



TO: TOC-P&M EMPLOYEE RELATIONS
FOR: PAUL CRAVEY
FROM: P. J. HUGHES
RE: OSHA INSPECTION OF TENNECO POLYMERS PASADENA

DATE: JANUARY 18, 1985

On Thursday, 17 January 1985, Mr. Roy Piggee of the Occupational Safety and Health Administration arrived at the Polymers Pasadena Plant to conduct an industrial hygiene inspection of the facility.

Mr. Piggee was met by Jim Oliver, Safety Superintendent, and Mr. Oliver was informed the survey was a random industrial hygiene survey. Mr. Piggee reviewed the OSHA 200 log and other occupational health reports and policies, surveyed the plant, accompanied by Mr. Oliver, and interviewed several employees. The plant survey and employee interviews were concluded on Friday, 18 January 1985.

Mr. Piggee requested and was provided the following documentation:

- o Summary report of December, 1984 VCM personnel monitoring results
- o Respiratory protection procedure
- o Medical program and evaluation form

In addition, a copy of the VCM training program was requested and is to be provided next week.

The only discrepancy which has been noted to Mr. Oliver thus far is housekeeping in the dryer building due to resin accumulation in this area. Mr. Piggee plans to return to the plant the week of 21 January 1985 in order to do dust sampling in the dryer building area. Equipment is available to do parallel sampling, and it is anticipated that parallel sampling will be done. It is unlikely that sample results will exceed the TLV.

A closing conference to discuss survey results has not been held. I will keep you informed of the status of this survey.


P. J. Hughes

PJH/jw

cc: J. P. Kelly

TENNECO POLYMERS, INC.
ENVIRONMENTAL REVIEW--PASADENA PLANT
1985

**TENNECO OIL
P&M FACILITIES
ENVIRONMENTAL REVIEW**

**TENNECO POLYMERS - PASADENA PLANT
POLYVINYL CHLORIDE FACILITIES**

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TENNECO OIL P&M
ENVIRONMENTAL REVIEW

March 5-7, 1985

Name and address of facility:

Tennec Polymers
Pasadena Plant
4403 La Porte Road
P. O. Box 849
Pasadena, TX 77501-0849

Affiliated with:

Tenneco Oil P&M

Operations Manager:

<u>Frank Koslosky</u>	<u>Director - Operations</u>	<u>(713) 479-3411</u>
<u>(Name)</u>	<u>(Title)</u>	<u>(Phone)</u>

Environmental Representative:

<u>Jim Kachtick</u>	<u>Mgr.-Environmental Sciences</u>	<u>(713) 479-3411</u>
<u>(Name)</u>	<u>(Title)</u>	<u>(Phone)</u>

Type of operation and/or principal products:

Polyvinyl Chloride

Review Team:

<u>Name</u>	<u>Title</u>	<u>Phone</u>
<u>Bob Prussner</u>	<u>Mgr.Environmental Affairs-TOC</u>	<u>(713) 757-3306</u>
<u>Roger Twe</u>	<u>Sr.Environmental Eng.-TOC</u>	<u>(713) 757-7685</u>
<u>Charles Beresford</u>	<u>Attorney - TOC</u>	<u>(713) 757-8764</u>
<u>Emile LeRouge</u>	<u>Environmental Supervisor-TOC</u>	<u>(504) 579-2274</u>
<u>Lloyd Stewart</u>	<u>Mgr.Environmental Audits-TEN</u>	<u>(713) 757-4100</u>

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**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

**TENNECO POLYMERS
ENVIRONMENTAL STAFFING**

(I)

Please show the reporting relationship between individuals directly responsible for environmental compliance and the senior manager associated with this facility. (Add blocks as necessary.)

Name Russell Bowers

Title Vice President--Chemicals

Name Frank Koslosky

Title Director - Operations

Name Harold Fife

Title Administrative Manager

Name Jim Kachtick

Title Manager - Environmental Sciences

- 50%

Name _____

Title _____

**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

**TENNECO POLYMERS
ENVIRONMENTAL STAFFING
(2)**

Please list name and title of persons dedicating a significant portion of their time to environmental compliance. This should include those persons responsible for operating environmental control equipment, conducting laboratory environmental analyses, etc.

Jim Kachtick

Manager - Environmental Sciences

NAME

TITLE

Approximate percentage (%) of work time dedicated to environmental: 95% (1/2 ^{Burlington} _{Fleming})

Brief description of environmental responsibility: Manage environmental affairs at Pasadena plant to insure compliance with pertinent laws and regulations. File permit applications, reports, and correspondence with regulatory agencies. Review and advise on all projects from the environmental aspect.

Nelson Turner

Larry Berkman (Tech mgr)

Manager of Quality Assurance

Name

TITLE

Approximate percentage (%) of work time dedicated to environmental: 20%

Brief description of environmental responsibility: Supervise NPDES, NESHAP and RCRA analytical testing to insure proper methods and techniques are used. Provide technical assistance in troubleshooting operational problems with waste treatment systems.

George Harvey

Nels T

Quality Assurance Supervisor

NAME

TITLE

Approximate percentage (%) of work time dedicated to environmental: 15%

Brief description of environmental responsibility: Oversees sample collection, provides liaison with operations in troubleshooting problems as they arise.

Jadie Pryor

Nels T

Chemist

NAME

TITLE

Approximate percentage (%) of work time dedicated to environmental: 100%

Brief description of environmental responsibility: Perform analytical testing for NPDES permit.

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**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

ENVIRONMENTAL STAFFING

(2)

Please list name and title of persons dedicating a significant portion of their time to environmental compliance. This should include those persons responsible for operating environmental control equipment, conducting laboratory environmental analyses, etc.

Chuck Handrick COPS Mgr

Joe Frank Robins

Offsites Superintendent

NAME

TITLE

Approximate percentage (%) of work time dedicated to environmental: 50%

Brief description of environmental responsibility: Manage operations of waste treatment system, waste fuels boiler system, loading facilities, water treating system and VCM pipelines. Provides liaison on environmental/operational concerns with TENN-USS and Oxy.

Joe Frank

Sandy Levine

Offsites Production Engineer

Name

TITLE

Approximate percentage (%) of work time dedicated to environmental: 50%

Brief description of environmental responsibility: Provide technical service for operation of the offsite facilities. This includes troubleshooting as well as long-range studies and tests in this area.

Joe Frank

Ed Dromgoole

Offsites Operations Supervisor

NAME

TITLE

Approximate percentage (%) of work time dedicated to environmental: 50%

Brief description of environmental responsibility: Supervise operations of waste treatment system, waste fuels boiler, and water treating system.

Joe Frank

Milton Hackfeld

Loading Supervisor

NAME

TITLE

Approximate percentage (%) of work time dedicated to environmental: 10%

Brief description of environmental responsibility: Supervise operations of the product and raw materials loading facilities, including dock, and pipelines.

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VCM MFG. ADP

by Jeff Bonett

(Pats to Chuck)

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**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

**WATER
(I)**

NPDES Permit No.:	Date Issued:	Date Expires:
<u>TX0006335</u>	<u>Oct. 15, 1984*</u>	<u>Oct. 15, 1989</u>

Other Water Discharge Permits:	Date Issued:	Date Expires:
<u>Texas Permit No. 00002</u>	<u>Feb. 22, 1983</u>	<u>Feb. 22, 1988</u>

* Effective date = Jan. 4, 1985
Discharge permit requirements: (Date EPA denied request for Evidentiary Hearing)
Outfall Number 101 (Add additional sheets as necessary.)

	<u>Permitted</u>		<u>Typical Actual</u>		<u>No. of Self-Reporting **</u>
	<u>Avg</u>	<u>Max</u>	<u>Avg</u>	<u>Max</u>	<u>Violations-Last 12 Mos.</u>
<u>Flow</u>	N/A	N/A	1.46	2.42	0
<u>BOD</u>	500	1,000	257	2098	3
<u>Oil & Grease</u>	210	315	11.2	119.4	0
<u>COD</u>	5,200	10,400	603	3840	0
<u>TSS</u>	420	840	175	1150	2
<u>VCM</u>	-	0.83		< 0.10	0
<u>Toluene</u>	-	3.75		< 0.10	0

Type of Waste Water Treatment System:
Primary Treatment (oil/water separation; equalization; neutralization)
Activated Sludge Multi-media Filtration
Method by which sanitary waste water is treated:
Package Unit/Effluent goes to activated sludge system

Who is treating sanitary waste?
Tenneco Polymers, Inc.

Sanitary Waste Water Permit No. N/A

Issuing Agency: N/A Expiration Date: N/A

** See Attachment 2

**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

**WATER
(1)**

NPDES Permit No.: _____ **Date Issued:** _____ **Date Expires:** _____

Other Water Discharge Permits: _____ **Date Issued:** _____ **Date Expires:** _____

Discharge permit requirements:

Outfall Number 001 _____ (Add additional sheets as necessary.)

	<u>Permitted</u>		<u>Typical Actual</u>		<u>No. of Self-Reporting **</u>
	<u>Avg</u>	<u>Max</u>	<u>Avg</u>	<u>Max</u>	<u>Violations-Last 12 Mos.</u>
<u>Flow</u>	3.0 mgl	5.4 mgl	1.99	3.63	0
<u>Temperature</u>		105°F		91°F	0
<u>pH</u>	6.0	- 9.0	6.0	- 11.4	1
<u>Chromium</u>	10.4	17.7	2.2	30.5	1
<u>Ammonia</u>	100	200	28	499	2
<u>Floating Solids</u>	Trace		None		0
<u>Biomonitoring</u>	N/A		-		-
<u>Type of Waste Water Treatment System:</u>					4

Method by which sanitary waste water is treated: _____

Who is treating sanitary waste? _____

Sanitary Waste Water Permit No. _____

Issuing Agency: _____ **Expiration Date:** _____

** See Attachment 2

**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

WATER

(2)

Date and significant findings of last regulatory inspection:
Please attach copy of regulatory inspection report.

May 3, 1984

(See Attachment 3)

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
Do any discharge permits contain a compliance schedule?	<u> </u>	<u> X </u>	<u> </u>
Is the facility meeting the compliance schedule?	<u> </u>	<u> </u>	<u> X </u>

FLOW AND pH

In matters relating to flow, do procedures used conform to the "water measurement manual" (U.S. Dept. of Interior, Bureau of Reclamation) or other procedures approved by the E.P.A?

 X

Primary flow measuring device properly installed?

 X

Primary flow measuring device properly operated and maintained?

 X

Is primary flow measuring device calibrated?

 X

How often? Monthly (Last calibration date: 3/4/85)

Secondary instruments (totalizers, recorders, etc.) properly operated and maintained?

 X

Are continuous pH recording instruments ^{and} calibrated with pH buffer solutions? Frequency: Daily on request

 X

Are the date, time, and the name of the person who calibrated the continuous pH recording instrument recorded? In a book? X
On the chart?

 X

Are calibration and maintenance records kept for 3 years on pH and flow measurement equipment?

 X

Are pH and flow measurement data kept for the required three-year period?

 X

SAMPLE COLLECTION AND PRESERVATION

Permittee sampling meets requirements and intent of permit?

 X

Details: Flow proportional; refrigerated

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**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

**WATER
(3)**

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
Permittee is using method of sample collection required by permit? If not, explain method used and the frequency of sampling: _____	<u>X</u>	_____	_____
Sampling locations adequate for representative samples?	<u>X</u>	_____	_____
Parameters and sampling frequency agree with permit?	<u>X</u>	_____	_____
Flow proportioned samples obtained where required by permit?	<u>X</u>	_____	_____
Are composite samples refrigerated at 4°C <u>during</u> collection?	<u>X</u>	_____	_____
Are grab samples refrigerated as soon as possible after collection?	<u>X</u>	_____	_____
Are samples labeled as to location, composite or grab, date and time of collection, and sampler?	<u>X</u>	_____	_____
Are samples collected in the authorized containers for each parameter?	<u>X</u>	_____	_____
Are approved preservatives used for each parameter, when needed?	<u>X</u>	_____	_____
When samples must be preserved, are they preserved at the time of collection?	<u>X</u>	_____	_____
Are samples analyzed within required holding times?	<u>X</u>	_____	_____
Is the laboratory refrigerator for sample storage kept at 4°C?	<u>X</u>	_____	_____
When samples are not to be analyzed immediately in the lab, are they refrigerated at 4°C?	<u>X</u>	_____	_____
Are approved cleaning procedures followed in the laboratory for sample containers that are to be reused?	<u>X</u>	_____	_____
<u>LABORATORY METHODS</u>			
Are EPA approved analytical testing procedures used?(40CFR 136.3)	<u>X</u>	_____	_____
If a different procedure is used, has written approval been received from the necessary regulatory agencies to use this alternate procedure?	_____	_____	<u>X</u>
If <u>part</u> of an approved procedure is changed by you, has written approval been received from the necessary regulatory agencies for this change?	_____	_____	<u>X</u>
Are monitoring and analyses being performed more frequently than required by permit? If YES, are results reported in permittee's self-monitoring report?	_____	<u>X</u>	_____

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**TENNECO OIL P&M
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TENNECO POLYMERS

**WATER
(4)**

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
Are parameters other than those required by the permit analyzed?	<u> </u>	<u>X</u>	<u> </u>
Are the methods used stated on the laboratory report sheet?	<u>X</u>	<u> </u>	<u> </u>

LABORATORY QUALITY ASSURANCE AND QUALITY CONTROL

Who is responsible for Laboratory Quality Assurance Program?
Nelson Turner

Are duplicate (precision) samples analyzed with each set of analyses? Frequency: <u>100%</u>	<u>X</u>	<u> </u>	<u> </u>
Are spiked (accuracy) samples analyzed with each set of analyses? Frequency: <u>100%</u>	<u>X</u>	<u> </u>	<u> </u>
Are precision control charts prepared and used?	<u> </u>	<u>X</u>	<u> </u>
Are accuracy control charts prepared and used?	<u>X</u>	<u> </u>	<u> </u>
Are intralaboratory quality control standards used for each permit parameter? Frequency: <u>100%</u>	<u>X</u>	<u> </u>	<u> </u>
Is satisfactory calibration and maintenance of laboratory instrument and equipment performed?	<u>X</u>	<u> </u>	<u> </u>
Are laboratory equipment calibrations and maintenance records kept for the required three-year period?	<u>X</u>	<u> </u>	<u> </u>
On analyses which require standards to be used in preparing calibration curves, are the curves prepared by using a blank and at least seven standards?	<u> </u>	<u> </u>	<u>X</u>
On analyses which require calibration curves or internal instrument calibration with standards, are blanks and standards analyzed with each set of samples in order to verify the calibration curve?	<u>X</u>	<u> </u>	<u> </u>
Are temperatures recorded on ovens(TSS) and incubators (BODs)? Frequency: <u>once/month</u>	<u>X</u>	<u> </u>	<u> </u>
Are laboratory analytical balances checked using NBS weights?	<u>X</u>	<u> </u>	<u> </u>
Are glucose-glutamic acid standards analyzed with each set of samples analyzed for BODs?	<u>X</u>	<u> </u>	<u> </u>
Is Class A volumetric glassware used for permit-required analyses?	<u>X</u>	<u> </u>	<u> </u>

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TENNECO POLYMERS

**WATER
(5)**

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
<u>LABORATORY DATA REPORTING AND STORAGE</u>			
Are the following recorded on the laboratory report sheet:			
Sample location?	<u>X</u>	_____	_____
Composite or grab?	<u>X</u>	_____	_____
Date and time of collection?	<u>X</u>	_____	_____
Sampler?	<u>X</u>	_____	_____
Date and time analysis started?	<u>X</u>	_____	_____
Analyst?	<u>X</u>	_____	_____
Are sample results kept for the required three-year period?	<u>X</u>	_____	_____
Are quality assurance and quality control records kept for the required three-year period?	<u>X</u>	_____	_____
Commercial laboratory used? *	_____	<u>X</u>	_____
Commercial laboratory state certified?	_____	_____	<u>X</u>
Weeds cut and vegetation growth in ponds removed?	<u>X</u>	_____	_____
Banks and dikes maintained? (Erosion, etc.)	<u>X</u>	_____	_____
Any reports of groundwater contamination from pond(s)?	_____	<u>X</u>	_____
If YES, give details:			

Seepage reported?	_____	<u>X</u>	_____
Adequate freeboard (<u>2 feet</u>) to prevent overflow?	<u>X</u>	_____	_____
Effluent release is:			
<u>X</u> Continuous	_____ Intermittent	_____ Seasonal	

* Will be used for biomonitoring in future.

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**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

**WATER
(6)**

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
What is the receiving stream?			
<u>Houston Ship Channel</u>			

Is there a formal Spill Control Plan (SPCC)?	<u>X</u>	_____	_____
Has the SPCC been approved by management?	<u>X</u>	_____	_____
Is the SPCC certified by a registered engineer?	<u>X</u>	_____	_____
Has the SPCC been reviewed and updated within the last 3 years?	<u>X</u>	_____	_____
Have there been any reported spills the prior 12 months?	_____	<u>X</u>	_____
How many? _____ Total amount of spill: _____			
If more than 2 reported spills within the last 12 months, has the SPCC been revised and certified by a registered engineer?	_____	_____	<u>X</u>
Is a training program existing to instruct personnel in operation and maintenance of spill control equipment?	<u>X</u>	_____	_____
Are briefings scheduled to insure adequate understanding of the SPCC plan by company personnel?	<u>X</u>	_____	_____

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TENNECO OIL P&M
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TENNECO POLYMERS

WATER
(7)

YES NO N/A

How is storm water treated?

Part of storm water collected in a retention pond,
which is normally pumped to waste treatment unit.

Other storm water is discharged untreated to the
Houston Ship Channel.

What is the design basis for storm water treatment?

The first 450,000 gallons of rainfall are collected
in the storm water retention pond.

Do existing discharge permits have storm water requirements? *

X

What are the requirements?

N/A

* Application of storm water discharge permits as required by new NPDES regulations will be submitted by the deadline of March 26, 1985.

TENNECO OIL P&M
ENVIRONMENTAL REVIEW

TENNECO POLYMERS

DOCK OPERATIONS

(1)

YES NO N/A

Does this facility operate a ship or barge dock?

X

What materials were transferred across the dock the last 12 months?

Methanol Ortho-xylene (TEAL- USS)

Ammonia (oxy)

2 Ethyl Hexanol (TEAL- USS)

Additional materials that may be transferred in the future.

Propylene TEAL- USS

Iso-butyraldehyde

Does the spill control plan include the dock facilities?

X

What is the volume of the spill containment for the transfer facility?

Two 20-gallon drip pans

What emergency spill containment equipment (booms, absorbent, etc.) are owned and available at the facility?

Vacuum truck

Backhoe with front-end loader

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**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

DOCK OPERATIONS

(2)

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
Have arrangements with other organizations been made for emergency spill cleanup support?	<u>X</u>	<u> </u>	<u> </u>

Who? All-Waste Service, Inc.; Browning-Ferris Industries;

Malone Marine Services; Petterson Marine

Do any of the materials transferred or anticipated to be transferred meet the Coast Guard definition of "oil," i.e., oil of any kind or in any form, including but not limited to petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil?"

<u> </u>	<u>X</u>	<u> </u>
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If the transferred materials fall within the Coast Guard definition of "oil," an operations manual meeting the requirements of Coast Guard Regulation (CFR 33 Part 154--Oil Pollution Regulations for Marine Oil Transfer Facilities) is required. Has an operations manual been prepared meeting these requirements?
(Please provide a copy of the manual.)

<u> </u>	<u> </u>	<u>X</u>
---------------	---------------	----------

(1) If an operations manual has been prepared, has it been submitted to the Coast Guard "Captain of the Port" (required no later than March 3, 1983)?

<u> </u>	<u> </u>	<u>X</u>
---------------	---------------	----------

(2) Has the Captain of the Port issued a "letter of adequacy"?

<u> </u>	<u> </u>	<u>X</u>
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(3) Have amendments to the dock operations manual been made since the issuance of the Coast Guard "letter of adequacy"?

<u> </u>	<u> </u>	<u>X</u>
---------------	---------------	----------

(4) Are copies of the dock operations manual available to dock operations personnel?

<u> </u>	<u> </u>	<u>X</u>
---------------	---------------	----------

(5) Has this facility designated "persons in charge of facility oil transfer operations" and advised the Captain of the Port of this designation in writing?

<u> </u>	<u> </u>	<u>X</u>
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(6) Are current (annual) hose pressure tests and inspection records available at this facility?

<u>X</u>	<u> </u>	<u> </u>
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If the transferred materials do not fall within the Coast Guard definition of "oil" but do fall within the requirements of 33CFR126 --Handling of Explosives or Other Dangerous Cargoes Within or Contiguous to Waterfront Facilities--has a dock operations manual been prepared for this facility?

<u>X</u>	<u> </u>	<u> </u>
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**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

DOCK OPERATIONS

(3)

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
(1) If an operations manual has been prepared, are copies available to dock operations personnel?	<u>X</u>	<u> </u>	<u> </u>
(2) Does the operations manual contain the following:			
A. Documentation that the dock operator is a qualified operator?	<u>X</u>	<u> </u>	<u> </u>
B. Dates and results of the most recent cargo hose and piping hydrostatic tests?	<u>X</u>	<u> </u>	<u> </u>
C. Cargo information cards listing the following:			
a. Cargo identification characteristics (appearance, odor, etc.)?	<u>X</u>	<u> </u>	<u> </u>
b. Emergency procedures?	<u>X</u>	<u> </u>	<u> </u>
c. Fire fighting procedures?	<u>X</u>	<u> </u>	<u> </u>

**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

**AIR
NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS)
(1)**

		<u>YES</u>	<u>NO</u>	<u>N/A</u>
What type(s) of PVC resin is produced:	Dispersion resin	<u> </u>	<u>X</u>	<u> </u>
	Suspension resin	<u>X</u>	<u> </u>	<u> </u>
	Bulk resin	<u> </u>	<u>X</u>	<u> </u>
Does this plant have a fixed vinyl chloride monitoring system in place to continuously monitor VCM emissions?				
		<u>X</u>	<u> </u>	<u> </u>
Do exhaust gasses meet the less than 10ppm VCM limit?				
		<u>X</u>	<u> </u>	<u> </u>
What sort of control devices are used to reduce VCM exhaust gases to 10ppm or less? <u>Incinerator System</u>				
How many relief valve discharges were reported in the last 12 months? <u>4</u> (See Attachment 4)				
* Where did relief valve discharges go?	<u>X</u> Flare	<u>X</u> Atmosphere	<u> </u> Other	
Were they reported within the required time (10 days)?				
		<u>X</u>	<u> </u>	<u> </u>
<u>FUGITIVE EMISSIONS FROM EQUIPMENT IN VCM SERVICE</u>				
Are loading and unloading lines in VCM service degassed thru a control system before opening?				
		<u>X</u>	<u> </u>	<u> </u>
Are slip gauges used in the VCM loading/unloading operation?				
		<u> </u>	<u>X</u>	<u> </u>
Are slip gauge emissions reduced via a control system?				
		<u> </u>	<u> </u>	<u>X</u>
If controlled--what is the control mechanism? <u>N/A</u>				
Are all pumps either sealless, have double seals or equivalent?				
		<u>X</u>	<u> </u>	<u> </u>
a. Positive pressure maintained between seals?		<u>X</u>	<u> </u>	<u> </u>
b. Double seal interspace vented to a control system?		<u>X</u>	<u> </u>	<u> </u>
Are all compressors equipped with double seals or equivalent?				
		<u>X</u>	<u> </u>	<u> </u>
a. Positive pressure maintained between seals?		<u>X</u>	<u> </u>	<u> </u>
b. Double seal interspace vented to a control system?		<u>X</u>	<u> </u>	<u> </u>
Are all agitators equipped with double seals or equivalent?				
		<u>X</u>	<u> </u>	<u> </u>
a. Positive pressure maintained between seals?		<u> </u>	<u> </u>	<u>X</u>
b. Double seal interspace vented to a control system?		<u> </u>	<u> </u>	<u>X</u>
c. Other <u> </u>		<u> </u>	<u> </u>	<u>X</u>
* Three discharges to atmosphere; one discharge to flare.				

**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

**AIR
NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAPS)
(2)**

present regulatory system does not credit flare as control device

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
Are relief valves connected to a process line, recovery system, or equivalent? <u>Essentially all discharge to flare system.</u>	<u>X</u>	<u>X</u>	
If not, are they equipped with rupture discs?			

When sampling, are sample containers purged into a closed process system?	<u>X</u>		
Are unused portions of samples (10% or more VCM by weight) returned to the process? <u>No unused portions remain.</u>		<u>X</u>	

Is the VCM content of equipment reduced as required before opening to atmosphere?	<u>X</u>		
---	----------	--	--

Does this plant have a formal leak detection and elimination program?	<u>X</u>		
a. Has the program been approved by the EPA Administrator?	<u>X</u>		
b. What is the plant definition of a "leak"? <u>Two consecutive 25 ppm analyses.</u>			

Is the VCM content of "in process wastewater" reduced as required?	<u>X</u>		
--	----------	--	--

Does this plant have Standard Operating Procedures incorporating the VCM fugitive emission requirements?	<u>X</u>		
--	----------	--	--

Are emissions data reported in Semiannual Report as required?	<u>X</u>		
---	----------	--	--

**

How many reported exceedances were there the last 12 months for:

a. Residual VCM content of stripped PVC slurry?	<u>0</u>
What percent is this of total reported values?	<u>0%</u>
b. Reactor opening emissions?	<u>18</u>
What percent is this of total reported values?	<u>8.9%</u>
c. Incinerator VCM emissions greater than 10ppm?	<u>6</u>
What percent of incinerator operating hours?	<u>0.14%</u>

Is record keeping performed as required?	<u>X</u>		
a. Are records kept two years?	<u>X</u>		
b. Are they destroyed after two years?		<u>X</u>	

When was last NESHAPS inspection? April 9, 1984 (See Attachment 5)
(Please provide copy of report.)

* TACB approved program in June, 1984. *checked to be first*

** Last two semi-annual reports (covering September 1, 1983 through August 31, 1984).

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TEN0 880

**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

**AIR
(I)**

List air construction permits or permit exemptions obtained in the last 12 months:

	<u>Description of Permit Unit</u>	<u>Permitting Agency</u>	<u>Control Device</u>	<u>Allowed Emissions</u>	<u>Date Issued</u>
1.	None				
2.					
3.					
4.					
5.					
6.					
7.					

List air operating permits presently in force:

	<u>Description of Permit Unit</u>	<u>Date Issued</u>	<u>Expiration Date</u>	<u>Allowed Emission</u>	<u>Monitoring Requirements</u>	<u>Reporting Requirements</u>
1.	R-4545 (F-8 Waste Fuels Boiler)	10/19/77	-	440 ppm SO ₂ 0.10 lb particulate ^{10⁵} <20% opacity	None	None
2.	R-944B (PVC Plant)	6/7/82	-	852.8 T/Y VOC 14.2 T/Y particulate	None	None

**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

**AIR
(2)**

When was the last air regulatory inspection? April 9, 1984 (See Attachment 5)
Please provide a copy of last inspection report. (Date)

Describe any noted deficiencies and the corrective action taken:

	<u>DEFICIENCY</u>	<u>CORRECTIVE ACTION</u>
1.	Incomplete tagging	Cylinder was properly tagged
2.	of VCM calibration gas	
3.	cylinder	
4.		
5.		
6.		

**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

**AIR
(3)**

When was the last air emissions inventory?

1980

DATE

List reported emissions rates:

Tons/Year

1.	<u>Hydrocarbons</u>	<u>795.2</u>	<u>↓</u>
2.	<u>Sulfur Dioxide</u>	<u>0</u>	
3.	<u>Nitrogen Oxides</u>	<u>2,022</u>	<u>↓</u>
4.	<u>Carbon Monoxide</u>	<u>1,114</u>	<u>↓</u>
5.	<u>Particulate</u>	<u>3.6</u>	
6.	<u>Vinyl Chloride</u>	<u>7.1</u>	
7.	<u> </u>		
8.	<u> </u>		

*11.2.1
1.2.1*

What procedure is followed to report emission excursions to regulatory agencies?
Please attach a copy of existing written procedure.

Telephone notification of emission to regulatory agencies by operations
shift supervisor. Written notification by Manager - Environmental
Sciences within required time period.

Is this facility monitoring ambient air quality? *

X NO N/A
YES

Is a quality assurance program used?
(Please provide quality assurance records.)

X NO N/A
YES

* Per participation in Houston Regional Monitoring System.

12/8/82

**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

**AIR
(4)**

What parameters are monitored?

SO₂, TSP, Ozone, CO, NO_x

Meteorological Data

Has air monitoring data shown exceedances of air standards? ☒ YES ☐ NO ☐ N/A

Is this facility in compliance with or on a schedule of compliance with all applicable emission limitations and standards under the Clean Air Act?

☒ YES ☐ NO ☐ N/A

Discussion if required:

Does this facility have procedures to insure leaded gasoline is not used in company vehicles designed for unleaded gasoline?

☒ YES ☐ NO ☐ N/A

If this facility dispenses more than 200,000 gallons of gasoline per year, does it have Stage I vapor control system installed?

☐ YES ☐ NO ☒ N/A

Who is responsible for gasoline health effects warnings?

Leon Cox

Is gasoline health effects information posted in vehicle refueling areas?

☒ YES ☐ NO ☐ N/A

12/27/83

**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

SOLID WASTE DISPOSAL

(1)

Is this facility registered under the Resource Conservation and Recovery Act (RCRA)?

YES NO N/A

X

Generator

X

Storer

Treater

Disposer

Transporter

What is the registration number? TXD 043749092

List any hazardous waste and the amount being generated and show if it is disposed of on or off-site.

ON OFF

See Attachment 6

X

List any solid waste and the amount being generated and show if it is disposed of on or off-site.

Plant trash - 10,000 yd³/yr (Brownish Trash)

X

Is any hazardous waste disposed of in a landfill as free liquid? If so, have arrangements been made for another type disposal of this waste after May 1985, since this practice will then be prohibited? Currently under investigation

YES NO N/A

X

X

Does this facility produce, distribute, or burn any fuel derived from hazardous waste? Discuss: Liquid hazardous wastes burned in F8

X

If this facility is a treater, storer, or disposer (TSD facility), does it have a final RCRA permit?

X

Has this facility received its RCRA Part B application?

X

If yes, when is Part B application due? _____

Is Part B application being completed as per 40 CFR 264 & 270?

X

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TEN0 885

SOLID WASTE DISPOSAL
(2)

**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

**Solid Waste Disposal
(3)**

How are empty drums disposed of?

Empty drums are crushed and shipped to CWM's Class I
site for disposal.

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
Are any empty drums given (sold) to employees or neighbors?	<u> </u>	<u>X</u>	<u> </u>
Are drums emptied of purchased materials returned to the vendor as part of the agreement to purchase the material?	<u>X</u>	<u> </u>	<u> </u>
What types of hazardous waste <u>treatment</u> are accomplished <u>on site</u> ?			
Solar Evaporation	<u> </u>	<u> </u>	<u>X</u>
Processing for Detoxification	<u> </u>	<u> </u>	<u>X</u>
Incineration	<u> </u>	<u> </u>	<u>X</u>
Neutralization	<u> </u>	<u> </u>	<u>X</u>
Landfarming	<u> </u>	<u> </u>	<u>X</u>
Fixation prior to burial	<u> </u>	<u> </u>	<u>X</u>
Recycling	<u> </u>	<u> </u>	<u>X</u>
Biological	<u> </u>	<u> </u>	<u>X</u>
Other <u> </u>	<u> </u>	<u> </u>	<u>X</u>
Has TOC provided closure costs of on-site treatment and storage facilities?	<u> </u>	<u> </u>	<u>X</u>
What is estimated cost? <u>N/A</u> Who estimated cost? <u>N/A</u>			
Are ponds used in hazardous waste treatment?	<u> </u>	<u>X</u>	<u> </u>
Are ponds in natural clay?	<u> </u>	<u> </u>	<u>X</u>
Are ponds lined with clay?	<u> </u>	<u> </u>	<u>X</u>
How thick? <u>N/A</u>			
What freeboard is maintained in ponds? <u>N/A</u>			
What is expected 24-hour rainfall in a five-year period? <u>10"</u>			
Does this facility have an ongoing groundwater monitoring program?	<u> </u>	<u>X</u>	<u> </u>
If facility has a final RCRA permit, what phase of GW monitoring exists at present? Detection <u> </u> Compliance <u> </u> Corrective Action <u> </u> <u>N/A</u>			
If facility is still in interim status, is GW monitoring program in compliance with the interim status requirements?	<u> </u>	<u> </u>	<u>X</u>

**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

**Solid Waste Disposal
(4)**

How many monitoring wells are used? N/A

How many wells are upgradient? N/A

How many wells are downgradient? N/A

How deep are the monitoring wells? N/A

What are the wells monitored for? (40 CFR 265.92) N/A

1. Set 1 Parameters: _____

2. Set 2 Parameters: _____

3. Set 3 Parameters: _____

4. Other: _____

	<u>YES</u>	<u>NO</u>	<u>N/A</u>
Have initial background concentrations been established for all of the parameters analyzed?	_____	_____	<u>X</u>

Does this background information indicate any groundwater contamination?	_____	_____	<u>X</u>
--	-------	-------	----------

If so, has a groundwater quality assessment program been established as per the interim status regulations?	_____	_____	<u>X</u>
---	-------	-------	----------

What has been the total cost of the groundwater monitoring program? N/A

What were the costs for the last 12 months? N/A

Are monitoring-well results reported to state?	_____	_____	<u>X</u>
--	-------	-------	----------

What is the depth of the shallowest aquifer currently used? 300 ft.

TENNECO OIL P&M
ENVIRONMENTAL REVIEW

TENNECO POLYMERS

Solid Waste Disposal
(5)

YES NO N/A

Does this facility operate water wells?

X

What depth? 800 ft How many? 2 *

List private drinking water wells near this facility.

plant wells

	Owner	Depth
1.	None within one mile	
2.		
3.		
4.		

List industrial/commercial water wells near this facility.

	Owner	Depth	Water Use
1.	Shell	890 ft.	Potable/Industrial
2.			
3.			
4.			

List municipal or public water wells near this facility.

	Owner	Depth	Water Use
1.	None within one mile		
2.			
3.			
4.			

Has this facility been inspected by a regulatory agency in the last 12 months regarding solid waste disposal?

 X

What discrepancies did they note? N/A

Have these discrepancies been corrected?
(Provide a copy of last regulatory inspection.) See Attachment 8

 X

* Four other wells are permitted, but not normally in use.

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**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

**Solid Waste Disposal
(6)**

OFF-SITE DISPOSAL

If off-site hazardous waste disposal is used:
What is the name of the facility?

- | Name | Permit Number | |
|---|---------------|---|
| 1. Chemical Waste Management-Port Arthur | TXD000761262 | ✓ |
| 2. Chemical Waste Management-Lake Charles | LAD000777201 | ✓ |
| 3. Rollins Environmental Services-Baton Rouge | LAD01039515 | ✓ |
| 4. Rollins Environmental Services-Deer Park | TXD055141378 | ✓ |

Do you have a copy of their current RCRA permit?

YES NO N/A

X _____ _____

Do you have a copy of their current state permit(s)?

X _____ _____

Have you visited this facility in the last 12 months?

X _____ _____

Did the evaluation confirm this site is satisfactory for disposal
of your facility's hazardous waste? *

X _____ _____

(If a written evaluation report was made, please attach.)

See Attachment 9

Are DOT approved containers and labeling used for off-site
delivery of hazardous waste?

X _____ _____

Estimated annual cost of off-site disposal? \$150,000 13,000,000 ✓

Has this off-site facility been inspected by a regulatory agency
in the last 12 months regarding solid waste disposal?

X _____ _____

What discrepancies did they note? See Attachment 9

Have these discrepancies been corrected? See Attachment 9

X _____ _____

* Neither CWM-Port Arthur or Rollins Environmental Services-Deer Park are
currently accepting wastes that we generate.

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**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

**TENNECO POLYMERS
UNDERGROUND STORAGE
(1)**

Does this facility have underground storage tanks?

X
YES NO N/A

Please tabulate information on underground storage including fuel tanks.

	<u>Tank Identification</u>	<u>Tank Volume</u>	<u>Material of Construction</u>	<u>Tank Age</u>	<u>Material Stored</u>
1.	<u>Unleaded gasoline</u>	<u>1000 gal</u>	<u>carbon steel</u>	<u>23 yrs</u>	<u>unleaded gasoline</u>
2.	<u>Leaded gasoline</u>	<u>3000 gal</u>	<u>carbon steel</u>	<u>23 yrs</u>	<u>leaded gasoline</u>
3.	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
4.	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
5.	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
6.	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
7.	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
8.	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
9.	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
10.	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

→ How often is stored product inventory reconciled? Weekly

What program is followed to insure early detection of potential leaks?

These tanks are being replaced with above ground tanks. This should be
completed by March, 1985.

**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

**POLYCHLORINATED BIPHENYLS (PCB)
(1)**

YES NO N/A

As of July 2, 1978, did this facility contain in service,
stored for future use, or stored for disposal:

A. 50 or more large high or low voltage PCB capacitors? X

B. One (1) or more PCB transformers? X

C. 45kgs (99.4 lbs) or more PCB chemical substances
or PCB mixtures? X

Does the facility contain other PCBs, PCB equipment (e.g.,
electromagnets, electric motors, hydraulic systems, heat
transfer systems, compressors), or containers of PCBs or
PCB mixtures? X

**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

HIGHLY VOLATILE LIQUID PIPELINE

(1)

Name of pipeline: Tenneco VCM Pipeline from Shell
When was pipeline constructed? 4/14/73
What is pipe diameter? 4"
Length of pipeline? 5,400 ft.
What products are transported? VCM
Normal operating rate and pressure: _____
Maximum operating rate and pressure: _____
Date of latest hydrostatic test: 4/14/73 at 2225 psig
Do current DOT regulations require additional pressure testing? X
YES NO N/A

How often are pipeline rights-of-way inspected? Annually
Who conducts these inspections? Tenneco Personnel (per annual cathodic protection inspection)
(Provide a copy of a typical inspection.)

How often are navigable waterway crossings inspected? N/A

Are all line markers provided as required? Yes

Do the markers contain the proper wording as required as well as
emergency phone numbers? Yes

How many pump stations are on this pipeline? One

What is the source of power?	Electric	Yes <u>X</u>	No <u> </u>	N/A <u> </u>
	Gas	Yes <u> </u>	No <u> </u>	N/A <u> </u>
	Diesel	Yes <u> </u>	No <u> </u>	N/A <u> </u>

What provisions are made to shut down pumps in event of pipeline leak?

Notification by "hot line" between Shell and TPI. Local shutoffs at pumps.

Remote air-operated valves on storage spheres.

TENNECO POLYMERS
HIGHLY VOLATILE LIQUID PIPELINE
(2)

TEN0 894

**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

HIGHLY VOLATILE LIQUID PIPELINE

(1)

Name of pipeline: Tenneco VCM Pipeline from B. F. Goodrich

When was pipeline constructed? 12" - 4/14/73; 6" - 11/13/80; 4" - 11/13/80

What is pipe diameter? 12"; 6", 4"

Length of pipeline? 12" - 13,800'; 6" - 770'; 4" - 1,200' (total 15,770')

What products are transported? VCM

Normal operating rate and pressure: 280 gpm at 200 psig

Maximum operating rate and pressure: 350 gpm at 300 psig

Date of latest hydrostatic test: 12" - 11/13/80 at 2225 psig; 4" and 6" - 11/13/80 at 750p

Do current DOT regulations require additional pressure testing? X
YES NO N/A

How often are pipeline rights-of-way inspected? Annually

Who conducts these inspections? Tenneco personnel - per annual cathodic protection inspection
(Provide a copy of a typical inspection.)

How often are navigable waterway crossings inspected? N/A

Are all line markers provided as required? Yes

Do the markers contain the proper wording as required as well as emergency phone numbers? Yes

How many pump stations are on this pipeline? One

What is the source of power? Electric Yes X No N/A
 Gas Yes No N/A
 Diesel Yes No N/A

What provisions are made to shut down pumps in event of pipeline leak?

Notification by "hot line" between Goodrich and TPI. Local shutoff at pumps.

Remote air-operated shutoff valves on storage spheres.

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TEN0 895

TENNECO POLYMERS
HIGHLY VOLATILE LIQUID PIPELINE
(2)

	X	
YES	NO	N/A

	YES	NO	X N/A
--	-----	----	----------

<u> </u>	<u> </u>	<u>X</u>
YES	NO	N/A

X		
YES	NO	N/A

N/A

What is final disposition of material? Waste Treatment Unit

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**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

**COMMUNITY RELATIONS/EMERGENCY PLANS
(1)**

How many complaints were received from neighbors or other interested parties the last 12 months?

None ↗

Is this a decrease compared to the previous 12 months?

Yes

Describe briefly how complaints are handled and name individual(s) responsible for handling complaints. If written procedures exist, please attach a copy.

Any complaints are routed to Director - Operations. He assigns
someone from plant to follow up, depending on nature of complaint:

When is the senior line manager responsible for local operations informed of citizen complaints?

ASAP

Who is responsible for reporting complaint information to the senior line manager?

Frank Koslosky

Does this facility have an Emergency Contingency Plan?
(If so, please make a copy available.) See Attachment 11

YES	NO	N/A
<u>X</u>	<u> </u>	<u> </u>

Has the Emergency Contingency Plan been updated in the last 12 months?

YES	NO	N/A
<u>X</u>	<u>X</u>	<u> </u>

Does this facility have a system set up to make timely notification of the occurrence of emergencies to TOC P&M (Houston)?

YES	NO	N/A
<u>X</u>	<u> </u>	<u> </u>

What individual is responsible to make timely reports of the occurrence of emergencies to TOC P&M Environmental Affairs Department (Houston)?

Jim Kachtick

**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

**COMMUNITY RELATIONS/EMERGENCY PLANS
(2)**

With what local agencies has this facility discussed emergency procedures? (e.g. Sheriff's Department, Fire Department, etc.)

Channel Industries Mutual Aid Organization

Which of these agencies have been given Material Safety Data Sheets (MSDSs) or hazardous substance information sheets to make them more knowledgeable about the facility's principal products?

None

List the principal products for which MSDSs or hazardous substance information sheets have been provided to local agencies:

None

Does this facility have a "neighbor warning" plan established, such as coordination with local sheriff or police, telephone calling system, etc?

X
YES NO N/A

Briefly describe activities this facility has participated in the last 12 months to enhance community relations. Typical activities are providing speakers for civic clubs and other local organizations, participating in county (parish) fairs, supporting youth groups such as Little League, Scouting, etc., providing information to newspapers, radio or television.

Individuals from the Pasadena plant participate in various Tenneco-sponsored
activities, such as Volunteers In Action, Houston Chamber of Commerce, etc.

(1)

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**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

S U M M A R Y
(2)

THE FOLLOWING ITEMS REQUIRE LOCAL OPERATIONS MANAGEMENT ATTENTION:

ITEM #	DESCRIPTION	SPECIFIC IMPROVEMENT NEEDED	DOES LOCAL MGMT AGREE	INDIVIDUAL RESPONSIBLE FOR COMPLETION OF CORRECTIVE ACTION	DATE FOR COMPLETION OF IMPROVEMENTS

**TENNECO OIL P&M
ENVIRONMENTAL REVIEW**

TENNECO POLYMERS

SUMMARY

(3)

Unresolved questions raised as a result of the Environmental Review.

Question # _____

Responsible party: _____

Date for answer: _____

Answer:

Date answered: _____

COMMENTS

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