the sludge with oily water from the slop oil tank until the sludge flows freely.
- 5) When the sludge has been vacuumed out, fill the API Separator with water and allow any remaining sludge to settle before the API Separator is put back in service.

V. HAZARDOUS WASTE MANAGEMENT - HAZARDOUS WASTE DRUM STORAGE AREA

The hazardous waste drum storage area is used to store hazardous waste drums before they are shipped to the disposal site.

The job title for facility personnel who manage the hazardous waste drum storage area is warehouse worker. It is the responsibility of the warehouse worker to make sure that all drums which are stored in the hazardous waste drum storage area are packaged and labeled properly, and that the hazardous waste drum storage area is maintained in a neat and orderly manner.

A. Moving Hazardous Waste Drums

Before moving hazardous waste drums to the hazardous waste drum storage area, the following items should be checked:

- 1) Make sure pallets are in good condition and that drums are positioned correctly on the pallets.
- 2) The drums should be in good condition, with all openings closed, and the drums must not be leaking.

RCRA HAZARDOUS WASTETRAINING MANUALABERDEEN CHEMICAL PLANTV. HAZARDOUS WASTE MANAGEMENT - HAZARDOUS WASTE DRUM STORAGE AREA (Cont.)A. Moving Hazardous Waste Drums (Continued)

- 3) The drums should be properly labeled.
- 4) Drums must be banded around the middle with plastic or metal banding.
- 5) Waste material is to be cleaned from outside the drums.

If any of these items are not done, the warehouse worker should not move the drums to the hazardous waste drum storage area until the discrepancies are corrected.

If the drums are acceptable for storage the warehouse worker should move the drums to the hazardous waste drum storage area east of the warehouse dock. The drums should be placed along the north wall. Drums should never be left outside the drum storage area except when preparing drums for shipment.

Care should be taken in driving the forktruck so that none of the drums fall off. It is easier to take a little longer to transport drums than to clean up the contents of a drum that would fall and rupture. If a drum does fall and rupture, the warehouse supervisor should be immediately contacted. Sorb-all should be put on oily wastes. The contents of the ruptured drum and any materials used in the clean-up operation should be placed into drums that are in good condition.

Any remaining material in the ruptured drum should be transferred into a good drum and the ruptured drum should be cleaned out. Again, any materials used in the clean-up should also be placed in drums. These good drums should be properly labeled and placed in the hazardous waste drum storage area.

B. Storage of Hazardous Waste Drums

The drum storage area is diked with a fence around it and a roof over the top. Access to the area is controlled by a locked gate. Drums of hazardous waste should be stored along the north wall. Other raw materials are also stored in the drum storage area. These drums should not be stored immediately next to hazardous waste drums. Any evidence of leaking drums should be reported immediately to the stores supervisor so that the contents of the leaking drum can be transferred to another drum.

Since some of the wastes stored in the hazardous waste storage area are flammable, there is a possibility of a fire. If this should occur, guidelines in the Fire Protection and Emergency Plan or RCRA Contingency Plan should be used.

RCRA HAZARDOUS WASTETRAINING MANUALABERDEEN CHEMICAL PLANTV. HAZARDOUS WASTE MANAGEMENT - HAZARDOUS WASTE DRUM STORAGE AREA
(Continued)C. Records and Inspection

The hazardous waste drum storage area is to be inspected weekly by the Process Engineering group. A copy of the "Hazardous Waste Weekly Survey" is attached. Items that are inspected and recorded are:

- 1) Obvious leaks or material around drums.
- 2) Signs of serious corrosion or deterioration of drums.
- 3) All drums should be closed.
- 4) Number of drums of each waste, with EPA identification number.

HAZARDOUS WASTE WEEKLY SURVEY

DATE: _____

NAME OF PERSON CONDUCTING SURVEY: _____

1. Hazardous Wastes in Drum Storage Area

a. Any obvious leaks or material around drums?

_____ Yes _____ No

If yes, describe extent of material around drums and locate where
material is coming from

b. Any signs of corrosion or deterioration to drums?

_____ Yes _____ No

If yes, describe extent of corrosion or deterioration.

c. Are all drums closed?

_____ Yes _____ No

If yes, describe which drums are not closed.

HAZARDOUS WASTE WEEKLY SURVEY

(continued)

DATE: _____

NAME OF PERSON CONDUCTING SURVEY: _____

2. Hazardous Waste Drum Storage Record

[illegible]

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Page 3 of 3

HAZARDOUS WASTE WEEKLY SURVEY

(Continued)

DATE: _____

NAME OF PERSON CONDUCTING SURVEY: _____

3. API Separator

Inspect the API separator for any obvious signs of leakage. Record results below:

RCRA HAZARDOUS WASTETRAINING MANUALABERDEEN CHEMICAL PLANTVI. HAZARDOUS WASTE MANIFESTS

No hazardous waste is to leave the plant without a manifest. The purpose of the manifest is to assure generators and government authorities that hazardous wastes are being properly transported to a disposal site after leaving the plant.

A. Filling Out Manifests

Attached is a copy of the hazardous waste manifest that must accompany each shipment of hazardous waste that leave the plant. Below is a detailed description of how to complete the manifest.

- 1) The generator is Conoco Chemicals Company, P. O. Box 91, Aberdeen, MS 39730. The EPA ID code is MSD007031230.
- 2) Currently, all hazardous wastes are sent to Chemical Waste Management. This company is also the transporter. The name, address, phone, and EPA ID code of Chemical Waste Management is placed on the line labeled transporter No. 1. These items are identical to the items marked disposer. Since Chemical Waste Management is the only transporter used, the space provided for transporter No. 2 is to be left blank.
- 3) The number of drums of each type of waste is placed in the space for container No. The container type will usually be 55 gallon drums.
- 4) The proper DOT shipping name and DOT hazard class as found in the table in Part III of this manual should be placed in the space provided for description/class. If the proper DOT shipping name is "hazardous waste", a description of the hazardous material in the waste should be included. For example, for API solids and plasticizer filter cake, the words "contains Bis (2-ethylhexyl) phthalate" should be included.
- 5) Total quantity is usually the number of drums and unit is "drum".
- 6) EPA hazardous waste ID NO. and CWMA waste codes are found in the table in Part III.
- 7) The space marked "weight" should be left blank except when a bulk shipment is made.

RCRA HAZARDOUS WASTETRAINING MANUALABERDEEN CHEMICAL PLANTVI. HAZARDOUS WASTE MANIFESTSA. Filling Out Manifest (Continued)

- 8) Only the stores supervisor or someone from the Process Engineering group who has witnessed loading the shipment and double checked the wastes that were loaded should sign the manifest as the generator.
- 9) If more than three types of wastes are shipped on one truck, additional manifests must be used.

The person who signs the manifest must personally check the drums to see that all necessary information is on the drums and that the information on the manifest accurately describes the wastes actually loaded on the truck.

B. Manifests Procedures

A copy of each hazardous waste manifest is to be retained in the plant by the Process Engineering group. The other copies are to accompany the waste shipment. The transporter is to retain a copy of the manifest and other copies of the manifest are to accompany the waste. When the waste has been delivered to the disposer and it has been checked, the disposer will sign the manifest accepting the waste and return a copy to the plant as verification that he has accepted the waste. The disposer also sends a copy of the manifest to the proper government authorities.

A copy of the manifest signed by the disposer indicating acceptance of the waste must be received by the plant within 35 days from the date of shipment.

If the manifest is not located within 35 days, a search for the manifest must be initiated. This search will be conducted by the Process Engineering group. If the manifest is not received within 45 days of the date of shipment, an exception report must be submitted to the State of Mississippi and the State of Alabama. The report must include a copy of the manifest and an explanation of efforts and results to locate the hazardous waste. (See section 402.5-32 or Mississippi Hazardous Waste Management Regulations).



ALABAMA HAZARDOUS WASTE MANIFEST

CWMA

112 74314

IDENTIFICATION INFORMATION

NAME	ADDRESS	PHONE	EPA ID CODE
GENERATOR			
TRANSPORTER NO. 1			
TRANSPORTER NO. 2			
DISPOSER Chemical Waste Management, Inc. Emelle Facility	P. O. Box 55 Emelle, Alabama 35459	205-652-9531	A L D O O 6 2 2 4 6 4

WASTE INFORMATION

CONTAINER		DESCRIPTION/CLASS	TOTAL QUAN.	UNIT	EPA Hazardous Waste ID No.	C W M A WASTE CODE	WEIGHT
NO.	TYPE						

EMERGENCY INFORMATION

EMERGENCY NOS.: DISPOSER — (205) 652-9531 ; GENERATOR — () — US COAST GUARD 1-800-424-8802

SPECIAL INSTRUCTIONS:

CERTIFICATION

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation, the U.S. Environmental Protection Agency:

Generator

Title

Date

This is to certify acceptance of the hazardous waste shipment described above:

Transporter #1

Title

Date

Transporter #2

Title

Date

This is to certify acceptance of the hazardous waste shipment described above for treatment, storage or disposal:

Disposer

Title

Date

DISPOSAL INFORMATION

CWMA WASTE CODE	QUANTITY	UNIT	PROCESS CODE	LOCATION			COMMENTS
				TRENCH	LEVEL	QUAD	

STATE OF ALABAMA
DIVISION OF SOLID WASTE AND VECTOR CONTROL

Instructions for the preparation of the Hazardous Waste Manifest:

A. IDENTIFICATION INFORMATION:

1. Generator and Transporter(s) name, address, phone number and EPA ID Code are listed here.

B. WASTE INFORMATION:

1. Container, no., and type are listed here. For container type use drums, tank, bag, carton, bulk, roll-off, etc.
2. Description/Class: List the proper US DOT Shipping Name and US DOT Hazard Class for each waste as identified in 49 CFR 171 through 177. When a waste is described by an N.O.S. description, the technical name(s) of the hazardous constituent(s) must be identified in addition to the proper shipping name. Common or trade names are not acceptable. For example: waste, cement, liquid, n.o.s (hexane, toluene, 2-butanone), flammable liquid.

When shipping PCB's use one of the following descriptions:

CLASS	DESCRIPTION	SPECIFIC EXAMPLES
A	PCB Articles	Transformers (drained & flushed) Capacitors, Elec. Motors, Pumps, Pipe
B	PCB Equipment	Mfd. Items (except class C or F) Containing Class A items - Such as fluorescent ballasts, Microwave Ovens, etc.
C	PCB Article container	Any Drum, can, package, barrel, etc. containing Class A or B items . But which is not in surface contact with PCB's.
D	PCB Mixtures	PCB contaminated soil, debris, sludge, slurries, rags, etc. with (Must be non-liquid to be acceptable) Over 500 ppm PCB
E	PCB Chemical Substances	Askarel, Arochlor, etc. - NOT ACCEPTABLE
F	PCB Container	Any container with Class A, B, D, or E items but where surfaces have been PCB contaminated. Example = Drum of soil

3. Quantity and unit are listed here. For unit use drums, cu. ft., gallons, etc.
4. EPA Hazardous Waste ID Number: The EPA Hazardous Waste numbers are listed in 40 CFR Part 261. The number or combination of numbers describing the waste are to be placed in this section.
5. CWA Waste Code: Enter the Waste Code Number given to you by Chemical Waste Management-Alabama when waste was approved.
6. Weight: Self-explanatory.

C. EMERGENCY INFORMATION: Indicate special handling instructions.

D. CERTIFICATION: Self-explanatory. Only a Generator's authorized representative can sign the manifest.

E. DISPOSAL INFORMATION: For Disposer's use only.

ROUTING OF MANIFEST

After the Generator has completed his portion of the manifest he must have Transporter No. 1 sign and certify receipt of shipment. The Generator will then retain Producer's No. 1 copy and forward all other copies with the shipment.

If there is more than one Transporter, Transporter No. 1 must have Transporter No. 2 sign and certify receipt of shipment. Transporter No. 1 must make a photocopy for his records. Do not retain any original copies.

When shipment has been received at TSD Facility, the TSD Facility's authorized representative will sign for acceptance storage or disposal.

Transporter's copy will be given to the delivering Transporter and Producer's Copy No. 2 will be returned to the Generator. The Regulatory copy will be forwarded to the Regulatory Agency by the Disposer.

HAZARDOUS
WASTE SPILLS

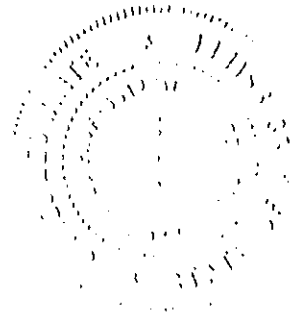
ADDENDUM TO S.P.C.C. PLAN

RCRA HAZARDOUS WASTE CONTINGENCY PLAN

WORK BY: Dave Mahler
Dave Mahler
Environmental Engineer

APPROVED BY: R. A. Frohreich
R. A. Frohreich
Chief Process Engineer

CERTIFIED BY: James L. White
7/20/83



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- 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 requires 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 plasticizer filter cake, waste phthalic anhydride, API sludge, waste barium, cadmium or lead stabilizers, and any waste mixtures containing significant amounts of DOP or barium, cadmium, or lead stabilizers. The areas of the plant which are covered under the Contingency Plan are the hazardous waste drum storage area and the API Separator.

II. EMERGENCY COORDINATOR

At all times, there must be at least one employee either 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 wastes 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>
Paul Kober - Primary	2264	369-7096
Ronnie Gilreath - Alternate	2280	369-7795

API SEPARATOR

Rick Snowden - Primary	2296	1-327-7382
Jerry Horstman - Alternate	2321	369-6005

In the absence of the department head, the department head will designate another person to perform his duties. This 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, reoccur, 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.
- 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 Process Engineering for assistance.

RCRAHAZARDOUS WASTE CONTINGENCY PLANIV. 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

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.

VI. 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:

Chief Process Engineer	Dick Frohreich	1-327-6070
Environmental Engineer	Dave Mahler	1-327-4540
Senior Process Engineer	Veldon Messick	1-327-0741
Plant Superintendent	Charlie Miller	369-9100
Plant Manager	John Friend	369-7377
Vinyl Operations Superintendent	Pete Markey	369-6019
Compound Operations Superintendent	Paul Kober	369-7096
Mechanical Superintendent	Rick Snowden	1-327-7382

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.

RCRAHAZARDOUS WASTE CONTINGENCY PLANVI. REPORTING (Continued)

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.

VII. 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.
- D. The list of spill clean up equipment or fire fighting equipment changes.

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 clean up equipment, refer to Appendix A of the S.P.C.C. Plan.

WASTE OIL

WASTE OIL DISPOSAL

Waste oil and certain waste oil-based chemicals which are generated from various sources around the Plant must be transferred to the waste oil sump at the northeast end of the API Separator. The oil can be either dumped directly into the sump or into the trench at the empty drum storage pad. When the sump becomes full, its level is self-regulated by an overflow baffle pipe which runs to the API Separator. In general, the oil layer on top of the sump thickens with time, displacing the water layer into the API Separator. Whenever the oil layer exceeds one foot thickness, the sump should be pumped out to the waste oil storage tank. The oil is dewatered in the tank and subsequently reclaimed as low grade fuel.

The following materials are acceptable for disposal in the waste oil sump:

- Spent lubricating oils
- AMS drum heels
- CTA drum heels
- Glycerine drum heels
- OMS drum heels
- Tin stabilizers
- Alcohols
- Agitene
- Spent lab solvents

The following materials must NOT be disposed of in the waste oil sump:

- Glue
- Barium, Cadmium or lead stabilizers
- Solidified Calcium Stearate
- Plasticizer contaminated substances
- Any other solid or semi-solid material

Materials which are unacceptable for disposal in the waste oil sump can be disposed of in the dumpster boxes, unless they are hazardous wastes. Disposal of hazardous waste is covered in the RCRA Training Manual. Partially full drums, open top drums and drums with plastic liners should be crushed and disposed of in the dumpster boxes. If there are any questions about how to dispose of any material, Process Engineering should be contacted for assistance.

PCB OIL

PCB OIL

The oil contained in most of the Plant's electrical equipment must be handled with special precautions because the oil contains a small quantity of a chemical substance called PCB (Polychlorinated biphenyls). PCB has been linked with various health disorders and its use is heavily regulated because it does not decompose in the environment.

Electrical equipment which contains or may possibly contain PCB are labeled with a yellow sticker which states "CAUTION-Contains PCB's (Polychlorinated Biphenyls)". The Plant has designated most of the electrical equipment in the Plant as being PCB-contaminated as a precautionary measure, even though most of the electrical equipment may not necessarily contain PCB. PCB-contaminated electrical equipment that is taken out of service must be stored at the PCB storage area behind the boiler house, unless the equipment is retained by the City of Aberdeen. Adequate records must be kept of all movement of PCB-contaminated electrical equipment. The status of all PCB's in the Plant is summarized in the PCB annual report, which is compiled by Process Engineering annually. If equipment labeled with a PCB sticker develops a leak, the following action must be taken immediately:

- 1) Contact the Mechanical Superintendent, who will designate someone to coordinate cleanup of the leak.
- 2) Flag off the area and put on rainsuits, rubber boots, rubber gloves and face shields.
- 3) Contain the leak to as small an area as possible. Take special care to prevent it from entering any of the Plant sewers. If it has entered a sewer line, skim the oil off the water at the first possible location available, such as the concrete settling basins. Use whatever means are available to prevent the oil from being discharged from the Plant.
- 4) Place all contaminated soil, gravel, water and clothing into intact open top drums, which are available at the P-1 building. Label each drum and mark with PCB stickers. Place the drums in the PCB storage area behind the boiler house.
- 5) Keep the area flagged off until Process Engineering determines that all of the PCB's have been removed.

If more than ten (10) pounds of PCB's (not PCB oil) leave the Plant boundaries, the National Response Center (1-800-424-8802) must be contacted as soon as possible.

TOXIC SUBSTANCE
REPORTING

TOXIC SUBSTANCE CONTROL REPORTING

Every employee is required to report to the Plant Safety Director any information concerning a substance which is believed to be toxic and presents a serious risk of injury to human health or the environment. The following guidelines should be considered in determining what needs to be reported:

- 1) Any information that leads you to believe that a chemical poses a serious risk to health or the environment.
- 2) Any emergency which you believe may immediately result in serious risk to human health or the environment.
- 3) Any evidence linking a chemical to cancer, gene mutation, birth defects or toxicity that results in death or serious or prolonged incapacitation. This applies to effects in the community as well as to Conoco employees.
- 4) Any evidence resulting from epidemiological studies, bioassays, or other documented studies which show potential for injury to human health or the environment.
- 5) Any widespread and previously unsuspected distribution of chemicals not found in nature but extremely persistent in the environment.
- 6) The information has not been reported previously.

An employee who has obtained or believes he has obtained information regarding a substantial risk must report that information to his or her Supervisor. The information will then be discussed with the Plant Safety Director, who will contact the appropriate authority (Director of Biomedical and Environmental Affairs).

SUPERFUND
REPORTING

SUPERFUNDHAZARDOUS SUBSTANCE SPILL AND RELEASE REPORTING REQUIREMENTS

The SUPERFUND law requires the Plant to report certain spills and releases of hazardous substances to the environment to the National Response Center (1-800-424-8802). The following substances and mixtures containing the substances are considered to be hazardous substances. A spill or release of the substance may need to be reported if the spill or release exceeds the reportable quantity.

<u>Substance</u>	<u>Reportable Quantity</u>
Ammonia	100 lbs.
Barium, Cadmium or Lead Stabilizers	1 lb.
Chlorine	10 lbs.
DOP	1 lb.
Phthalic Anhydride	1 lb.
PCB's	10 lbs.
Phosphoric Acid	5,000 lbs.
Sodium Hydroxide	1,000 lbs.
Sulfuric Acid	1,000 lbs.
VCM	1 lb.
Any other substance that could be classified as hazardous	assume 1 lb.

The regulations concerning what to report are complex in many instances, therefore Process Engineering should be consulted with whenever there is any doubt concerning whether or not a spill or release is reportable. In general, the following items are reportable.

- 1) A spill or release of any hazardous material in excess of the reportable quantity where the material leaves the Plant property, excepting routine and permitted discharges.
- 2) A spill of any hazardous material into the Plant process sewer system in excess of the reportable quantity and the spill results in an NPDES permit violation.
- 3) A non-permitted, non-routine discharge of vinyl chloride to the air.

The following personnel are authorized to report hazardous substance spills and releases to the National Response Center. The report must be made as soon as possible after becoming aware of the spill or release.

Chief Process Engineer	Dick Frohreich	1-328-3628
Environmental Engineer	Dave Mahler	1-327-4540
Senior Process Engineer	Veldon Messick	1-327-3628
Plant Superintendent	Charlie Miller	369-9100
Plant Manager	John Friend	369-7377
Vinyl Operations Superintendent	Pete Markey	369-6019
Compound Operations Superintendent	Paul Kober	369-7096
Mechanical Superintendent	Rick Snowden	1-327-7382