APPENDIX I

AIR PERMIT APPLICATIONS

State of Tennessee
Department of Environment and Conservation
Division of Air Pollution Control

Process Emission Source Number B-486-1
Page 1 of 15
Date DEC 0 2 1994

APC-20
PERMIT APPLICATION

PLEASE TYPE OR PRINT AND SUBMIT IN DUPLICATE FOR EACH EMISSION SOURCE, ATTACH APPROPRIATE SOURCE DESCRIPTION FORMS.

1. Organization's Legal Name Eastman Chemical Company			/// For /// APC	APC Company-Point No.
2. Mailing Address (St/Rd/P.O. Box) P. O. Box 1993				APC Log/Permit No.
City Kingsport	State TN	Zip Code 37662		Phone With Area Code (615)229-2000
3. Principal Technical Contact J. H. Albrecht				Phone With Area Code (615)229-5877
4. Site Address (St/Rd/Hwy) South Eastman Road				County Name Sullivan
City of Distance to Nearest Town Kingsport		Zip Code 37662		Phone With Area Code (615)229-2000
5. Emission Source No. B-486-1		Permit Renewal Yes ( ) No (X)		SIC No. 2869

6. Brief Description of Emission Source

Production of Methanol and Dimethyl Ether

7. Type of Permit Request (Complete One Line Only)

Construction (X)	Starting Date 3/1/95	Completion Date 12/31/96		
Operating ( )	Date Construction Started	Date Completed	Last Permit No. New Source	Emission Source Reference Number New Source
Location Transfer ( )	Transfer Date		Last Permit No.	Emission Source Reference Number

Address of Last Location

8. Describe Changes That Have Been Made to This Equipment or Operation Since the Last Construction or Operating Permit Application.

New Source.

9. Signature (Application Must Be Signed Before It Will Be Processed)

Barry M. Mitchell

10. Signer's name (Type or Print) B. M. Mitchell

Title Authorized Signatory

State of Tennessee
Department of Environment and Conservation
Division of Air Pollution Control
Page 1 of 3

Process Emission Source Number B-486-1
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Date DEC 0 2 1994

APC-21 & 24
PROCESS OR FUEL BURNING SOURCE DESCRIPTION.

1. Organization Name	Eastman Chemical Company	/// For /// APC	APC Company-Point No.
2. Emission Source No.	B-486-1		APC Log/Permit No.

3. Description of Process or Fuel Burning Unit
Production of Methanol and Dimethyl Ether

4. Normal Operation:	Hours/Day	Days/Week	Weeks/Year	Days/Year	Hours/Year
	24	7	52	365	8760

5. Type of Permit Application	(Check Below One Only)
Process Source: Apply for a separate permit for each source, (check at right, and complete lines 6, 7 and 8)	X
Process Source with in-process fuel: Products of combustion contact materials heated. Apply for a Separate permit for each source. (Check a right, and complete line 6, 7, 8, 10 to 14)	
Non-Process Fuel Burning Source: Products of combustion do not contact materials heated. Complete this form for each boiler or fuel burner and complete and emission point description form (APC-22) for each stack. (Check at right and complete lines 8 to 14)	

6. Type of Operation	Normal Batch Time	Normal Batches/Day
Continuous (X) Batch ( )		

7. Process Material Inputs and In-Process Solid Fuels	Diagram Reference*	Input Rates (Pounds/Hour)		(For APC Use Only) SCC Code
		Design	Actual	
1. Synthesis Gas	1	35,500	35,500	
2. Sodium Hydroxide	6	1	1	
3. Carbon Monoxide	2	4,600	4,600	
4. Hydrogen Purge	3	5,500	5,500	
5. Oil	5	6,200	6,200	
6. Catalyst	4	1,600	1,600	
7.				
Totals**			54,000	

* A Flow Diagram Must be Attached
**Total Rounded to 2 Significant Figures

8. Total Emissions for This PES (Tons/Year):

	Average	Maximum
Particulates	0.10	0.10
SO_2	0	0
NO_x	0	0
CO	2.60	2.60
VOC	4.56	4.56

Other (Specify)	Average	Maximum
CO_2	1.38	1.38
H_2	0.30	0.30

Process Emission Source
Number B-486-1
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9. Boiler or Burner Data. (Complete Lines 9 to 14 using a separate form for each boiler.)

Boiler Number	Stack Number **	Type of Firing***	Rated Boiler Horsepower	Rated Input Capacity (10^6 Btu/Hr)	Fuel Type	
					Primary	Secondary
Not Applicable						

Boiler Serial No.	Date Constructed	Last Modification Date

** Boilers with same stack will have same stack number.
*** Cyclone spreader (with or without reinjection), pulverized (wet or dry bottom, with or without reinjection), other stoker (specify type), hand fired, automatic, or other type (describe below in comments.)

10. Fuel Data. (Complete for a process source with in-process fuel or a nonprocess fuel burning source.) Not Applicable

Fuels Used	Annual Usage	Hourly Usage		Percent Sulfur	Percent Ash	Btu Value of Fuel	(For APC Only) SCC Code
		Design	Average				
Natural Gas:	10^6 CUFT	CUFT	CUFT	///	///	1,000	
#2 Fuel Oil:	10^3 GAL	GAL	GAL		///		
#5 Fuel Oil:	10^3 GAL	GAL	GAL		///		
#6 Fuel Oil:	10^3 GAL	GAL	GAL		///		
Coal:	TONS	LBS	LBS				
Wood:	TONS	LBS	LBS	///	///		
Liquid Propane	10^3 GAL	GAL	GAL	///	///	85,000	
Other: (Specify Type & Units)							

11. If Wood is Used as a Fuel, Specify Types and Estimate Percent by Weight of Bark. Not Applicable

12. If Wood is Used With Other Fuels, Specify Percent by Weight of Wood Charged to the Burner. Not Applicable

13. Comments:

14. If a Standby or Interruptible Fuel is Used, Give Type of Fuel, Annual Quantity Used, and the Schedule or Program for Use Not Applicable

Sulfur Content of Standby Fuel %	If Coal, Show Ash Content %
	Btu Value

Process Emission Source
Number B-486-1
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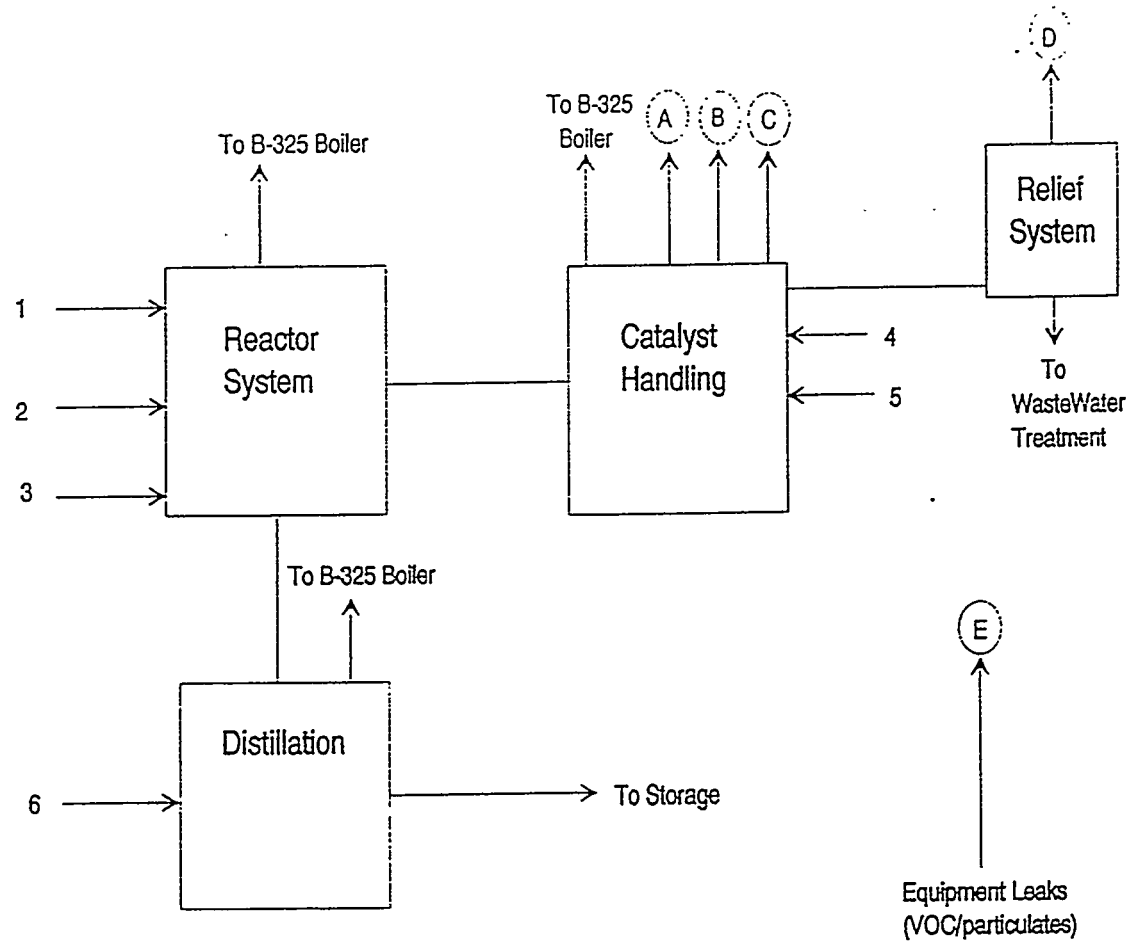
Flow Diagram

For Item 7 of APC-21 (& 24)



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL

PROCESS EMISSION SOURCE
NUMBER B-486-1
PAGE 5 OF 15
DATE DEC 0 2 1994
TANK ID NUMBER 29D-30
VENT ID NUMBER A

APC - 27
STORAGE TANK DESCRIPTION

PROCESS TANK
STORAGE TANK X

1. ORGANIZATION NAME - EASTMAN CHEMICAL COMPANY			FOR	APC COMPANY-POINT NO.
2. PROCESS EMISSION SOURCE NO. B-486-1			APC	APC SEQUENCE NO.
3. TANK LATITUDE 36 DEG 31' 7" N	TANK LONGITUDE 82 DEG 32' 48" W	UTM VERTICAL 4042400 N		UTM HORIZONTAL 361500 E
4. TANK ID NUMBER 29D-30	VENT ID NUMBER A	CONSTRUCTION DATE 3/1/95		
5. DIAMETER (FT) 9.0	HEIGHT (FT) 22.1	CAPACITY (GAL) 10500.		
6. CYLINDER (VERT) X	CYLINDER (HORZ)	SPHERE		OTHER (DESCRIBE)

7. TANK COLOR	WHITE	ALUMINUM		GRAY			OTHER (DESCRIBE)
		SPECULAR	DIFFUSE	LIGHT	MEDIUM	DARK	
A. ROOF:	X						
B. SHELL:					X		

8. PAINT CONDITION	GOOD X	POOR		NO PAINT
9. TANK TYPE	FIXED ROOF X	FLOATING ROOF	OPEN TOP	UNDERGROUND / OTHER (DESCRIBE)
10. INSULATED NONE	TEMPERATURE 77. DEGREES F	PRESSURE 14. PSIA		

11. FOR FLOATING ROOF TANKS COMPLETE: NOT APPLICABLE

A. ROOF TYPE	DOUBLE DECK	PONTOON	PAN	OTHER (DESCRIBE)
B. SEAL TYPE	SINGLE	DOUBLE		OTHER (DESCRIBE)
C. SHELL CONSTRUCTION	RIVETED	WELDED		OTHER (DESCRIBE)

12. LIST ALL LIQUIDS, VAPORS, GASES, OR MIXTURES TO BE STORED IN THIS TANK. GIVE THE PERCENT BY WEIGHT OF EACH COMPONENT. SEE APC - 27 SHEET 3.

13. OUTAGE: AVERAGE DISTANCE FROM TOP OF TANK TO LIQUID SURFACE (FEET)	AVG. THROUGHPUT (GALLONS / DAY)	MAXIMUM NO. OF TANK TURNOVERS PER YEAR
11.0	99.	3.

DATE DEC 0 2 1994
TANK ID NUMBER 29D-30
VENT ID NUMBER A

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL

APC - 27
STORAGE TANK DESCRIPTION

14. LOADING TYPE:	BOTTOM	SUBMERGED	VAPOR BALANCED	OTHER (DESCRIBE)
		X		

15. OPERATING HOURS/YEAR 8760. OPERATING DAYS/YEAR 365.

16. SPECIAL VAPOR CONTROL DEVICES:

CONSERVATION VENT

17. OPERATIONAL DATA:

CONTINUOUS FILLING AND DISCHARGING
AVERAGE DAILY LEVEL FLUCTUATION N/A
AVERAGE DAILY VOLUME FLUCTUATION N/A

BATCH FILLING
AVERAGE NUMBER OF GALLONS PER FILLING 6000.
AVERAGE NUMBER OF FILLS PER YEAR 6.

18. INERT GAS OR NITROGEN FLOW:
GAS FLOW 0.08300 SCFM
SATURATION OF GAS 100.0 %

19. TOTAL VOC EMISSIONS: Negligible TONS/YEAR

20. TOTAL PARTICULATE EMISSIONS: 0.00 TONS/YEAR

21. EMISSIONS ESTIMATION METHOD AP - 42

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL

APC - 27
STORAGE TANK DESCRIPTION

12. (CONTINUED)

COMPONENT	WEIGHT PERCENT	MOL. WEIGHT	VAPOR PRESSURE (PSIA) AT 77. DEG F
White Mineral Oil	100.0	450.0	0.0000

PROCESS EMISSION SOURCE
NUMBER B-486-1
PAGE 8 OF 15
DATE DEC 0 2 1994
TANK ID NUMBER 29D-31
VENT ID NUMBER B

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL

APC - 27
STORAGE TANK DESCRIPTION

PROCESS TANK X
STORAGE TANK

1. ORGANIZATION NAME - EASTMAN CHEMICAL COMPANY			FOR	APC COMPANY-POINT NO.
2. PROCESS EMISSION SOURCE NO. B-486-1			APC	APC SEQUENCE NO.
3. TANK LATITUDE 36 DEG 31′ 7" N	TANK LONGITUDE 82 DEG 32′ 48" W	UTM VERTICAL 4042400 N		UTM HORIZONTAL 361500 E
4. TANK ID NUMBER 29D-31	VENT ID NUMBER B	CONSTRUCTION DATE 3/1/95		
5. DIAMETER (FT) 4.0	HEIGHT (FT) 11.6	CAPACITY (GAL) 1000.		
6. CYLINDER (VERT) X	CYLINDER (HORZ)	SPHERE		OTHER (DESCRIBE)
7. TANK COLOR	WHITE	ALUMINUM	GRAY	OTHER (DESCRIBE)
		SPECULAR / DIFFUSE	LIGHT / MEDIUM / DARK	
A. ROOF:	X			
B. SHELL:			X	
8. PAINT CONDITION	GOOD X		POOR	NO PAINT
9. TANK TYPE	FIXED ROOF X	FLOATING ROOF	OPEN TOP	UNDERGROUND / OTHER (DESCRIBE)
10. INSULATED NONE	TEMPERATURE 122. DEGREES F	PRESSURE 15. PSIA		
11. FOR FLOATING ROOF TANKS COMPLETE: NOT APPLICABLE				
A. ROOF TYPE	DOUBLE DECK	PONTOON	PAN	OTHER (DESCRIBE)
B. SEAL TYPE	SINGLE	DOUBLE		OTHER (DESCRIBE)
C. SHELL CONSTRUCTION	RIVETED	WELDED		OTHER (DESCRIBE)
12. LIST ALL LIQUIDS, VAPORS, GASES, OR MIXTURES TO BE STORED IN THIS TANK. GIVE THE PERCENT BY WEIGHT OF EACH COMPONENT. SEE APC - 27 SHEET 3.				
13. OUTAGE: AVERAGE DISTANCE FROM TOP OF TANK TO LIQUID SURFACE (FEET) 5.8		AVG. THROUGHPUT (GALLONS / DAY) 51.		MAXIMUM NO. OF TANK TURNOVERS PER YEAR 19.

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL

DATE DEC 0 2 1994
TANK ID NUMBER 29D-31
VENT ID NUMBER B

APC - 27
STORAGE TANK DESCRIPTION

14. LOADING TYPE:	BOTTOM	SUBMERGED	VAPOR BALANCED	OTHER (DESCRIBE)
	X			

15. OPERATING HOURS/YEAR 8760. OPERATING DAYS/YEAR 365.

16. SPECIAL VAPOR CONTROL DEVICES:

CONSERVATION VENT

17. OPERATIONAL DATA:

CONTINUOUS FILLING AND DISCHARGING
AVERAGE DAILY LEVEL FLUCTUATION N/A
AVERAGE DAILY VOLUME FLUCTUATION N/A

BATCH FILLING
AVERAGE NUMBER OF GALLONS PER FILLING 500.
AVERAGE NUMBER OF FILLS PER YEAR 37.

18. INERT GAS OR NITROGEN FLOW:
GAS FLOW 0.08300 SCFM
SATURATION OF GAS 100.0 %

19. TOTAL VOC EMISSIONS: Negligible TONS/YEAR

20. TOTAL PARTICULATE EMISSIONS: 0.00 TONS/YEAR

21. EMISSIONS ESTIMATION METHOD AP - 42

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL

APC - 27
STORAGE TANK DESCRIPTION

12. (CONTINUED)

COMPONENT	WEIGHT PERCENT	MOL. WEIGHT	VAPOR PRESSURE (PSIA) AT 122. DEG F
White Mineral Oil	100.0	450.0	0.0000

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL

PROCESS EMISSION SOURCE
NUMBER B-486-1
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DATE DEC 0 2 1994
TANK ID NUMBER 29C-36
VENT ID NUMBER C

APC - 27
STORAGE TANK DESCRIPTION

PROCESS TANK X
STORAGE TANK

1. ORGANIZATION NAME - EASTMAN CHEMICAL COMPANY			FOR	APC COMPANY-POINT NO.
2. PROCESS EMISSION SOURCE NO. B-486-1			APC	APC SEQUENCE NO.
3. TANK LATITUDE 36 DEG 31′ 7" N	TANK LONGITUDE 82 DEG 32′ 48" W	UTM VERTICAL 4042400 N		UTM HORIZONTAL 361500 E
4. TANK ID NUMBER 29C-36	VENT ID NUMBER C	CONSTRUCTION DATE 3/1/95		
5. DIAMETER (FT) 2.0	HEIGHT (FT) 4.7	CAPACITY (GAL) 110.		
6. CYLINDER (VERT) X	CYLINDER (HORZ)	SPHERE		OTHER (DESCRIBE)

7. TANK COLOR	WHITE	ALUMINUM		GRAY			OTHER (DESCRIBE)
		SPECULAR	DIFFUSE	LIGHT	MEDIUM	DARK	
A. ROOF:	X						
B. SHELL:					X		

8. PAINT CONDITION	GOOD X	POOR		NO PAINT
9. TANK TYPE	FIXED ROOF X	FLOATING ROOF	OPEN TOP	UNDERGROUND	OTHER (DESCRIBE)
10. INSULATED NONE	TEMPERATURE 122. DEGREES F	PRESSURE 15. PSIA		

11. FOR FLOATING ROOF TANKS COMPLETE: NOT APPLICABLE

A. ROOF TYPE	DOUBLE DECK	PONTOON	PAN	OTHER (DESCRIBE)
B. SEAL TYPE	SINGLE	DOUBLE		OTHER (DESCRIBE)
C. SHELL CONSTRUCTION	RIVETED	WELDED		OTHER (DESCRIBE)

12. LIST ALL LIQUIDS, VAPORS, GASES, OR MIXTURES TO BE STORED IN THIS TANK. GIVE THE PERCENT BY WEIGHT OF EACH COMPONENT. SEE APC - 27 SHEET 3.

13. OUTAGE: AVERAGE DISTANCE FROM TOP OF TANK TO LIQUID SURFACE (FEET)	AVG. THROUGHPUT (GALLONS / DAY)	MAXIMUM NO. OF TANK TURNOVERS PER YEAR
2.3	50.	166.

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL

APC - 27
STORAGE TANK DESCRIPTION

14. LOADING TYPE:	BOTTOM	SUBMERGED	VAPOR BALANCED	OTHER (DESCRIBE)
		X		

15. OPERATING HOURS/YEAR 8760. OPERATING DAYS/YEAR 365.

16. SPECIAL VAPOR CONTROL DEVICES:

CONSERVATION VENT

17. OPERATIONAL DATA:

CONTINUOUS FILLING AND DISCHARGING
AVERAGE DAILY LEVEL FLUCTUATION N/A
AVERAGE DAILY VOLUME FLUCTUATION N/A

BATCH FILLING
AVERAGE NUMBER OF GALLONS PER FILLING 88.
AVERAGE NUMBER OF FILLS PER YEAR 208.

18. INERT GAS OR NITROGEN FLOW:
GAS FLOW 0.08300 SCFM
SATURATION OF GAS 100.0 %

19. TOTAL VOC EMISSIONS: Negligible TONS/YEAR

20. TOTAL PARTICULATE EMISSIONS: 0.00 TONS/YEAR

21. EMISSIONS ESTIMATION METHOD AP - 42

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL

APC - 27
STORAGE TANK DESCRIPTION

12. (CONTINUED)

COMPONENT	WEIGHT PERCENT	MOL. WEIGHT	VAPOR PRESSURE (PSIA) AT 122. DEG F
White Mineral Oil	100.0	450.0	0.0000

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Process Emission Source Number B-486-1
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APC-22
EMISSION POINT DESCRIPTION

1. Organization Name	Eastman Chemical Company		/// For /// APC	APC Company-Point No.
2. Emission Source No. B-486-1	Flow Diagram Point No. D			APC Sequence No.
3. Location:	Latitude 36° 31' 7" N	Longitude 82° 32' 48" W	UTM Vertical 4042400 N	UTM Horizontal 361500 E

4. Brief Emission Point Description
Vent from scrubber

5. Normal Operation:	Hours/Days 24	Days/Week 7	Weeks/Year 52	Days/Year 365	Hours/Year 8760

6. Stack or Emission Point Data:	Height Above Grade (FT) 60	Diameter (FT) 0.3	Temperature (°F) 100	% of Time Over 125°F 0	Direction of Exit (Up, Down, Horizontal) Up
Data at Exit Conditions:	Flow (Actual Ft^3/Min.) 0.13	Velocity (Ft/Sec) 0.03	Moisture (Volume %) 2		
Data at Standard Conditions: (70°F and 29.92 In. Hg.	Flow (Dry Std. Ft^3/Min.) 0.10	Velocity (Ft/Sec) 0.02			

7. Air Contaminants

	Emissions (Lbs/Hr)		Concentration		Emissions (TPY)		Emissions*	Control*	Control
	Average	Maximum	Average	Max.	Average	Maximum	Est. Method	Device	Eff. %
Particulates	-		**	**					
Sulfur Dioxide	-		***	***					
Nitrogen Oxides	-		PPM	PPM					
Organic Compounds	-		PPM	PPM					
Carbon Monoxide	0.2	0.2	PPM 400,000	PPM 400,000	0.88	0.88	2	000	-
Fluorides	-								
Other (Specify)	-								

8. Check Types of Monitoring and Recording Instruments That are Attached:
Opacity Monitor ( ). SO_2 Monitor ( ). NO_x Monitor ( ). Other (Specify in Comments) ( )
None (X)

9. Comments: (Continue on Back if Needed)

* Refer to the back of the permit application form for estimation method and control device codes.
** Exit gas particulate concentration units: process - grains/dry standard ft^3 (70°F); wood fired boilers - grains/dry standard ft^3 (70°F); all other boilers - lbs/million Btu heat input.
*** Exit gas sulfur dioxide concentrations units: process - ppm by volume, dry bases; boilers lbs/million Btu heat input.

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Process Emission Source
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APC-22
EMISSION POINT DESCRIPTION

1. Organization Name: Eastman Chemical Company		/// For /// APC	APC Company-Point No.
2. Emission Source No.: B-486-1	Flow Diagram Point No.: E		APC Sequence No.

3. Location:	Latitude	Longitude	UTM Vertical	UTM Horizontal
	36° 31' 7" N	82° 32' 48" W	4042400 N	361500 E

4. Brief Emission Point Description

Equipment Leaks

5. Normal Operation:	Hours/Days	Days/Week	Weeks/Year	Days/Year	Hours/Year
	24	7	52	365	8760

6. Stack or Emission Point Data:	Height Above Grade (FT)	Diameter (FT)	Temperature (°F)	% of Time Over 125°F	Direction of Exit (Up, Down, Horizontal)
	-	-	-	-	
Data at Exit Conditions:	Flow (Actual Ft^3/Min.)	Velocity (Ft/Sec)	Moisture (Volume %)		
	-	-	-		
Data at Standard Conditions: (70°F and 29.92 In. Hg.	Flow (Dry Std. Ft^3/Min.)	Velocity (Ft/Sec)			
	-	-			

7. Air Contaminants

	Emissions (Lbs/Hr)		Concentration		Emissions (TPY)		Emissions*	Control*	Control
	Average	Maximum	Average	Max.	Average	Maximum	Est. Method	Device	Eff. %
Particulates	-	-	** -	** -	-	0.10	3	000	-
Sulfur Dioxide	-		***	***					
Nitrogen Oxides	-		PPM	PPM					
Organic Compounds	-	-	PPM -	PPM -	-	4.56	5	000	-
Carbon Monoxide	-	-	PPM -	PPM -	-	1.72	5	000	-
Fluorides	-								
Other (Specify) Hydrogen	-	-	-	-	-	0.30	5	000	-

8. Check Types of Monitoring and Recording Instruments That are Attached:
Opacity Monitor ( ). SO_2 Monitor ( ). NO_x Monitor ( ). Other (Specify in Comments) (X)
None ( )

9. Comments: (Continue on Back if Needed)

Leak detection and repair as required by Title III.

* Refer to the back of the permit application form for estimation method and control device codes.

** Exit gas particulate concentration units: process - grains/dry standard ft^3 (70°F); wood fired boilers - grains/dry standard ft^3 (70°F); all other boilers - lbs/million Btu heat input.

*** Exit gas sulfur dioxide concentrations units: process - ppm by volume, dry bases; boilers lbs/million Btu heat input.

BACT/LAER Discussion

Flow Diagram Reference Point A, B, C

1. Description of Reference Point

Conservation vents for Tanks 29D-30, 29D-31, and 29C-36.

2. Description of Emissions

Inert gas with a potential for a small quantity of VOC as a result of tank filling operations, breathing losses, and inert gas purges on level devices.

3. Alternatives Considered

Because low VOC emissions are produced due to the low vapor pressure of the stored chemical, no emission abatement was considered for these sources.

4. Relative Cost of Alternative Systems

Not applicable.

5. Relative Efficiencies of Alternative Systems

Not applicable.

6. Process Steps Which Inherently Reduce Emission Levels

None.

7. Reasons for Selection of the System Chosen

The low vapor pressure of the stored chemical results in low VOC emissions without the installation of emission control equipment. Emissions are negligible.

BACT/LAER Discussion

Flow Diagram Reference Point D

1. Description of Reference Point

Vent from a water scrubber.

2. Description of Emissions

Emissions consist of carbon monoxide.

3. Alternatives Considered

Due to the low potential for emissions as a result of process constraints, no alternatives were considered.

4. Relative Cost of Alternative Systems

Not applicable.

5. Relative Efficiencies of Alternative Systems

Not applicable.

6. Process Steps Which Inherently Reduce Emission Levels

None.

7. Reasons for Selection of the System Chosen

Process constraints do not allow CO emissions to reach a significant level.

BACT/LAER Discussion

Flow Diagram Reference Point E

1. Description of Reference Point

Fugitive emissions from valves, flanges, and open equipment. Leak detection and repair will be employed per Title III.

2. Description of Emissions

These emissions consist of VOCs (including Methanol), CO, particulates, and other (H_2 and CO_2).

3. Alternatives Considered

Because of the applicability of the HON, no other alternatives were considered.

4. Relative Cost of Alternative Systems

Not applicable.

5. Relative Efficiencies of Alternative Systems

Not applicable.

6. Process Steps Which Inherently Reduce Emission Levels

None.

7. Reasons for Selection of the System Chosen

Leak detection and repair, as required by Title III, represent the best management practices available.

Process Emission Source
Number B-486-1
Date DEC 0 2 1994
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Emission Changes for New/Modified Sources

Vent Code	Type of Emission	* Application Max. Lb/Hr	This Application Max. Lb/Hr	Net Change Max. Lb/Hr	Hrs./Yr.	Net Change Max. TYP
A	VOC	Not Applicable	Negligible	-	8760	Negligible
B	VOC	Not Applicable	Negligible	-	8760	Negligible
C	VOC	Not Applicable	Negligible	-	8760	Negligible
D	CO	Not Applicable	0.20	+0.20	8760	+0.88
Fugitives E	VOC	Not Applicable	4.56 TPY	-	8760	+4.56
	CO	Not Applicable	1.72 TPY	-	8760	+1.72
	TSP	Not Applicable	0.10 TPY	-	8760	+0.10
	Others	Not Applicable	1.68 TPY	-	8760	+1.68

Total Emission Change:	max. lbs./hr.	max. TPY
VOC	-	+4.56
TSP	-	+0.10
SO_2	-	-
NO_x	-	-
CO	-	+2.60
Other	-	+1.68

* Previous Application Submittal Date
(New Source)

Clip
This was in the
12/

Fax 12

Wednesday 12/28/94
Kingsport Times News

PUBLIC NOTICE

The Tennessee Air Pollution Control Division (TAPCD) has received requests for construction of air contaminant sources as noted below. The proposed construction is subject to part 1200-3-9-.01 (1)(h) of the Tennessee Air Pollution Control Regulations, which requires a public notification and 30-day public comment period. Interested parties may express their comments and concerns in writing to Mr. John W. Walton, Director, Air Pollution Control Division, 8th Floor, L&C Annex, 401 Church Street, Nashville, TN 37243-1531 within thirty (30) days of the date of this notice. Questions concerning a source may be addressed to the assigned Division personnel at the same address or by calling 615-532-0554.

Individuals with disabilities who wish to participate should contact the Tennessee Department of Environment and Conservation to discuss any auxiliary aids or services needed to facilitate such participation. Such contact may be in person, by writing, telephone, or other means, and should be made no less than ten days prior to the end of the thirty (30) day public comment period to allow time to provide such aid or service. Contact the Tennessee Department of Environment and Conservation ADA Coordinator, 21st Floor, 401 Church St., Nashville TN 37248, (615) 532-0103. Hearing impaired callers may use the Tennessee Relay Service (1-800-848-0298).

Applicant	Source Description and Location	Division Personnel
Eddie Corp. / Speed Clip Div.	Casting Machine, Electric Melting Furnace, Die Casting Operation, and Two (2) Gas Pots 8 Boswell Drive, Bristol 37620	O. Aislen
King Pharmaceuticals, Inc.	94-1 Granulation equipment 501 Fifth Street, Bristol 37620	O. Aislen
Eastman Chemical Company	B-486-1 Production of Methanol & Dimethyl Ether South Eastman Road, Kingsport 37662	G. Acharia

APPENDIX II

SOLID WASTE DISPOSAL FACILITIES PERMITS

HAZARDOUS WASTE LANDFILL PERMITS

State of Tennessee
Department of Environment
and Conservation
Division of Solid Waste Management

Hazardous Waste Management Program
4th Floor, Customs House
701 Broadway
Nashville, TN 37243-1535
(615) 741-3424

PERMIT

Permittee: Tennessee Eastman Division, Eastman Chemical Company
Installation Identification Number: TND 00 337 6928
Permit Number: TNHW-019
Units: Hazardous Waste Surface Impoundments and Landfill
Modification Number: 1

Pursuant to the Tennessee Hazardous Waste Management Act, as amended (Tennessee Code Annotated 68-46-101 et seq.) and regulations (Chapter 1200-1-11) promulgated thereunder by the Tennessee Solid Waste Disposal Control Board, a permit is issued to Tennessee Eastman Division, Eastman Chemical Company (hereinafter called the Permittee), to operate a hazardous waste storage, treatment, and disposal facility for the management of hazardous waste, located in Kingsport, Tennessee, Sullivan County at latitude 36^0 31' 27" and longitude 82^0 33' 44". The Permittee will be allowed to store, treat, and dispose of hazardous waste subject to the terms of this permit.

The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions contained herein (including those in any attachments) and the applicable regulations contained in Rule Chapter 1200-1-11, as specified in the permit. Applicable regulations are those which are in effect on the date of issuance of the permit, except for the requirements of the annual permit maintenance fees of Rule 1200-1-11-.08 in which case the applicable regulations are those in effect on the date the appropriate fee is due.

Continuation, Transfer, Modification, Revocation and Reissuance, and Termination of this permit must comply with and conform to Rule 1200-1-11-.07(9).

This permit is based on the assumption that the information submitted in the original permit application and subsequent modifications thereto (hereinafter referred to as the application) is accurate and that the facility will be constructed, operated, maintained, and closed as specified in the application. The Permittee's failure in the application to disclose fully all relevant facts or the Permittee's misrepresentation of any relevant facts at any time

may be grounds for termination of this permit and potential enforcement action. The Commissioner may modify this permit if information is received which was not available at the time of permit issuance and which justifies the application of different permit conditions at the time of issuance. The Permittee must inform the Tennessee Department of Environment and Conservation, Division of Solid Waste Management, of any deviation from or changes in the information in the application which would affect the Permittee's ability to comply with the applicable regulations or permit conditions.

This permit is effective as of March 31, 1992, and shall remain in effect until September 30, 1998, unless revoked and reissued, or terminated, or continued.

Tom Tiesler, Director
Division of Solid Waste Management
Tennessee Department of Environment and Conservation

TT/HMB/F1151280

TENNESSEE AIR POLLUTION CONTROL BOARD
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37247-3101

Permit to Construct or Modify an Air Contaminant Source Issued Pursuant to Tennessee Air Quality Act

Date Issued: SEP 29 1992

Permit Number: 935213P

Date Expires: April 1, 1994

Issued To:

Tennessee Eastman Company

Installation Address:

Kingsport

Installation Description:
HWDU-1
Ash (From Incineration of Hazardous Waste)
Disposal Unit with Wet Suppression

Emission Source Reference No:
82-1009-66

The holder of this permit shall comply with the conditions contained in this permit as well as all applicable provisions of the Tennessee Air Pollution Control Regulations.
This is not a permit to operate.

CONDITIONS:

1. This permit does not cover any air contaminant source that does not conform to the conditions of this permit and the information given in the approved application.

2. Visible emissions shall not exceed 10 percent or greater opacity as determined by EPA Method 9, as published in the Federal Register, Volume 39, No. 219 on November 12, 1974. (6 minute average)

3. This permit shall serve as a temporary operating permit from initial start-up to the receipt of a standard operating permit, (regardless of the expiration date), provided the operating permit is applied for within thirty (30) days of initial start-up and the conditions of this permit and any applicable emission standards are met.

HAROLD E. HODGES, P.E.
TECHNICAL SECRETARY

F2052268

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule or Regulation of the State of Tennessee or any of its Political Subdivisions.

NON TRANSFERABLE

POST AT INSTALLATION ADDRESS

CN-0754

NON-HAZARDOUS WASTE LANDFILL PERMITS

State of Tennessee
Department of Health and Environment
Division of Solid Waste Management

Solid Waste Management Program
7th Floor, 150 9th Ave. North
Nashville, Tennessee 37203
(615) 741-3424

REGISTRATION AUTHORIZING SOLID WASTE
DISPOSAL ACTIVITIES IN
TENNESSEE

Registration Number: 1 049

Date Issued: JUL 12 1984

Issued to Tennessee Eastman Company for a facility located south of the Holston River South Fork on Tennessee Eastman Company property in Sullivan County.

Activities Authorized: Disposal by landfilling of fly ash and bottom ash from the coal-fired boilers, bottom ash from the incinerators, ash from the coal gasification plant, construction rubble and relatively inert solid wastes (i.e. gravel, dirt, wooden pallets, metal shavings).

By my signature, this registration is issued in compliance with the provisions of the Tennessee Solid Waste Disposal Act (Tennessee Code Annotated, Section 68-31-101, et. seq.), and applicable regulations developed pursuant to this law and in effect; and in accordance with the conditions and other terms set forth in this registration document and the attached Registration Conditions.

Tom Tiesler, Director
Division of Solid Waste Management

EC/ch SW/18

TENNESSEE AIR POLLUTION CONTROL BOARD
NASHVILLE, TENNESSEE 37219

Operating Permit issued pursuant to Tennessee Air Quality Act

Date Issued: December 11, 1980 Permit Number: 011138

Expires:

Issued to: Installation Address:

Tennessee Eastman Company Kingsport

Installation Description: Emission Source Reference No.:

Nontraditional fugitive dust sources (Not otherwise permitted) 82-00003

The holder of this permit shall comply with the conditions contained in this permit as well as all applicable provisions of the Tennessee Air Pollution Control Regulations.

CONDITIONS:

1. No person shall cause, suffer, allow, or permit any materials to be handled, transported, or stored; or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions as specified by the Technical Secretary, to prevent particulate matter from being airborne. Such reasonable precautions shall include, but not be limited to, the following:

   (a) Use, where possible, of water or chemicals for control of dust in demolition of existing buildings or structures, construction operations, grading of roads or the clearing of land:

   (b) Application of asphalt, oil, water or suitable chemicals on dirt roads, materials stock piles, and other surfaces which can create airborne dusts:

2. The attached plan is accepted by the Technical Secretary and adherence with this plan is a condition of this permit. Any deviation to lessen the requirements of this plan is a violation of this permit.

3. Should the Technical Secretary determine in his estimation that the plan of action outlined in condition #2 is not adequate to meet the objectives of the attainment plan or condition #1 of this permit, he shall provide the owner or operator with written notice that the plan is no longer acceptable. The owner or operator shall have 30 days to submit a new acceptable plan addressing the deficiencies noted by the Technical Secretary.

Continued on next page.

Harold E. Hodges

HAROLD E. HODGES, P. E.
TECHNICAL SECRETARY jdp

No authority is granted by this permit to operate, construct, or maintain any installation in violation of any law, statute, code, ordinance, rule or regulation of the State of Tennessee or any of its political subdivisions.

NON TRANSFERABLE

POST OR FILE AT INSTALLATION ADDRESS

4. For industrial traffic and parking areas, the Technical Secretary will use the following criterion to determine conformance with condition #1 of the permit and the measures required under condition #2 of the permit to maintain the traffic and parking areas reasonably dust free:

   - 10% opacity for any 2 minutes (2 minute average) conducted in the manner prescribed by the Technical Secretary.

5. No person shall cause, suffer, allow or permit discharge of a visible emission from any fugitive dust source with an opacity in excess of ten (10) percent for an aggregate of fifteen (15) minutes. Readings are to be taken across the narrower direction if the generation site is rectangular or oblong and are to be perpendicular to the wind direction ($\pm 30^0$). Readings will be taken approximately every 15 seconds for any consecutive fifteen minute period and an arithmetic average used to determine compliance. Any other items not covered here will be in accordance with the general specifications of reference method as specified in part 1200-3-16-.01-(5)-(g)-9.

INCINERATOR PERMIT

State of Tennessee
Department of Health and Environment
Division of Solid Waste Management

Hazardous Waste Management Program
4th Floor, Customs House
701 Broadway
Nashville, Tennessee 37219-5403
(615) 741-3424

PERMIT

Permittee: Tennessee Eastman Company, Division of Eastman Kodak Company
Installation Identification Number: TND 00 337 6928
Unit(s): Incinerators (3)
Permit Number: TNHW-025

Pursuant to the Tennessee Hazardous Waste Management Act, as amended (Tennessee Code Annotated 68-46-101 et seq.), and regulations (Chapter 1200-1-11) promulgated thereunder by the Tennessee Department of Health and Environment (TDHE) and the Tennessee Solid Waste Disposal Control Board, a permit is issued to Tennessee Eastman Company (hereinafter also called the Permittee or TEC), to operate a hazardous waste treatment facility for the management of hazardous wastes, located in Kingsport, Tennessee, 37662 at latitude 36° 31' 27" and longitude 82° 33' 44". The Permittee will be allowed to treat hazardous waste by incineration in two rotary kilns and a liquid destructor in accordance with the conditions of this Permit.

The Permittee must comply with all terms and conditions of this permit. This permit consists of the conditions contained herein (including those in any attachments) and the applicable regulations contained in Rule Chapter 1200-1-11, as specified in the permit. Applicable regulations are those which are in effect on the date of issuance of the permit, except for the applicable fee requirements of Rule 1200-1-11-.08, applicable land disposal restriction requirements of Rule 1200-1-11-.10, and the permit continuation, transfer, modification, revocation and reissuance, and termination provisions at Rule 1200-1-11-.07(9). Any lawfully promulgated modification made to these excepted regulations during the effective life of this permit shall be considered applicable regulations.

Continuation, Transfer, Modification, Revocation and Reissuance, and Termination of this permit must comply with and conform to Rule 1200-1-11-.07(9).

This permit is based on the assumption that the information submitted in the original permit application and subsequent modifications thereto (hereinafter referred to as the application) is accurate and that the facility will be constructed, operated, maintained, and closed as specified in the application. The Permittee's failure in the application to disclose fully all relevant facts, or the Permittee's misrepresentation of any relevant facts at any time may be grounds for termination of this permit and potential enforcement action. The Commissioner may modify this permit if information is received which was not available at the time of permit issuance and which justifies the application of different permit conditions at the time of issuance. The Permittee must inform the Tennessee Department of Health and Environment, Division of Solid Waste

BOILER PERMITS

August 19, 1992 This is the correct date per green card

CERTIFIED

U.S. Environmental Protection Agency
Region IV
4WD-RCRA
Mr. G. Alan Farmer
Chief, RCRA Branch
Attention: BIF
345 Courtland Street, N. E.
Atlanta, Georgia 30365

Dear Sir:

Subject: Certification of Compliance for Tennessee Eastman Division's Boiler Nos. 18, 19, 20, 23, 24, and 30

On August 21, 1991, Tennessee Eastman Division, Eastman Chemical Company, submitted to the U. S. Environmental Protection Agency (EPA) certifications of precompliance for boiler nos. 18-24 in Building 83 Powerhouse and boiler no. 30 in the Building 325 Powerhouse pursuant to EPA's February 21, 1991 Boiler and Industrial Furnace rule.

In April - June of 1992, Tennessee Eastman Division conducted tests on boiler nos. 19, 23, and 30 according to the test plan submitted to EPA on March 6, 1992. Based on the results of the compliance tests, Tennessee Eastman Division is now submitting the enclosed certification of compliance for boiler nos. 18, 19, 20, 23, 24, and 30. The certification for boiler nos. 21 and 22 was previously submitted on September 13, 1991 and was revised on August 19, 1992.

If you have any questions concerning this submittal, please contact me at (615) 229-3991.

Very truly yours,

C.W. Bridges
C. W. Bridges
Environmental Affairs

cwb-2001.doc

Enclosure

cc: Tom Tiesler, Director
Tennessee Division of Solid Waste Management
701 Broadway
Nashville, Tennessee 37243-1535
4th Floor, Customs House

Eastman Chemical Company
Tennessee Eastman Division
Eastman Road; P.O. Box 511
Kingsport, Tennessee 37662
(615) 229-2000

EPA Facility ID No. TND003376928

Region IV, EPA

Certification of Compliance
for
Eastman Chemical Company, Tennessee Eastman Division
Boiler Nos. 18, 19, 20, 23, 24 & 30

August 21, 1992

Submitted to

The United States Environmental Protection Agency

jbr/BIF2-001

Eastman Chemical Company, Tennessee Eastman Division
Certification of Compliance for Tennessee Eastman Division
Boilers Nos. 18, 19, 20, 23, 24 & 30
August 21, 1992

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6.0 Certification Statement

I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation. Copies of all emissions tests, dispersion modeling results and other information used to determine conformance with the requirements of 40 CFR 266.103(c) are available at the facility and can be obtained from the facility contact person listed above. Based on my inquiry of persons who manage the facility, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also acknowledge that the operating conditions established in the certification pursuant to 40 CFR 266.103(c)(4)(iv) are enforceable limits at which the facility can legally operate during interim status until a revised certification of compliance is submitted.

John F. Webb — 8/18/92

Mr. John F. Webb — Date
Superintendent, Power & Services Division

jbr/BIF2-012

APPENDIX III

WATER PERMIT

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER POLLUTION CONTROL
401 CHURCH STREET
L & C ANNEX 6TH FLOOR
NASHVILLE TN 37243-1534

August 31, 1993

Dr. Robert L. Barnes, Mgr., Env. Affairs
Tennessee Eastman Division
Division of Eastman Kodak Company
P.O. Box 1993
Kingsport, Tennessee 37662-5393

Subject: **NPDES Permit No. TN0002640**
Tennessee Eastman Division
Kingsport, Sullivan County, Tennessee

In accordance with the provisions of the Tennessee Water Quality Control Act, Tennessee Code Annotated, Sections 69-3-101 through 69-3-120, the enclosed NPDES Permit is hereby issued by the Division of Water Pollution Control. The continuance and/or reissuance of this NPDES Permit is contingent upon your meeting the conditions and requirements as stated therein.

Please be advised that you have the right to appeal any of the provisions establised in this NPDES Permit, in accordance with Tennessee Code Annotated, Section 69-3-110, and the General Regulations of the Tennessee Water Quality Control Board. If you elect to appeal, you should file a petition within thirty (30) days of the receipt of this permit.

If you have questions concerning this correspondence or if we may be of assistance to you in any way, please contact Mr. Stephen B. Letendre at (615) 532-0673.

Sincerely,

Thomas E. Roehm, Manager
Division of Water Pollution Control
Industrial Facilities Section

TER/sbl

02640FPT.DOC

Enclosure

cc: Division of Water Pollution Control, Permits Section
Division of Water Pollution Control, Johnson City Field Office

STATE OF TENNESSEE

NPDES PERMIT

NO. TN0002640

Authorization to discharge under the
National Pollution Discharge Elimination System
Issued By

DIVISION OF WATER POLLUTION CONTROL
401 CHURCH STREET
L & C ANNEX 6TH FLOOR
NASHVILLE TN 37243-1534

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101, et seq.) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.)

Discharger: **Tennessee Eastman Division, Division of Eastman Kodak Company**

is authorized to discharge: uncontaminated cooling water, miscellaneous low level contaminants and storm water runoff through Outfall 001, treated process wastewater and storm water runoff through Outfall 002, uncontaminated cooling water, cooling tower blowdown, ash settling basin effluent, intake water, cooling system agents and storm water runoff through Outfall 004, uncontaminated cooling water, intake water, cooling system agents and storm water runoff through Outfall 005, uncontaminated cooling water, ash settling basin effluent, intake water, cooling system agents and storm water runoff through Outfall 006, and intermittent discharges associated with various miscellaneous activities, sources, and storm water runoff through seventy-seven (77) storm water outfalls numbered Outfalls S01 through S84 (not all inclusive)

from a facility located: in Kingsport, Sullivan County, Tennessee

to receiving waters named: the South Fork of the Holston River, Big Sluice of South Fork of the Holston River, and Horse Creek

in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

This permit shall become effective on: September 1, 1993
This permit shall expire on: August 30, 1998
Issuance date: August 31, 1993

Paul E. Davis, Director
Division of Water Pollution Control

02640CVR.DOC

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RATIONALE

APPENDIX

SBL

02640CON.DOC

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Tennessee Eastman Division (Eastman), Division of Eastman Kodak Company, is authorized to discharge uncontaminated cooling water, miscellaneous low level contaminants and storm water runoff through Outfall 001, treated process wastewater and storm water runoff through Outfall 002, uncontaminated cooling water, cooling tower blowdown, ash settling basin effluent, intake water, cooling system agents and storm water runoff through Outfall 004, uncontaminated cooling water, intake water, cooling system agents and storm water runoff through Outfall 005, uncontaminated cooling water, ash settling basin effluent, intake water, cooling system agents and storm water runoff through Outfall 006, and intermittent discharges associated with various miscellaneous activities, sources, and storm water runoff through seventy-seven (77) storm water outfalls numbered Outfalls S01 through S84 (not all inclusive) from a facility located in Kingsport, Sullivan County, Tennessee to the South Fork of the Holston River, Big Sluice of South Fork of the Holston River, and Horse Creek.

Storm water discharges from Outfalls 001, 002, 004, 005, and 006 are being permitted simultaneously with the process and/or nonprocess wastewater discharges from these outfalls. No separate storm water outfalls will be designated in these instances.

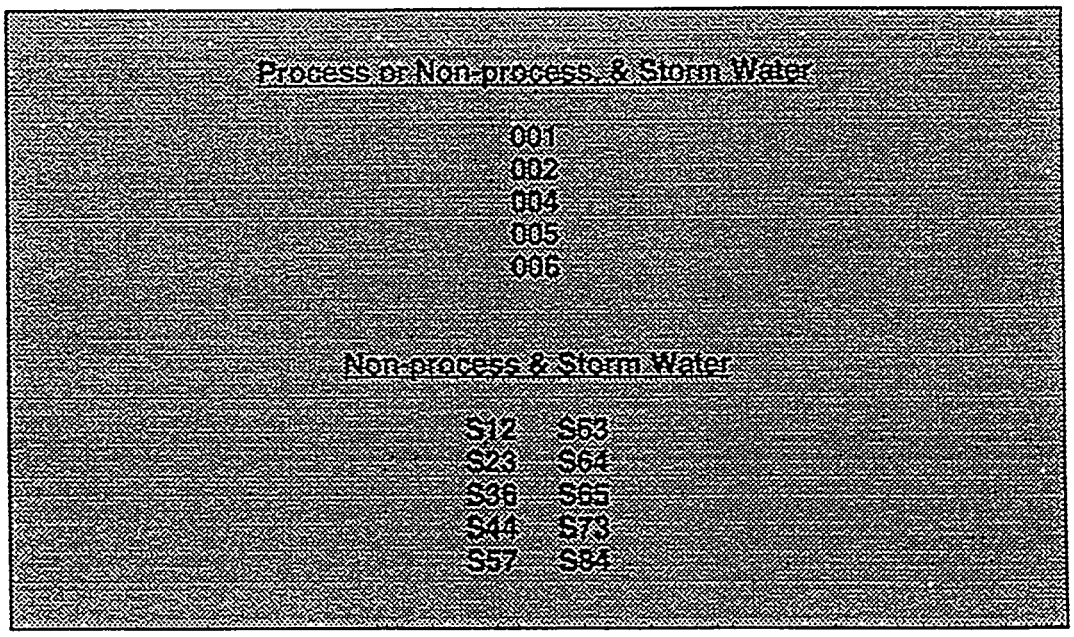
The seventy-seven (77) storm water outfalls are designated as follows:

Storm Water Outfalls
S01 - S33, S36 - S39, S41, S43 - S60, S63 - S70, S72 - 75, S77, S78, S81, S84

Only storm water Outfalls S12, S23, S36, S44, S57, S63, S64, S65, S73, and S84 need to be monitored for storm water discharges for the purpose of this permit. These ten (10) storm water outfalls are considered by the Division of Water Pollution Control (the "Division") to be "substantially identical" to, per 40 CFR 122.21(g)(7), and representative of the storm water discharges from all seventy-seven (77) storm water outfalls.

In particular, the non-storm water discharges authorized by this permit through these seventy-seven (77) outfalls include intermittent discharges from fire-fighting activities, fire hydrant flushings, potable water sources including waterline flushings, irrigation drainage, lawn watering, routine external building washdown (which does not use detergent or other similar compounds), pavement washwaters where spills or leaks of toxic or hazardous material have not occurred (unless all spilled material has been removed) and where detergents are not used, air conditioning condensate, springs, uncountaminated groundwater, existing foundation or footing drains where flows are not contamnated with process materials such as solvents, uncontaminated and/or filtered river water not previously used as noncontact or contact cooling waters or for process purposes.

In summary, a group of fifteen (15) total monitored discharges need to be sampled and tested by the permittee in accordance with the conditions set forth in this permit. These fifteen (15) monitored discharges are tabulated here:



These discharges shall be limited and monitored by the permittee as specified herein:

PERMIT LIMITS

OUTFALL 002

TREATED INDUSTRIAL PROCESS WASTEWATER AND STORM WATER RUNOFF

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITATIONS				MONITORING REQUIREMENTS	
	MONTHLY		DAILY			
	AVG. CONC. (mg/l)	AVG. AMNT. (lb/day)	MAX. CONC. (mg/l)	MAX. AMNT. (lb/day)	MSRMNT. FRQNCY.	SAMPLE TYPE
FLOW	REPORT (MGD)*		REPORT (MGD)*		Continuous	Recorder
CBOD5 (MAY 1 – SEPT. 30)	---	4000	---	8500	Daily	Composite
CBOD5 (OCT. 1 – APR. 30)	---	6000	---	13000	Daily	Composite
AMMONIA (as N)	30.5	6000	61	12000	Daily	Composite
TSS	---	11111	---	35954	Daily	Composite
pH	6.0–9.0		6.0–9.0		Continuous	---
96HR LC50 **	Survival in 16.29% Effluent				1/2 Months	Composite
NOEC **	Survival, Growth, Repro. in 4.89% Effluent				1/2 Months	Composite
CHROMIUM, TTL.	0.050	12.51	0.100	25.02	1/Week	Composite
COPPER, TTL.	0.050	12.51	0.100	25.02	1/Week	Composite
LEAD, TTL.	0.172	43.03	0.690	172.64	1/Week	Composite
NICKEL, TTL.	1.690	422.84	3.980	995.60	1/Week	Composite
ZINC, TTL.	0.635	158.88	1.270	317.75	1/Week	Composite
CYANIDE	0.058	14.51	0.419	104.83	1/Week	Composite
ACENAPHTHENE	0.022	5.50	0.059	14.76	1/Quarter	Grab
ACRYLONITRILE	0.096	24.02	0.242	60.55	1/Quarter	Grab
BENZENE	0.037	9.26	0.136	34.03	1/Quarter	Grab
CARBON TETRACHLORIDE	0.018	4.50	0.038	9.51	1/Quarter	Grab
CHLOROBENZENE	0.015	3.75	0.028	7.01	1/Quarter	Grab
1,2,4–TRICHLOROBENZENE	0.068	17.01	0.140	35.03	1/Quarter	Grab
HEXACHLOROBENZENE	0.000186	0.05	0.000372	0.09	1/Quarter	Grab
1,2–DICHLOROETHANE	0.068	17.01	0.211	52.79	1/Quarter	Grab
1,1,1–TRICHLOROETHANE	0.021	5.25	0.054	13.51	1/Quarter	Grab
HEXACHLOROETHANE	0.021	5.25	0.054	13.51	1/Quarter	Grab
1,,1–DICHLOROETHANE	0.022	5.50	0.059	14.76	1/Quarter	Grab
1,1,2–TRICHLOROETHANE	0.021	5.25	0.054	13.51	1/Quarter	Grab
CHLOROETHANE	0.104	26.02	0.268	67.05	1/Quarter	Grab
CHLOROFORM	0.021	5.25	0.045	11.51	1/Quarter	Grab
2–CHLOROPHENOL	0.031	7.76	0.098	24.52	1/Quarter	Grab
1,2–DICHLOROBENZENE	0.077	19.27	0.163	40.78	1/Quarter	Grab
1,3–DICHLOROBENZENE	0.031	7.76	0.044	11.01	1/Quarter	Grab

Permit Limits Continued on Next Page...

Permit Limits Continued from Previous Page...

OUTFALL 002

1,4–DICHLOROBENZENE	0.015	3.75	0.028	7.01	1/Quarter	Grab
1,1–DICHLOROETHYLENE	0.016	4.00	0.025	6.26	1/Quarter	Grab
1,2–TRANS–DICHLOROETHYLENE	0.021	5.25	0.054	13.51	1/Quarter	Grab
2,4–DICHLOROPHENOL	0.039	9.76	0.112	28.02	1/Quarter	Grab
1,2–DICHLOROPROPANE	0.153	38.28	0.230	57.55	1/Quarter	Grab
1,3–DICHLOROPROPYLENE	0.029	7.26	0.044	11.01	1/Quarter	Grab
2,4–DIMETHYLPHENOL	0.018	4.50	0.036	9.01	1/Quarter	Grab
2,4–DINITROTOLUENE	0.113	28.27	0.285	71.31	1/Quarter	Grab
2,6–DINITROTOLUENE	0.255	63.80	0.641	160.38	1/Quarter	Grab
ETHYLBENZENE	0.032	8.01	0.108	27.02	1/Quarter	Grab
FLUORANTHENE	0.025	6.26	0.068	17.01	1/Quarter	Grab
METHYLENE CHLORIDE	0.040	10.01	0.089	22.27	1/Quarter	Grab
METHYL CHLORIDE	0.086	21.52	0.190	47.54	1/Quarter	Grab
HEXACHLOROBUTADIENE	0.020	5.00	0.049	12.26	1/Quarter	Grab
NAPHTHALENE	0.022	5.50	0.059	14.76	1/Quarter	Grab
NITROBENZENE	0.027	6.76	0.068	17.01	1/Quarter	Grab
2–NITROPHENOL	0.041	10.26	0.069	17.26	1/Quarter	Grab
4–NITROPHENOL	0.072	18.01	0.124	31.02	1/Quarter	Grab
2,4–DINITROPHENOL	0.073	17.76	0.123	30.77	1/Quarter	Grab
4,6–DINITRO–O–CRESOL	0.078	19.52	0.277	69.31	1/Quarter	Grab
PHENOL	0.015	3.75	0.026	6.51	1/Quarter	Grab
BIS(2–ETHYLHEXYL) PHTHALATE	0.103	25.77	0.279	69.81	1/Quarter	Grab
DI–N–BUTYL PHTHALATE	0.027	6.76	0.057	14.26	1/Quarter	Grab
DIETHYL PHTHALATE	0.081	20.27	0.203	50.79	1/Quarter	Grab
DIMETHYL PHTHALATE	0.019	4.75	0.047	11.76	1/Quarter	Grab
BENZO(A)ANTHRACENE	0.008	2.00	0.016	4.06	1/Quarter	Grab
BENZO(A)PYRENE	0.008	2.00	0.016	4.06	1/Quarter	Grab
3,4–BENZOFLUORANTHENE	0.008	2.00	0.016	4.06	1/Quarter	Grab
BENZO(K)FLUORANTHENE	0.008	2.00	0.016	4.06	1/Quarter	Grab
CHRYSENE	0.001	0.25	0.002	0.41	1/Quarter	Grab
ACENAPHTHYLENE	0.008	2.00	0.016	4.06	1/Quarter	Grab
ANTHRACENE	0.001	0.25	0.002	0.41	1/Quarter	Grab
FLUORENE	0.001	0.25	0.002	0.41	1/Quarter	Grab
PHENANTHRENE	0.001	0.25	0.002	0.41	1/Quarter	Grab
PYRENE	0.001	0.25	0.002	0.41	1/Quarter	Grab
TETRACHLOROETHYLENE	0.022	5.50	0.056	14.01	1/Quarter	Grab
TOLUENE	0.026	6.51	0.080	20.02	1/Quarter	Grab
TRICHLOROETHYLENE	0.021	5.25	0.054	13.51	1/Quarter	Grab
VINYL CHLORIDE	0.104	26.02	0.268	67.05	1/Quarter	Grab

* Flow shall be reported in Million Gallons Per Day (MGD).
** See Part III for monitoring requirements of toxicity tests.

NOTE: Effluent Limitations prescribed here apply to NET ADDITIONS to treated intake water except for TSS and pH which are Gross Limits. The Division is granting this request for net additions pursuant to 40 CFR, Part 122.45(g) and contingent upon the requirements set forth therein.

PERMIT LIMITS

OUTFALLS 001, 004, 005, & 006

UNCONTAMINATED COOLING WATER, COOLING TOWER BLOWDOWN, ASH SETTLING BASIN EFFLUENT, LOW LEVEL CONTAMINANTS, INTAKE WATER, COOLING SYSTEM AGENTS, AND STORM WATER RUNOFF

	EFFLUENT LIMITATIONS				MONITORING REQUIREMENTS	
	MONTHLY		DAILY			
EFFLUENT CHARACTERISTIC	AVG. CONC. (mg/l)	AVG. AMNT. (lb/day)	MAX. CONC. (mg/l)	MAX. AMNT. (lb/day)	MSRMNT. FRQNCY.	SAMPLE TYPE
FLOW	Report (MGD) *		Report (MGD) *		Continuous	Recorder
OIL & GREASE	15	--	30	--	1/Month	Grab
pH	Range 6.0 – 9.0 **		Range 6.0 – 9.0 **		Daily	Grab
TEMPERATURE	29.4 Deg. C		30.5 Deg. C ****		Continuous	Recorder
TSS *****	--	--	Report	--	1/Month	Composite
96HR LC50	See Note ***				Semi-annual	Composite
NOEC	See Note ***				Semi-annual	Composite

* Flow shall be reported in Million Gallons Per Day (MGD).

** pH analyses shall be performed within fifteen (15) minutes of sample collection.

*** See Part III for the toxicity limits and monitoring frequencies for toxicity tests.

**** Based on information provided by the permittee, it has been determined pursuant to Section 316(a) of the Federal Water Pollution Control Act, as amended, (the "Act"), that (1) the water quality standards relating to heat and the thermal discharge requirements of Section 301 of the Act as they apply to the permittee's discharge are more stringent than necessary to provide for the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the receiving water; and (2) alternative effluent limitations relating to heat and thermal discharge requirements, such that the flow and temperature shall be controlled so that the stream temperature does not exceed 30.5 Deg.C at the point of discharge (unless caused by natural conditions) do provide for such protection and propagation. Therefore, the water quality standards relating to heat and the thermal discharge requirements of Section 301 of the Act and similar standards as provided by the Tennessee Water Quality Control Act (TCA 69-3-101 et seq.) are hereby modified in accordance with Section 316(a) of the Act and an alternative effluent limitation is imposed such that the permittee shall control the flow and temperature of the effluent from these outfalls such that the effluent does not exceed 30.5 Deg.C at the points of discharge.

*****For the purpose of sampling these outfalls, the term "Composite" may be representative of samples collected continuously over a period of 24 hours at a rate proportional to time.

PERMIT LIMITS

OUTFALLS S12, S23, S36, S44, S57, S63, S64, S65, S73, S84

MISCELLANEOUS NONPROCESS WASTEWATER AND STORM WATER RUNOFF

EFFLUENT CHARACTERISTIC	EFFLUENT LIMITATIONS				MONITORING REQUIREMENTS	
	MONTHLY		DAILY			
	AVG. CONC. (mg/l)	AVG. AMNT. (lb/day)	MAX. CONC. (mg/l)	MAX. AMNT. (lb/day)	MSRMNT. FRQNCY.*****	SAMPLE TYPE
FLOW	Report (GPD) *		Report (GPD) *		Semi-annual	Estimate****
OIL & GREASE	Report	--	Report	--	Semi-annual	Grab
pH	Report **		Report **		Semi-annual	Grab
TSS	Report	--	Report	--	Semi-annual	Grab
48HR LC50	--		Report ***		Once ***	Grab

* Flow shall be reported in Gallons Per Day (GPD).
** pH analyses shall be performed within fifteen (15) minutes of sample collection.
*** See Part III for the monitoring frequencies for toxicity tests. Toxicity tests shall be conducted once during the first year of this permit for Outfalls S12, S23, S36, S44, and S57. Toxicity tests shall be conducted once during the second year of this permit for Outfalls S63, S64, S65, S73, S84.
**** An estimate of the flow shall be made using on-site measurements of the amount of rainfall, duration of the rainfall, and the drainage area of the outfall.
*****Storm water runoff samples shall be collected within 30 minutes of initiation of flow, as practicable, during a storm event that is greater than 0.1 inches and that occurs after a period of at least 72 hours after any previous storm event with rainfall of 0.1 inches or greater.

Additional monitoring requirements and conditions applicable to all outfalls include:

Discharges of storm water runoff from land disturbed by construction activities in drainage areas to outfalls covered under the conditions of this permit are hereby authorized. the permittee shall develop and implement erosion and sediment control plans fifteen (15) days prior to the start of each individual project whose area of land disturbance is equal to or greater than five (5) acres.

There shall be no distinctly visible floating scum, oil or other matter contained in the wastewater discharge. The wastewater discharge must not cause an objectionable color contrast in the receiving stream.

The wastewater discharge must result in no other materials in concentrations sufficient to be hazardous or otherwise detrimental to humans, livestock, wildlife, plant life, or fish and aquatic life in the receiving stream.

Sludge or any other material removed by any treatment works must be disposed of in a manner which prevents its entrance into or pollution of any surface or subsurface waters. Additionally, the disposal of such sludge or other material must be in compliance with the Tennessee Solid Waste Disposal Act, TCA 68-31-101 et seq. or the Tennessee Hazardous Waste Management Act, TCA 68-46-101 et seq.

B. MONITORING PROCEDURES

1. Representative Sampling

Samples and measurements taken in compliance with the monitoring requirements specified herein shall be representative of the volume and nature of the monitored discharge, and shall be taken after treatment, as applicable, and prior to mixing with uncontaminated stormwater runoff (where warranted) or the receiving stream.

2. Test Procedures

a. Test procedures for the analysis of pollutants shall conform to regulations published pursuant to Section 304 (h) of the Clean Water Act (the "Act"), as amended, under which such procedures may be required.

b. Unless otherwise noted in the permit, all pollutant parameters shall be determined according to methods prescribed in Title 40, CFR, Part 136, as amended, promulgated pursuant to Section 304 (h) of the Act.

3. Recording of Results

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

a. The exact place, date and time of sampling;

b. The exact person(s) collecting samples;

c. The dates and times the analyses were performed;

d. The person(s) or laboratory who performed the analyses;

e. The analytical techniques or methods used, and;

f. The results of all required analyses.

4. Records Retention

All records and information resulting from the monitoring activities required by this permit including all records of analyses performed and calibration and maintenance of instrumentation shall be retained for a minimum of three (3) years, or longer, if requested by the Division of Water Pollution Control.

C. DEFINITIONS

The ***Monthly Average Concentration***, a limitation on the discharge concentration, in milligrams per liter (mg/l), is the arithmetic mean of all daily concentrations determined in a one-month period. For parameters measured less than twice per month, representing a minimum of two (2) separate daily concentrations, only the daily maximum value shall be reported.

The ***Monthly Average Amount***, a discharge limitation measured in pounds per day (lb/day), is the total amount of any pollutant in the discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by a permit, the monthly average amount shall be determined by the summation of all the measured daily discharges by weight divided by the number of days during the calendar month when the measurements were made. For parameters measured less than twice per month, representing a minimum of two (2) separate daily amounts, only the daily maximum value shall be reported. Notwithstanding the above, the Division of Water Pollution Control may monitor or may require that the permittee monitor the discharge in order to determine compliance with the monthly average amount.

The ***Daily Maximum Concentration*** is a limitation on the average concentration, in milligrams per liter (mg/l), of the discharge during any calendar day. When a proportional-to-flow composite sampling device is used, the daily concentration is the concentration of that 24-hour composite; when other sampling means are used, the daily concentration is the arithmetic mean of the concentrations of equal volume samples collected during any calendar day or sampling period.

The ***Daily Maximum Amount***, is a limitation measured in pounds per day (lb/day), on the total amount of any pollutant in the discharge by weight during any calendar day.

The ***Instantaneous Concentration*** is a limitation on the concentration, in milligrams per liter (mg/l), of any pollutant contained in the discharge determined from a grab sample taken at any point in time.

A ***Composite Sample***, for the purposes of this permit, is a sample collected continuously over a period of 24 hours at a rate proportional to the flow unless otherwise stipulated in this permit.

For the purpose of this permit, a ***Calendar Day*** is defined as any 24-hour period.

For the purpose of this permit, a ***Quarter*** is defined as any one of the following three month periods: January 1 through March 31, April 1 through June 30, July 1 through September 30, or October 1 through December 31.

For the purpose of this permit, ***Annually*** is defined as a period of twelve (12) consecutive months beginning with the date of issuance of this permit.

For the purpose of this permit, ***Semi-annually*** means the same as "once every six months." Measurements of the effluent characteristics concentrations may be made anytime during a six-month period beginning from the issuance date of this permit so long as the second set of measurements for a given 12 month period are made approximately six-months subsequent to that time.

D. REPORTING

1. Monitoring Results

Monitoring results shall be recorded monthly and submitted monthly for Outfalls 001, 002, 004, 005, and 006 using Discharge Monitoring Report (DMR) forms supplied by the Division of Water Pollution Control or an alternative form approved by the Division. Monitoring results shall be recorded semi-annually and submitted annually for the ten (10) representative storm water outfalls numbered Outfalls S12, S23, S36, S44, S57, S63, S64, S65, S73, and S84. Submittals shall be postmarked no later than 15 days after the completion of the reporting period. The top two copies of each report are to be submitted. A copy should be retained for the permittee's files. DMR's and any communication regarding compliance with the conditions of this permit must be sent to:

TENNESSEE DEPT OF ENVIRONMENT & CONSERVATION
DIVISION OF WATER POLLUTION CONTROL
COMPLIANCE REVIEW SECTION
401 CHURCH STREET
L & C ANNEX 6TH FLOOR
NASHVILLE TN 37243-1534

The first DMR is due October 15, 1993

DMR's must be signed and certified by a responsible corporate officer as defined in 40 CFR 122.22, a general partner or proprietor, or a principal municipal executive officer or ranking elected official, or his duly authorized representative. Such authorization must be submitted in writing and must explain the duties and responsibilities of the authorized representative.

For the purpose of evaluating compliance with the permit limits established herein, the results of analyses which are below the EPA published detection levels for those effluent characteristics shall be reported as Below Detection Level (BDL), unless in specific cases other detection limits are demonstrated to be the best achievable because of the particular nature of the wastewater being analysed.

2. Additional Monitoring by Permittee

If the permittee monitors any pollutant specifically limited by this permit more frequently than required at the location(s) designated, using approved analytical methods as specified herein, the results of such monitoring shall be included in the calculation and reporting of the values required in the DMR form. Such increased frequency shall also be indicated on the form.

3. Falsifying Reports

Knowingly making any false statement on any report required by this permit may result in the imposition of criminal penalties as provided for in Section 309 of the Federal Water Pollution Control Act, as amended, and in Section 69-3-115 of the Tennessee Water Quality Control Act.

E. SCHEDULE OF COMPLIANCE

Full compliance and operational levels shall be attained from the effective date of this permit.

PART II

A. GENERAL PROVISIONS

1. Duty to Reapply

Permittee is not authorized to discharge after the expiration date of this permit. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information and forms as are required to the Director of Water Pollution Control (the "Director") no later than 180 days prior to the expiration date.

2. Right of Entry

The permittee shall allow the Director, the Regional Administrator of the U.S. Environmental Protection Agency, or their authorized representatives, upon the presentation of credentials:

a. To enter upon the permittee's premises where an effluent source is located or where records are required to be kept under the terms and conditions of this permit, and at reasonable times to copy these records;

b. To inspect at reasonable times any monitoring equipment or method or any collection, treatment, pollution management, or discharge facilities required under this permit; and

c. To sample at reasonable times any discharge of pollutants.

3. Availability of Reports

Except for data determined to be confidential under Section 308 of the Federal Water Pollution Control Act, as amended, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Division of Water Pollution Control. As required by the Federal Act, effluent data shall not be considered confidential.

4. Proper Operation and Maintenance

a. The permittee shall at all times properly operate and maintain all facilities and systems (and related appurtenances) for collection and treatment which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory and process controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. Backup continuous pH and flow monitoring equipment are not required.

b. Dilution water shall not be added to comply with effluent requirements to achieve BCT, BPT, BAT and or other technology based effluent limitations such as those in State of Tennessee Rule 1200-4-5-.03.

5. Treatment Facility Failure

The permittee, in order to maintain compliance with this permit, shall control production, all discharges or both, upon reduction, loss, or failure of the treatment facility, until the facility is restored or an alternative method of treatment is provided. This requirement applies in such situations as the reduction, loss, or failure of the primary source of power.

6. Property Rights

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

7. Severability

The provisions of this permit are severable. If any provision of this permit due to any circumstance, is held invalid, then the application of such provision to other circumstances and to the remainder of this permit shall not be affected thereby.

8. Other Information

If the permittee becomes aware that he failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, then he shall promptly submit such facts or information.

B. CHANGES AFFECTING THE PERMIT

1. Planned Changes

The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when:

a. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or

b. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1).

2. Permit Modification, Revocation, or Termination

a. This permit may be modified, revoked and reissued, or terminated for cause as described in 40 CFR 122.62 and 122.64, Federal Register, Volume 49, No. 188 (Wednesday, September 26, 1984), as amended.

b. The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

c. If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established for any toxic pollutant under Section 307(a) of the Federal Water Pollution Control Act, as amended, the Director shall modify or revoke and reissue the permit to conform to the prohibition or to the effluent standard, providing that the effluent standard is more stringent than the limitation in the permit on the toxic pollutant. The permittee shall comply with these effluent standards or prohibitions within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified or revoked and reissued to incorporate the requirement.

3. Change of Ownership

This permit may be transferred to another person by the permittee if:

a. The permittee notifies the Director of the proposed transfer at least 30 days in advance of the proposed transfer date;

b. The notice includes a written agreement between the existing and new permittees containing a specified date for transfer of permit responsibility, coverage, and liability between them; and

c. The Director, within 30 days, does not notify the current permittee and the new permittee of his intent to modify, revoke or reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

4. Change of Mailing Address

The permittee shall promptly provide to the Director written notice of any change of mailing address. In the absence of such notice the original address of the permittee will be assumed to be correct.

C. NONCOMPLIANCE

1. Effect of Noncompliance

All discharges shall be consistent with the terms and conditions of this permit. Any permit noncompliance constitutes a violation of applicable State and Federal laws and is grounds for enforcement action, permit termination, permit modification, or denial of permit reissuance.

2. Reporting of Noncompliance

a. 24-Hour Reporting

In the case of any noncompliance which could cause a threat to public drinking supplies, or any other discharge which could constitute a threat to human health or the environment, the required notice of non-compliance shall be provided to the appropriate Division field office within 24 hours from the time the permittee becomes aware of the circumstances. (The field office should be contacted for names and phone numbers of emergency response personnel.)

A written submission must be provided within five days of the time the permittee becomes aware of the circumstances unless this requirement is waived by the Director on a case-by-case basis. The permittee shall provide the Director with the following information:

i. A description of the discharge and cause of noncompliance;

ii. The period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue; and

iii. The steps being taken to reduce, eliminate, and prevent recurrence of the noncomplying discharge.

b. Scheduled Reporting

For instances of noncompliance which are not reported under subparagraph 2.a. above, the permittee shall report the noncompliance on the Discharge Monitoring Report. The report shall contain all information concerning the steps taken, or planned, to reduce, eliminate, and prevent recurrence of the violation and the anticipated time the violation is expected to continue.

3. Bypassing

a. "*Bypass*" means the discharge of wastewaters from any portion of the collection or treatment system to surface waters other than through permitted outfalls. "Severe

property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

b. Bypass is prohibited unless the following three (3) conditions are met:

i. Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage;

ii. There are not feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment down-time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment down-time or preventative maintenance;

iii. The permittee submits notice of an unanticipated bypass to the appropriate field office of the Division of Water Pollution Control within 24 hours of becoming aware of the bypass (if this information is provided orally, a written submission must be provided within five days). When the need for the bypass is foreseeable, prior notification shall be submitted to the Director, if possible, at least ten (10) days before the date of the bypass.

c. The permittee shall operate the collection system so as to avoid bypassing. No new or additional flows shall be allowed that will contribute to bypass discharges or would otherwise overload any portion of the system.

4. Upset

a. "*Upset*" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology - based permit effluent limitations if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

i. An upset occurred and that the permittee can identify the cause(s) of the upset;

ii. The permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;

iii. The permittee submitted information required under "Reporting of Noncompliance" within 24 hours of becoming aware of the upset (if this

information is provided orally, a written submission must be provided within five days); and

iv. The permittee complied with any remedial measures required under "Adverse Impact."

5. Adverse Impact

The permittee shall take all reasonable steps to minimize any adverse impact to the waters of Tennessee resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

6. Diversion

a. "*Diversion*" is the intentional rerouting of wastewater within a treatment facility away from a biological portion of the treatment facility.

D. LIABILITIES

1. Civil and Criminal Liability

Except as provided in permit conditions or "*Bypassing*", "*Upset*", "*Diversion*", and "*Treatment Facility Failures*", nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance. Notwithstanding this permit, the permittee shall remain liable for any damages sustained by the State of Tennessee, including but not limited to fish kills and losses of aquatic life and/or wildlife, as a result of the discharge of wastewater to any surface or subsurface waters. Additionally, notwithstanding this Permit, it shall be the responsibility of the permittee to conduct its wastewater treatment and/or discharge activities in a manner such that public or private nuisances or health hazards will not be created.

2. Liability Under State Law

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or the Federal Water Pollution Control Act, as amended.

PART III

OTHER REQUIREMENTS

A. TOXIC POLLUTANTS

The permittee shall notify the Division of Water Pollution Control as soon as it knows or has reason to believe:

1. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis, of any toxic substance(s) (listed at 40 CFR 122, Appendix D, Table II and III) which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

   a. One hundred micrograms per liter (100 ug/l);

   b. Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;

   c. Five (5) times the maximum concentration value reported for that pollutant(s) in the permit application in accordance with 122.21(g)(7); or

   d. The level established by the Director in accordance with 122.44(f).

2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels":

   a. Five hundred micrograms per liter (500 ug/l);

   b. One milligram per liter (1 mg/l) for antimony;

   c. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 122.21(g)(7); or

   d. The level established by the Director in accordance with 122.44(f).

B. BIOMONITORING REQUIREMENTS, ACUTE

The permittee shall conduct 48-hour static toxicity tests on two appropriate test species on samples of final effluent from Outfalls S12, S23, S36, S44, S57, S63, S64, S65, S73, and S84. The test organisms shall include a Daphnidae species and the fathead minnow (Pimephales promelas). A grab sample of final effluent shall be collected during the first period of continuous discharge within the first 30 minutes of flow initiation, where practicable. Results of all tests conducted with any species shall be reported according to EPA/600/4-90/027, Report Preparation and Data Utilization, and two copies shall be submitted to the Division of Water Pollution Control with the annual discharge monitoring reports.

The permittee shall determine the LC_{50} using serial dilutions and a control one time only during the *first* year of this permit for Outfalls S12, S23, S36, S44, and S57. Likewise, the permittee shall determine the LC_{50} using serial dilutions and a control one time only during the *second* year of this permit for Outfalls S63, S64, S65, S73, and S84.

All test organisms, procedures, and quality assurance criteria used shall be in accordance with Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, EPA-600/4-90-027. The Division of Water Pollution Control will allow the acute test to be conducted at 25°C as per the chronic test procedures. The permittee's selection of an appropriate control water for the toxicity tests shall be submitted to the Division of Water Pollution Control for review and approval prior to use. The permittee shall submit the name of the laboratory performing the toxicity test(s) to the Division of Water Pollution Control, along with a discussion evaluating the relative toxicity of this discharge.

C. BIOMONITORING REQUIREMENTS, CHRONIC

The permittee shall conduct a 7-Day Ceriodaphnia Survival and Reproduction Test and a 7-Day Fathead Minnow (Pimephales promelas) Larval Survival and Growth Test on samples of final effluent from Outfalls 001, 002, 004, 005, and 006. Toxicity will be demonstrated if more than 50% lethality of the test organisms occurs in 96 hours in 100% effluent for Outfall 001, 16.3% effluent for 002, 6.79% effluent for 004, 6.19% effluent for 005, or 6.19% effluent for 006 or the 7-day no observalbe effect concentration (NOEC) is less than 52.15% effluent for Outfall 001, 4.90% effluent for 002, 2.04% effluent for 004, 1.86% effluent for 005, or 1.86% effluent for 006. The following table illustrates the acute (96HR LC_{50}) and chronic (NOEC) toxicity limits for each of these outfalls.

TOXICITY LIMITS CALCULATIONS

PROCESS, NONPROCESS, & STORM WATER OUTFALLS

OUTFALL	96HR LC50 (%)	NOEC (%)	48HR LC50 (%) *
001	100	52.15	--
002	16.29	4.89	--
004	6.79	2.04	--
005	6.19	1.86	--
006	6.19	1.86	--

NONPROCESS AND STORM WATER OUTFALLS

S12	--	--	REPORT
S23	--	--	REPORT
S36	--	--	REPORT
S44	--	--	REPORT
S57	--	--	REPORT
S63	--	--	REPORT
S64	--	--	REPORT
S65	--	--	REPORT
S73	--	--	REPORT
S84	--	--	REPORT

* All 48HR LC50 tests shall be conducted using serial dilutions.

All tests will be conducted on 24-hour composite samples of final effluent. All test solutions shall be renewed daily. If, in any control, more than 10% of the test organisms die in 96 hours or more than 20% of the test organisms dies in 7 days, that test (control and effluent) shall be repeated at the option of the permittee. Such testing will determine whether the effluent affects the survival, reproduction, and/or growth of the test organisms.

The toxicity tests specified above shall be conducted once every two (2) months (1/2 Months) for Outfall 002 and semi-annually for Outfalls 001, 004, 005, and 006. If, after a period of one year of testing, the permittee has demonstrated compliance with the toxicity limits set forth herein for Outfall 002, the monitoring frequency for this outfall shall be reduced to once every six (6) months. The first test shall be conducted no later than ninety (90) days from the effective date of this permit for Outfall 002 and within the first one hundred eighty (180) days for Outfalls 001, 004, 005, and 006. Results shall be reported according to EPA/600/4-89/001, or the current edition, and two copies shall be submitted to the Division with the monthly discharge monitoring reports, as applicable. If any one test shows lethality to more than 50% of the test organisms in 96 hours in the effluent concentration prescribed as the limit for that outfall and/or the NOEC is less than the prescribed limit for that outfall then the next paragraph applies.

If toxicity (greater than 50% lethality of test organisms in 96 hours or an NOEC less than the prescribed limits) is found in any of the tests specified above, this will constitute a violation of this permit. The permittee will then be subject to the enforcement provisions of the Clean Water Act.

The determination of effluent lethality values will be made in accordance with Methods for Measuring the Acute Toxicity of Effluents to Freshwater and Marine Organisms, EPA/600/4-90/027. The Division of Water Pollution Control will allow the acute toxicity value to be generated within the chronic toxicity test.

All test organisms, procedures and quality assurance criteria used shall be in accordance with Short-term Methods For Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, EPA/600/4-89/001, or the current edition. The permittee's selection of an appropriate control water for the toxicity tests shall be submitted to the Division of Water Pollution Control for review and approval prior to use. The permittee shall submit the name of the laboratory performing the toxicity test(s) to the Division of Water Pollution Control.

D. REOPENER CLAUSE FOR PERMITS ISSUED TO SOURCES IN PRIMARY INDUSTRIES

If an applicable standard or limitation is promulgated under Sections 301(b)(2)(C) and (D), 304(B)(2), and 307(a)(2) and that effluent standard or limitation is more stringent than any effluent limitation in the permit or controls a pollutant not limited in the permit, the permit shall be promptly modified or revoked and reissued to conform to that effluent standard or limitation.

E. PLACEMENT OF SIGNS

Within sixty (60) days of the effective date of this permit, the permittee shall place and maintain a sign(s) at Outfalls 001, 002, 004, 005, and 006. Likewise, the permittee, within the same time period, shall place and maintain signs at an upstream and downstream point, on both

sides of the river bank, of the Eastman property boundaries, describing the source of the discharges from the seventy-seven (77) nonprocess wastewater and storm water outfalls permitted herein. The sign(s) should be clearly visible to the public from the bank and the receiving stream. The minimum sign size should be two feet by two feet (2' x 2') with one inch (1") letters. The sign should be made of durable material and have a white background with black letters.

The sign(s) are to provide notice to the public as to the nature of the discharge and, in the case of the permitted outfalls, that the discharge is regulated by the Tennessee Department of Environment and Conservation, Division of Water Pollution Control. The following is given as an example of the minimal amount of information that must be included on the sign(s):

NPDES permitted industrial outfalls:

TREATED PROCESS WASTEWATER AND STORM WATER RUNOFF
(PERMITTEE'S NAME)
(PERMITTEE'S PHONE NUMBER)
NPDES PERMIT NO.
TENNESSEE DIVISION OF WATER POLLUTION CONTROL
(615) 928-6487 JOHNSON CITY FIELD OFFICE

or

NONPROCESS WASTEWATER AND STORM WATER RUNOFF
(PERMITTEE'S NAME)
(PERMITTEE'S PHONE NUMBER)
NPDES PERMIT NO.
TENNESSEE DIVISION OF WATER POLLUTION CONTROL
(615) 928-6487 JOHNSON CITY FIELD OFFICE

PART IV

BEST MANAGEMENT PRACTICES CONDITIONS

A. GENERAL CONDITIONS

1. BMP Plan

For purposes of this part, the terms "pollutant" or "pollutants" refer to any substance listed as toxic under Section 307(a)(1) of the Clean Water Act, oil, as defined in Section 311(a)(1) of the Act, and any substance listed as hazardous under Section 311 of the Act. The permittee shall develop and implement a Best Management Practices (BMP) plan which prevents, or minimizes the potential for, the release of pollutants (including oil and grease, alumina ore dust, carbon dust from electrodes, and debris from crushed aluminum cans) from ancillary activities, including material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas, to the waters of the State of Tennessee through plant site runoff; spillage or leaks; sludge or waste disposal; or drainage from raw material storage.

2. Implementation

The plan shall be developed within eighteen (18) months after the effective date of this permit. The permittee shall begin implementation of the BMP Plan as soon as practicable following it's development.

B. GENERAL REQUIREMENTS

The BMP plan shall:

1. Be documented in narrative form, and shall include any necessary plot plans, drawings or maps.

2. Establish specific objectives for the control of pollutants.

   a. Each facility component or system shall be examined for its potential for causing a release of significant amounts of pollutants to waters of the State of Tennessee due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.

   b. Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g., precipitation), or other circumstances to result in significant amounts of pollutants reaching surface waters, the plan should include a prediction of the direction, rate of flow, and total quantity of pollutants which could be discharged from the facility as a result of each condition or circumstance.

3. Establish specific best management practices to meet the objectives identified under paragraph b of this section, addressing each component or system capable of causing a release of significant amounts of pollutants to the waters of the State of Tennessee, and identifying specific preventative or remedial measures to be implemented.

4. Be reviewed by plant engineering staff and the plant manager.

C. DOCUMENTATION

The permittee shall maintain the BMP plan at the facility and shall make the plan available to the permit issuing authority upon request.

D. BMP PLAN MODIFICATION

The permittee shall amend the BMP plan whenever there is a significant change in the facility or a significant change in the operation of the facility which materially increases the potential for the ancillary activities to result in a discharge of significant amounts of pollutants.

E. MODIFICATION FOR INEFFECTIVENESS

If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of significant amounts of pollutants to surface waters and the specific objectives and

requirements under paragraphs b and c of General Requirements Section, the permit shall be subject to modification pursuant to 40 CFR 122.62 or 122.63 to incorporate revised BMP requirements. Any such permit modification shall be subject to review in accordance with the procedures for permit appeals set forth in accordance with 69-3-110, Tennessee Code Annotated.

F. SARA TITLE III, SECTION 313 PRIORITY CHEMICALS

The BMP Plan shall include the following for those facilities subject to reporting requirements under SARA Title III, Section 313 for chemicals which are classified as Section 313 water priority chemicals:

1. In areas where Section 313 water priority chemicals are stored, processed or otherwise handled, appropriate containment, drainage control and/or diversionary structures shall be provided. At a minimum, one of the following preventive systems or its equivalent shall be used:

   a. curbing, culverting, gutters, sewers or other forms of drainage control to prevent or minimize the potential for storm water run-on to contact significant sources of pollutants.

   b. Roofs, covers or other forms or protection to prevent storage piles from exposure to stormwater and wind.

2. The plan shall include a discussion of measures taken to conform with the following applicable guidelines:

   a. Liquid storage areas where stormwater comes into contact with any equipment, tank container, or other vessel used for Section 313 water priority chemicals.

      i. Tank or container must be compatible with Section 313 water priority chemical which it stores.

      ii. Liquid storage areas shall be operated to minimize discharges of Section 313 chemicals.

   b. Material storage areas for Section 313 water priority chemicals other than liquids shall incorporate features which will minimize the discharge of Section 313 chemicals by reducing stormwater contact.

   c. Truck and rail car loading and unloading areas for Section 313 water priority chemicals shall be operated to minimize discharges of chemicals. Appropriate measures may include placement and maintenance of drip pans for use when making and breaking hose connections; a spill contingency plan; and/or other equivalent measures.

   d. In plant areas where Section 313 chemicals are transferred, processed or handled, piping, processing equipment, and materials handling equipment shall be operated so as to minimize discharges of chemicals. Piping and equipment must be compatible with chemicals handled. Additional protection including covers and guards to prevent exposure to wind and pressure relief vents, and overhangs or door skirts to enclose trailer ends at truck loading docks shall be implemented as appropriate. Visual

inspections or leak tests shall be conducted on overhead piping that conveys Section 313 water priority chemicals.

e. Discharges from areas covered by parts 2a, 2b, 2c, or 2d:

i. Drainage from these areas should be restrained by valves or other positive means to prevent the discharge of a spill or excessive leakage. Containment units shall be drained manually.

ii. Flapper-type drain valves shall not be used for drainage of containment units.

iii. If facility is not engineered as specified above, the final discharge of in-facility storm sewers should be equipped with a diversion system that could, in the event of an uncontrolled spill of a Section 313 chemical, return the spilled material to the facility or direct the materials to wastewater treatment facilities.

iv. Records shall be kept of the frequency and estimated volume (in gallons) of discharges from containment area.

f. Facility site runoff other than from areas covered by parts 2a, 2b, 2c, and 2d from which runoff could contain Section 313 water priority chemicals shall incorporate the necessary drainage or other control features to prevent discharge of spilled or improperly disposed material and ensure the mitigation of pollutants in runoff or leachate.

g. All areas of the facility shall be inspected at specific intervals for leaks or conditions that could lead to discharges of Section 313 water priority chemicals or direct contact of stormwater with raw materials, intermediate materials, waste materials or products. Inspection intervals shall be specified in the plan and shall be based on design and operational experience. Corrective action shall be taken promptly when a leak or condition which could cause significant releases of chemicals is discovered. If corrective action can not be taken immediately, the unit or process shall be shut down until the situation is corrected. When a leak or spill has occurred, the contaminated material(s) must be promptly removed and disposed in accordance with Federal, State, and local requirements and/or as described in the plan.

h. Facilities shall have the necessary security systems to prevent accidental or intentional entry which could cause a discharge.

i. Facility employees and contract personnel that work in areas where SARA Title III, Section 313 water priority chemicals are used or stored shall be trained in and informed of preventive measures at the facility, as appropriate. As necessary or warranted, employee training shall be conducted at least once per year in matters of pollution control laws and regulations, and in the BMP Plan. The plan shall designate a person(s) who is accountable for spill prevention at the facility and who will set up the necessary spill emergency procedures and reporting requirements.

3. "Section 313 water priority chemicals" means the following chemicals or chemical categories:

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
401 Church Street
Nashville, Tennessee 37243

[FEB 1994]
RECEIVED

To: Richard Strang

From: William M. Christie, WMC
Ecological Services Division

Subject: Environmental Review for Threatened and Endangered Species.

Date: 2/25/94

Project: Industrial Project Site

Be advised that a review of our data base indicate no recorded threatened and endangered species for this specific project area.

The results of this review does not mean that a comprehensive biological survey has been completed for this and other sites.

/wmc

Ecological Services Division: 8th Floor, L & C Tower, 401 Church St., Nashville, TN 37243-0447 * Phone (615)532-0437 * FAX(615)532-0046

a. listed at 40 CFR 372.65 pursuant to Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986, also titled the Emergency Planning and Community Right-to-Know Act of 1986;

b. present at or above threshold levels at a facility subject to SARA Title III, Section 313 reporting requirements; and,

c. that meet at least one of the following criteria:

i. are listed in Appendix D of 40 CFR 122 on either Table II (organic priority pollutants), Table III (certain metals, cyanides, and phenols) or Table V (certain toxic pollutants and hazardous substances);

ii. are listed as a hazardous substance pursuant to section 311(b)(2)(A) of the CWA at 40 CFR 116.4; or,

iii. are pollutants for which EPA has published acute or chronic toxicity criteria.

SBL

02640PMT.DOC

APPENDIX IV

EXISTING AIR PERMITS

TENNESSEE AIR POLLUTION CONTROL BOARD
NASHVILLE, TENNESSEE 37219

Operating Permit issued pursuant to Tennessee Air Quality Act

Date Issued: December 11, 1980 Permit Number: 0101131

Expires:

Issued to: Installation Address:

Tennessee Eastman Company Kingsport

Installation Description:
B-248-1
Rotary Kiln Incinerators #1 & 2
with Wet Scrubbers

Emission Source Reference No.:
82-01003-40 & 41
EMS #040 & 41

The holder of this permit shall comply with the conditions contained in this permit as well as all applicable provisions of the Tennessee Air Pollution Control Regulations.

CONDITIONS:

Harold E. Hodges

HAROLD E. HODGES, P. E.
TECHNICAL SECRETARY eh

No authority is granted by this permit to operate, construct, or maintain any installation in violation of any law, statute, code, ordinance, rule or regulation of the State of Tennessee or any of its political subdivisions.

NON TRANSFERABLE

POST OR FILE AT INSTALLATION ADDRESS

PH- 0423
APC Rev. 1/78

Process Emission Source
Number B-248-1
Edition [redacted]

TENNESSEE EASTMAN COMPANY
AIR OPERATING PERMIT APPLICATION APPROVAL SHEET

Check One:
____ Original
__X__ Renewal Application With Change
____ Renewal Application Without Change

Division Power & Services
Department Water & Waste Treatment
Building 248
Date Application Must Be Submitted to TDAPC _____

DESCRIPTION OF PROCESS EMISSION SOURCE

Steam Generating Unit - Waste Incinerator Rotary Kiln HRT Boiler

The originals of the application forms are attached for approval. After approval, the Clean Environment Program will send the transmittal letter and copies of the APC forms to the Tennessee Division of Air Pollution Control. The original APC forms will be returned to the Division Environmental Coordinator for filing.

APPROVALS:

1) Kenneth Tutt 1-30-84
Division Environmental Coordinator (Responsible for Completeness of Application) Date

2) Joachim Ulrich 1-30-84
Department Superintendent (Responsible for Accuracy of Technical Information) Date

3) R. J. Woodward 2/3/84
Division Superintendent (Approval to Release Information to Agency) Date

4) Return to the Clean Environment Program, B-54D

(See Reverse Side for Additional Requested Information)

FEB 1984 RECEIVED

wlc/TA1622g/F

5/1/83 (Green)

STATE OF TENNESSEE
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF AIR POLLUTION CONTROL

Process Emission Source
Number B-248-1
Page 1 of
Date April 25 1984

APC-20
PERMIT APPLICATION

1. ORGANIZATION'S LEGAL NAME Tennessee Eastman Company A Division of Eastman Kodak Company			FOR APC	APC COMPANY-POINT NO.
2. MAILING ADDRESS (ST/RD/P.O. BOX) P. O. Box 511				APC LOG/PERMIT NO.
CITY Kingsport	STATE Tennessee	ZIP CODE 37662		PHONE WITH AREA CODE (615) 229-2444
3. PRINCIPAL TECHNICAL CONTACT J. C. Edwards				PHONE WITH AREA CODE (615) 229-2444
4. SITE ADDRESS (ST/RD/HWY) South Eastman Road				COUNTY NAME Sullivan
CITY OR DISTANCE TO NEAREST TOWN Kingsport		ZIP CODE 37662		PHONE WITH AREA CODE (615) 229-2444
5. EMISSION SOURCE NO. (NUMBER WHICH UNIQUELY IDENTIFIES THIS SOURCE) B-248-1		PERMIT RENEWAL YES ( ), NO ( ).		

6. BRIEF DESCRIPTION OF EMISSION SOURCE

Steam Generating Unit - Waste Incinerator

Rotary Kiln HRT Boiler

7. TYPE OF PERMIT REQUESTED (COMPLETE ONE LINE ONLY)

CONSTRUCTION ( )	STARTING DATE	COMPLETION DATE	DATE WAIVER APPROVED (IF APPLICABLE)	
OPERATING (X)	DATE CONSTRUCTION STARTED	DATE COMPLETED June 1, 1979	LAST PERMIT NO. 0101131	EMISSION SOURCE REFERENCE NUMBER 82-01003-40 & 41
LOCATION TRANSFER ( )	TRANSFER DATE		LAST PERMIT NO.	EMISSION SOURCE REFERENCE NUMBER

ADDRESS OF LAST LOCATION

8. DESCRIBE CHANGES THAT HAVE BEEN MADE TO THIS EQUIPMENT OR OPERATION SINCE THE LAST CONSTRUCTION OR OPERATING PERMIT APPLICATION

None

9. SIGNATURE (APPLICATION MUST BE SIGNED BEFORE IT WILL BE PROCESSED) J C Edwards		DATE
10. SIGNER'S NAME (TYPE OR PRINT) J. C. Edwards	TITLE Manager, Clean Environment Program	PHONE WITH AREA CODE (615) 229-2444

STATE OF TENNESS
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF AIR POLLUTION CONTROL

25[illegible] CAPITOL HILL BUILDING
NASHVILLE, TENNESSEE 37219
TELEPHONE (615) 741-3931

INCINERATOR SOURCE DESCRIPTION

PLEASE TYPE OR PRINT, SUBMIT IN DUPLICATE AND ATTACH TO THE PERMIT APPLICATION.

1. ORGANIZATION NAME: Tennessee Eastman Company, A Division of Eastman Kodak Company | APC COMPANY POINT NO. FOR: ///
2. EMISSION SOURCE NO. (AS ON PERMIT APPLICATION): B-248-1 | SIC CODE: 2869 | APC PERMIT/LOG NO. APC: ///
3. SOURCE LOCATION: → | LATITUDE: 36° 30' 44" N | LONGITUTDE: 82° 32' 1" W | UTM VERTICAL: 4,041,656 N | UTM HORIZONTAL: 362,671 E
4. TYPE OF WASTE BURNED: 0, 1, 6 (USE CODE FROM TABLE ON BACK) | CHARGING RATE (POUNDS/HOUR): AVERAGE | DESIGN: 10,000 | TONS BURNED PER YEAR: 47,000
5. IS THE INCINERATOR FURNACE VOLUME 2.5 CUBIC FEET OR LESS? → | NO: X | YES: | IS THE UNIT USED SOLELY FOR DISPOSAL OF INFECTIVE DRESSINGS? | NO: X | YES:
6. INCINERATOR MANUFACTURER: #1 Ruggles Coles, #2 Bartlett-Snow | MODEL NUMBER: | DATE INSTALLED: 1963
7. INCINERATOR TYPE: → | SINGLE CHAMBER: X | MULTI-CHAMBER: | REFRACTORY LINED: X | AUXILARY BURNERS:
8. INCINERATOR OPER. SCHEDULE: → | HOURS/DAY: 24 | DAYS/WEEK: 7 | WEEKS/YEAR: 52 | DAYS/YEAR:
9. PERCENT ANNUAL THROUGHPUT: → | DEC.-FEB.: 25 | MARCH-MAY: 25 | JUNE-AUG.: 25 | SEPT.-NOV.: 25
10. BURNER DATA: → | BURNER CAPACITY (BTU/HOUR): PRIMARY | SECONDARY/AFTERBURN | AIR FLOW (CFM): OVERFIRE | UNDERFIRE
    DOES UNIT HAVE CONTROLLED OR STARVED AIR? → | NO: | YES:
11. AUXILARY FUEL DATA: #2 Fuel Oil | PRIMARY FUEL TYPE (SPECIFY): | STANDBY FUEL TYPE (SPECIFY):

FUEL	ANNUAL USAGE	HOURLY USAGE: DESIGN	HOURLY USAGE: AVERAGE	% SULFUR	% ASH	BTU VALUE OF FUEL	(FOR APC ONLY) SCC CODE
NATURAL GAS	10^6 CUFT	CU FT	CU FT	///	///	1,000	
#2 FUEL OIL	10^3 GAL 173	GAL 600	GAL	0.35 Wt %	///	130,000	
LIQUID PROPANE	10^3 GAL	GAL	GAL	///	///	85,000	
OTHER (SPECIFY TYPE & UNITS)							

12. STACK OR EMISSION POINT DATA: → | HEIGHT ABOVE GRADE (FT): 200 | DIAMETER (FT): 10 | TEMPERATURE (°F): 161 | DISTANCE TO NEAREST PROPERTY LINE (FT): 295

	FLOW (ACTUAL FT3/MIN)	VELOCITY (FT/SEC)	MOISTURE (GRAINS/FT3)	MOISTURE (PERCENT)
DATA AT EXIT CONDITIONS →	85,667	18.1	47.9	18
DATA AT STANDARD CONDITIONS →	FLOW (DRY STD. FT3/MIN) 57,400	VELOCITY (FT/SEC) 12.1	MOISTURE GRAINS/FT3) 71.7	MOISTURE (PERCENT)

13. AIR CONTAMINANTS	EMISSIONS(LBS/HR) AVERAGE	MAXIMUM	CONCENTRATION	AVG. EMISS. (TONS/YR)	EMISSIONS* EST. METHOD	CONTROL* DEVICES	CONTROL EFFICIENCY %
PARTICULATES**	7.3	8.9	***0.015	31.97	1	053*	95
SULFUR DIOXIDE	102.7	201.1	**** 169	449.83	1		
NITROGEN OXIDES			PPM				
ORGANIC COMPOUNDS	<1.0		PPM	<4.7	2		
CARBON MONOXIDE			PPM				
FLUORIDES							
OTHER(SPECIFY)							

14. SCRUBBER DATA: MANUFACTURER & MODEL NUMBER: Peabody-Venturi Scrubber | WATER FLOW (GALLONS/MINUTE): 350 | SCRUBBER PRESSURE DROP(INCHES WATER): 50

OTHER CONTROL (DESCRIBE)

A quench chamber is located upstream of the venturi scrubber.

15. CHECK TYPES OF MONITORING AND RECORDING INSTRUMENTS THAT ARE ATTACHED:

OPACITY MONITOR ( ), SO2 MONITOR ( ), NOX MONITOR ( ), OTHER-SPECIFY IN COMMENTS ( )

16. COMMENTS *053 control device for particulates.

Low boilers from production processes; bottoms, sludges & tars from production process waste solvents or solvent contaminated wastes; distillation residues & sidestreams; off quality or surplus product or raw materials; discarded samples; laboratory or pilot plant wastes.

17. SIGNATURE: See signature on APC 20 | DATE:

* REFER TO THE BACK OF THE PERMIT APPLICATION FORM FOR ESTIMATION METHOD AND CONTROL DEVICE CODES.

** A VALID STACK TEST OF PARTICULATE EMISSIONS FROM MANUFACTURER SHALL BE INCLUDED WITH APPLICATION

*** EXIT GAS PARTICULATE CONCENTRATION UNITS: GRAINS/DRY STANDARD FT (70°F).

**** EXIT GAS SULFUR DIOXIDE CONCENTRATION UNITS: PPM BY VOLUME DRY BASIS.

TYPE OF WASTE BURNED CODE TABLE

PRINCIPAL COMPONENTS, USUAL SOURCE AND TYPICAL MOISTURE CONTENT	CODE
HIGHLY COMBUSTABLE WASTE, PAPER, WOOD, CARDBOARD CARTONS,(INCLUDING UP TO 10% TREATED PAPERS, PLASTIC OR RUBBER SCRAPS); FROM COMMERCIAL AND INDUSTRIAL SOURCES; 10% MOISTURE	0
COMBUSTIBLE WASTE, PAPER, CARTONS, RAGS, WOOD SCRAPS, COMBUSTIBLE FLOOR SWEEPINGS, FROM: DOMESTIC, COMMERCIAL, AND INDUSTRIAL SOURCES; 25% MOISTURE	1
RUBBISH AND GARBAGE, FROM: RESIDENTIAL SOURCES; 50% MOISTURE.	2
PREDOMINANTLY ANUMAL AND VEGTABLE WASTE FROM: RESTAURANTS, HOTELS, MARKETS, INSTITUTIONAL, COMMERCIAL AND CLUB SOURCES; 70% MOISTURE.	3
CARCASSES, ORGANS, SOLID ORGANIC WASTES, FROM: HOSPITALS, LABORATORIES, SLAUGHTERHOUSES, ANIMAL POUNDS, AND SIMILAR SOURCES; 85% MOISTURE.	4
GASEOUS AND SEMI-LIQUID INDUSTRIAL PROCESS WASTE; VARIABLE MOISTURE. DESCRIBE IN DETAIL UNDER COMMENTS.	5
SOLID AND SEMI-SOLID INDUSTRIAL PROCESS WASTE; VARIABLE MOISTURE. DESCRIBE IN COMMENTS IN DETAIL.	6

TENNESSEE AIR POLLUTION CONTROL BOARD
NASHVILLE, TENNESSEE 37219

Operating Permit issued pursuant to Tennessee Air Quality Act

Date Issued: December 11, 1980 Permit Number: 0101141

Expires:

Issued to: Installation Address:

Tennessee Eastman Company Kingsport

Installation Description:	Emission Source Reference No.:
B-248-2 Waste Chemical Incinerator Bigelow-Liptak with Quench Chamber, Packed Bed & Venturi Scrubbers 6,000 lbs/hr design charge rate	82-01003-50 EMS #050

The holder of this permit shall comply with the conditions contained in this permit as well as all applicable provisions of the Tennessee Air Pollution Control Regulations.

CONDITIONS:

Harold E. Hodges

HAROLD E. HODGES, P. E.
TECHNICAL SECRETARY ah

No authority is granted by this permit to operate, construct, or maintain any installation in violation of any law, statute, code, ordinance, rule or regulation of the State of Tennessee or any of its political subdivisions.

NON TRANSFERABLE

POST OR FILE AT INSTALLATION ADDRESS

PH- 0423
APC Rev. 1/78

STATE OF TENNESSEE
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF AIR POLLUTION CONTROL

Process Emission Source
Number B-248-2
Page 1 **of**
Date April 25, 1984

APC-20
PERMIT APPLICATION

1. ORGANIZATION'S LEGAL NAME Tennessee Eastman Company A Division of Eastman Kodak Company			FOR APC USE: APC COMPANY-POINT NO.
2. MAILING ADDRESS (ST/RD/P.O. BOX) P. O. Box 511			APC LOG/PERMIT NO.
CITY Kingsport	STATE Tennessee	ZIP CODE 37662	PHONE WITH AREA CODE (615) 229-2444
3. PRINCIPAL TECHNICAL CONTACT J. C. Edwards			PHONE WITH AREA CODE (615) 229-2444
4. SITE ADDRESS (ST/RD/HWY) South Eastman Road			COUNTY NAME Sullivan
CITY OR DISTANCE TO NEAREST TOWN Kingsport		ZIP CODE 37662	PHONE WITH AREA CODE (615) 229-2444
5. EMISSION SOURCE NO. (NUMBER WHICH UNIQUELY IDENTIFIES THIS SOURCE) B-248-2		PERMIT RENEWAL YES ( ), NO (X).	

6. BRIEF DESCRIPTION OF EMISSION SOURCE

A waste chemical incinerator with heat recovery and scrubbers.

7. TYPE OF PERMIT REQUESTED (COMPLETE ONE LINE ONLY)

CONSTRUCTION ( )	STARTING DATE	COMPLETION DATE	DATE WAIVER APPROVED (IF APPLICABLE)	
OPERATING (X)	DATE CONSTRUCTION STARTED	DATE COMPLETED 1-24-79	LAST PERMIT NO. 0101141	EMISSION SOURCE REFERENCE NUMBER 82-01003-50
LOCATION TRANSFER ( )	TRANSFER DATE		LAST PERMIT NO.	EMISSION SOURCE REFERENCE NUMBER

ADDRESS OF LAST LOCATION

8. DESCRIBE CHANGES THAT HAVE BEEN MADE TO THIS EQUIPMENT OR OPERATION SINCE THE LAST CONSTRUCTION OR OPERATING PERMIT APPLICATION

None

9. SIGNATURE (APPLICATION MUST BE SIGNED BEFORE IT WILL BE PROCESSED) J C Edwards		DATE
10. SIGNER'S NAME (TYPE OR PRINT) J. C. Edwards	TITLE Manager, Clean Environment Program	PHONE WITH AREA CODE (615) 229-2444

STATE OF TENNESSEE
DEPARTMENT OF PUBLIC HEALTH
DIVISION OF AIR POLLUTION CONTROL

25 PITOL HILL BUILDING
NASHVILLE, TENNESSEE 37219
TELEPHONE (615) 741-3931

INCINERATOR SOURCE DESCRIPTION

PLEASE TYPE OR PRINT, SUBMIT IN DUPLICATE AND ATTACH TO THE PERMIT APPLICATION.

1. ORGANIZATION NAME: Tennessee Eastman Company, A Division of Eastman Kodak Company | APC COMPANY POINT NO. FOR:
2. EMISSION SOURCE NO. (AS ON PERMIT APPLICATION): B-248-2 | SIC CODE: 2869 | APC PERMIT/LOG NO.
3. SOURCE LOCATION: | LATITUDE: 36° 30' 48" N | LONGITUDE: 82° 31' 58" W | UTM VERTICAL: 4,041,778 N | UTM HORIZONTAL: 362,747 E
4. TYPE OF WASTE BURNED: 5 (USE CODE FROM TABLE ON BACK) | CHARGING RATE (POUNDS/HOUR): AVERAGE | DESIGN: 6,000 | TONS BURNED PER YEAR: 25,000
5. IS THE INCINERATOR FURNACE VOLUME 2.5 CUBIC FEET OR LESS? | NO: X | YES | IS THE UNIT USED SOLELY FOR DISPOSAL OF INFECTIVE DRESSINGS? | NO: X | YES
6. INCINERATOR MANUFACTURER: Bigelow-Liptak | MODEL NUMBER | DATE INSTALLED: 1979
7. INCINERATOR TYPE: | SINGLE CHAMBER: X | MULTI-CHAMBER | REFRACTORY LINED: X | AUXILARY BURNERS
8. INCINERATOR OPER. SCHEDULE: | HOURS/DAY: 24 | DAYS/WEEK: 7 | WEEKS/YEAR: 50 | DAYS/YEAR
9. PERCENT ANNUAL THROUGHPUT: | DEC.-FEB.: 25 | MARCH-MAY: 25 | JUNE-AUG.: 25 | SEPT.-NOV.: 25
10. BURNER DATA: | BURNER CAPACITY (BTU/HOUR): PRIMARY | SECONDARY/AFTERBURN | AIR FLOW (CFM): OVERFIRE | UNDERFIRE
    DOES UNIT HAVE CONTROLLED OR STARVED AIR? | NO | YES
11. AUXILARY FUEL DATA: #2 Fuel Oil | PRIMARY FUEL TYPE (SPECIFY) | STANDBY FUEL TYPE (SPECIFY)

FUEL	ANNUAL USAGE	HOURLY USAGE: DESIGN	HOURLY USAGE: AVERAGE	% SULFUR	% ASH	BTU VALUE OF FUEL	(FOR APC ONLY) SCC CODE
NATURAL GAS	10^6 CUFT	CU FT	CU FT	///	///	1,000	
#2 FUEL OIL	10^3 GAL 100	GAL 180	GAL	0.35 Wt %	///	130,000	
LIQUID PROPANE	10^3 GAL	GAL	GAL	///	///	85,000	
OTHER (SPECIFY TYPE & UNITS)							

12. STACK OR EMISSION POINT DATA: | HEIGHT ABOVE GRADE (FT): 50 | DIAMETER (FT): 3.5 | TEMPERATURE (°F): 198.1 | DISTANCE TO NEAREST PROPERTY LINE (FT): 1500

	FLOW (ACTUAL FT3/MIN)	VELOCITY (FT/SEC)	MOISTURE (GRAINS/FT3)	MOISTURE (PERCENT)
DATA AT EXIT CONDITIONS	30,800	53.7	59.67	23.7
DATA AT STANDARD CONDITIONS	FLOW (DRY STD. FT3/MIN) 18,200	VELOCITY (FT/SEC) 31.5	MOISTURE GRAINS/FT3) 101.37	MOISTURE (PERCENT)

13. AIR CONTAMINANTS	EMISSIONS(LBS/HR) AVERAGE	EMISSIONS(LBS/HR) MAXIMUM	CONCENTRATION	AVG. EMISS. (TONS/YR)	EMISSIONS* EST.METHOD	CONTROL* DEVICES	CONTROL EFFICIENCY %
PARTICULATES**	1.83		***0.006	8.02	1	053*/001	99
SULFUR DIOXIDE	0.18		****0.91	0.79	1		
NITROGEN OXIDES			PPM				
ORGANIC COMPOUNDS	<0.6		PPM	<2.5	2	001	
CARBON MONOXIDE			PPM				
FLUORIDES							
OTHER(SPECIFY)							

14. SCRUBBER DATA: MANUFACTURER & MODEL NUMBER → Ceilcote Packed Bed Scrubber and Peabody High Energy Venturi Scrubber | WATER FLOW (GALLONS/MINUTE) 180-250 | SCRUBBER PRESSURE DROP(INCHES WATER) 60

OTHER CONTROL (DESCRIBE)
A quench chamber is located upstream of the packed bed scrubber.

15. CHECK TYPES OF MONITORING AND RECORDING INSTRUMENTS THAT ARE ATTACHED:
OPACITY MONITOR ( ), SO2 MONITOR ( ), NOX MONITOR ( ), OTHER-SPECIFY IN COMMENTS ( )

16. COMMENTS *053 control device for particulates.
Low boilers from production processes; bottoms, sludges and tars from production processes; waste solvents or solvent contaminated wastes; distillation residues and sidestreams; off quality or surplus product or raw materials; laboratory or pilot plant wastes.

17. SIGNATURE
See signature an APC 20

DATE

* REFER TO THE BACK OF THE PERMIT APPLICATION FORM FOR ESTIMATION METHOD AND CONTROL DEVICE CODES.
** A VALID STACK TEST OF PARTICULATE EMISSIONS FROM MANUFACTURER SHALL BE INCLUDED WITH APPLICATION
*** EXIT GAS PARTICULATE CONCENTRATION UNITS: GRAINS/DRY STANDARD FT (70°F).
**** EXIT GAS SULFUR DIOXIDE CONCENTRATION UNITS: PPM BY VOLUME DRY BASIS.

TYPE OF WASTE BURNED CODE TABLE

PRINCIPAL COMPONENTS, USUAL SOURCE AND TYPICAL MOISTURE CONTENT	CODE
HIGHLY COMBUSTABLE WASTE, PAPER, WOOD, CARDBOARD CARTONS,(INCLUDING UP TO 10% TREATED PAPERS, PLASTIC OR RUBBER SCRAPS); FROM COMMERCIAL AND INDUSTRIAL SOURCES; 10% MOISTURE	0
COMBUSTIBLE WASTE, PAPER, CARTONS, RAGS, WOOD SCRAPS, COMBUSTIBLE FLOOR SWEEPINGS, FROM: DOMESTIC, COMMERCIAL, AND INDUSTRIAL SOURCES; 25% MOISTURE	1
RUBBISH AND GARBAGE, FROM: RESIDENTIAL SOURCES; 50% MOISTURE.	2
PREDOMINANTLY ANUMAL AND VEGTABLE WASTE FROM: RESTAURANTS, HOTELS, MARKETS, INSTITUTIONAL, COMMERCIAL AND CLUB SOURCES; 70% MOISTURE.	3
CARCASSES, ORGANS, SOLID ORGANIC WASTES, FROM: HOSPITALS, LABORATORIES, SLAUGHTERHOUSES, ANIMAL POUNDS, AND SIMILAR SOURCES; 85% MOISTURE.	4
GASEOUS AND SEMI-LIQUID INDUSTRIAL PROCESS WASTE; VARIABLE MOISTURE. DESCRIBE IN DETAIL UNDER COMMENTS.	5
SOLID AND SEMI-SOLID INDUSTRIAL PROCESS WASTE; VARIABLE MOISTURE. DESCRIBE IN COMMENTS IN DETAIL.	6

TENNESSEE AIR POLLUTION CONTROL BOARD
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37247-3101

Permit to Construct or Modify an Air Contaminant Source Issued Pursuant to Tennessee Air Quality Act

Date Issued: APR 2 9 1992

Permit Number:

Date Expires:
September 1, 1994

932325P

Issued To:	Installation Address:
Tennessee Eastman Company	South Eastman Road Kingsport

Installation Description:	Emission Source Reference No:
B-325-1: Boiler #31 Pulverized Coal-Fired Boiler	82-1010-15 PSD-BACT-NSPS

The holder of this permit shall comply with the conditions contained in this permit as well as all applicable provisions of the Tennessee Air Pollution Control Regulations.
This is not a permit to operate.

CONDITIONS:

1. This permit does not cover any air contaminant source that does not conform to the conditions of this permit and the information given in the approved application dated June 14, 1991. This includes compliance with the following operating parameters:

   Heat input to this source shall not exceed 880 million Btu/hour.

2. Particulate matter emitted from the new boiler #31 shall not exceed 15.8 lbs/hour.

3. Sulfur dioxide emitted from the new boiler #31 shall not exceed 293 lbs/hour and have a minimum removal efficiency of 90%. Sulfur dioxide emissions from the existing boiler #30 shall not exceed 317 lbs/hour and it shall be retrofitted with a spray dryer absorber to reduce sulfur dioxide emissions, and this reduction in emissions shall be accomplished by the time the new boiler #31 becomes operational.

4. Volatile Organic Compounds emitted from the new boiler #31 shall not exceed 8.8 lbs/hour.

5. Carbon monoxide emitted from the new boiler #31 shall not exceed 176 lbs/hour.

(continued on the next page)

Harold E. Hodges

HAROLD E. HODGES, P.E.
TECHNICAL SECRETARY

F5501261

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule or Regulation of the State of Tennessee or any of its Political Subdivisions.

NON TRANSFERABLE POST AT INSTALLATION ADDRESS

APR 2 9 1992

932325P

6. Fluorides emitted from the new boiler #31 shall not exceed 2.75 lbs/hour. Fluorides emitted from the existing boiler #30 shall not exceed 2.25 lbs/hour.

7. Fluorides emitted from the existing boiler #30 shall not exceed 2.25 lbs/hour. To determine the decrease in fluoride emissions as a result of the proposed spray dryer absorber, tests shall be conducted at the inlet and the outlet of the proposed spray dryer absorber.

8. Hydrogen chloride emitted from the new boiler #31 shall not exceed 28.2 lbs/hour. Hydrogen chloride emitted from the existing boiler #30 shall not exceed 25.0 lbs/hour.

9. Particulate matter emitted from the coal bunker for boiler #31 shall not exceed 1.06 lbs/hour.

10. Particulate matter emitted from the lime storage silo shall not exceed 1.06 lbs/hour.

11. Beryllium emitted from the new boiler #31 shall not exceed 0.004 lbs/hour.

12. Nitrogen oxides emitted from this source shall not exceed 0.40 lb/million Btu heat input.

13. Visible emissions from the new boiler #31 shall not exceed 20 percent opacity (6 minute average), except for one 6 minute period per hour of not more than 27 percent opacity as determined by EPA Method 9, as published in the Federal Register, Volume 39, No. 219 on November 12, 1974.

14. Within 60 days after achieving the maximum production rate at which the facility will be operated, but no later than 180 days after initial start-up, the owner or operator shall furnish the Technical Secretary a written report of the results of an emissions performance test for the pollutants listed below. The performance test shall be conducted and data reduced in accordance with methods and procedures specified in 40 CFR 60.46b.

Particulates from the new boiler #31.

15. Within 60 days after achieving the maximum production rate at which the facility will be operated, but no later than 180 days after initial start-up, the owner or operator shall furnish the Technical Secretary a written report of the results of an emissions performance test for the pollutants listed below. The performance test shall be conducted and data reduced in accordance with methods and procedures specified in Chapter 1200-3-16-.01(5)(g)13 of the Tennessee Air Pollution Control Regulations.

Fluorides from the new boiler #31 and the existing boiler #30

(continued on the next page)

APR 2 8 1992

932325P

16. At least thirty (30) days prior to conducting the source tests, the Technical Secretary shall be given notice of the test in order to afford him the opportunity to have an observer present.

17. The Technical Secretary shall be notified in writing at least ten (10) days prior to start-up of the source.

18. This permit does not cover construction which commences after 18 months of the date of issuance of this permit.

19. This permit shall serve as a temporary operating permit from initial start-up to the receipt of a standard operating permit, provided the operating permit is applied for within the time period specified in this permit for submitting test reports, and provided the conditions of this permit and any applicable emission standards are met.

20. The source owner or operator shall install, maintain, operate, and submit reports of excess emissions from continuous in-stack monitoring systems for sulfur dioxide and nitrogen oxides and either oxygen or carbon dioxide. The sensors of these monitoring systems shall be located in representative areas of the effluent gas stream of the boiler. Electronic signal combining systems shall be installed to convert the output of the pollutant monitors into units of the applicable emission standards. The in-stack sulfur dioxide and nitrogen oxides monitoring system shall meet all the requirements of Performance Specification 2 as outline in the Federal Register, Volume 48, Number 102, Wednesday, May 25, 1983, and performance specification test data shall be submitted as proof of this. Prior to the installation of these monitoring systems, a monitoring plan shall be submitted to the Technical Secretary for approval. At least ten (10) days prior to the performance testing of this monitoring system, the Technical Secretary shall be notified of such performance testing so that an official observer may be present. This monitoring system shall be in effective operation, the performance specifications completed, and the report of this performance testing submitted to the Technical Secretary within one hundred eighty (180) days of the start-up of the source.

(continued on the next page)

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932325P

21. Operational Condition for Sulfur Dioxide and Nitrogen Oxides Monitoring Systems

The use of continuous in-stack monitoring for sulfur dioxide and nitrogen oxides and the monitoring of the sulfur dioxide input to the control device (measured as per 40 CFR 60.47b) is the method by which this boiler proves continual compliance with the applicable sulfur dioxide and nitrogen oxides emissions limitation and sulfur dioxide emission reduction requirement. Therefore, for this boiler to demonstrate continual compliance with the applicable sulfur dioxide and nitrogen oxides emissions limitations, the in-stack nitrogen oxides and sulfur dioxide monitoring systems shall each be fully operational for at least eighty (80) percent of the operational time of the monitored source during each month of the calendar quarter. An operational availability of less than this amount may be considered the basis for declaring the source to be in non-compliance with the applicable monitoring requirements, unless the reasons for the failure to maintain this level of operational availability are accepted by this Division as being legitimate malfunctions of the instruments.

22 Quality Assurance Condition for the Sulfur Dioxide and Nitrogen Oxides Monitoring Systems. The continuous in-stack sulfur dioxide and nitrogen oxides monitoring systems shall meet all of the requirements of Appendix F as published in the Federal Register, Volume 52, Number 107, June 4, 1987, beginning on page 21007.

23. The owner or operator shall submit excess emission reports and CEMS downtime reports to this Division for each calendar quarter in accordance with Rule 1200-3-10-.02(2). If there are no excess emissions or CEMS downtime during this quarter, the owner or operator shall submit a report to that effect. A format for this report will be supplied by the Division after the acceptance of the performance specifications test.

24. To determine compliance with the emission limits for nitrogen oxides required under condition 12 of this permit, the owner or operator of an affected facility shall conduct the performance test as required under 1200-3-16-.01(5) using the continuous system for monitoring nitrogen oxides. For the initial compliance test, nitrogen oxides from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the nitrogen oxides emission standards under condition 12 of this permit. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

(continued on the next page)

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932325P

25. The source owner or operator shall install, calibrate, operate, and submit reports of excess emissions from an in-stack continuous opacity monitoring system. The new boiler #31 shall utilize the Division approved continuous in-stack opacity monitor because the new boiler #31, as proposed, will exhaust thru the stack for the existing boiler #30. Therefore for this fuel burning installation to demonstrate continual compliance with the applicable opacity limitation, the in-stack opacity monitor shall be fully operational for at least ninety-five (95) percent of the operational time of the monitored unit during any calendar quarter. An operational availability of less than this amount may be considered the basis for declaring the fuel burning installation to be in noncompliance with the applicable monitoring requirements, unless the reasons for the failure to maintain this level of operational availability are accepted by the Division as being legitimate malfunctions of the instrument. In the event of a disparity between the instrument's reading versus that of a qualified visible emission evaluator, the Technical Secretary may require the source to conduct any necessary testing or investigations needed to resolve the disparity.

Quality assurance checks shall be performed on the opacity monitor on a biennial calendar basis and in a manner prescribed by the Technical Secretary. Written reports of the quality assurance checks shall be submitted in a format prescribed by the Technical Secretary.

As an alternative to this, an on-stack quality assurance audit may be conducted on a semiannual basis. If elected, this on-stack quality assurance audit shall be conducted in a manner prescribed by the Technical Secretary, and written reports of these audits shall be submitted to the Technical Secretary. Prior to the commencing of the use of the semiannual audit, the Technical Secretary shall be informed in writing of the election of this option.

Furthermore within ninety (90) days of each major modification or major repair of the opacity monitor, a repeat of the performance test shall be conducted and a written report of it submitted to the Technical Secretary as proof of the continuous operation of the opacity monitor within acceptable accuracy limits.

26. No hazardous waste shall be burned in boiler #31.

27. For the pollutants with emission limitations placed on this permit, the emissions measuring test methods and procedures are the following:

(continued on the next page)

APR 2 9 1992

932325P

Pollutant	Testing Methodology
Particulates	EPA Method 5 as published in 42 FR 41776 and subsequent amendments.
Fluorides	EPA Method 13 as published in 45 FR 41852 and subsequent amendments.
Sulfur dioxide	See Permit Condition #28.
Nitrogen oxides	See Permit Condition #24.
Hydrogen chloride	EPA Method 26 as published in 56 FR 5770
Beryllium	EPA Method 104 as published in 40 CFR 61, Appendix B.
Carbon monoxide	EPA Method 10 as published in 39 FR 9319.
Volatile Organic Compounds	EPA Method 25 as published in 45 FR 65959.

28. To determine compliance with the emission limit and emissions reduction for sulfur dioxide required under condition 3 of this permit, the owner or operator of an affected facility shall conduct the performance test as required under 1200-3-16-.01(5) using the continuous system for monitoring sulfur dioxide. To demonstrate compliance with the 90% sulfur dioxide reduction requirement; the procedures outlined in 40 CFR 60.47b shall be utilized. For the initial compliance test, sulfur dioxide emission and percent sulfur dioxide reduction from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission and average reduction rates are used to determine compliance with the sulfur dioxide emission standard and emission reduction rate under condition 3 of this permit. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.

FSSO1261

TENNESSEE AIR POLLUTION CONTROL BOARD
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-1531

OPERATING PERMIT Issued Pursuant to Tennessee Air Quality Act

Date Issued: JUL 08 1993

Permit Number: 036681F

Date Expires: July 1, 1997

Issued To:

Tennessee Eastman Division
Eastman Kodak Company

Installation Address:

South Eastman Road
Kingsport

Installation Description:

B-325-1
Steam and Electric Generating Unit
Coal Fired Boiler No. 30
Coal Bunker and Ash Handling

Emission Source Reference No:

82-1007-37

The holder of this permit shall comply with the conditions contained in this permit as well as all applicable provisions of the Tennessee Air Pollution Control Regulations.

CONDITIONS:

1. This operating permit was prepared utilizing an application dated July 8, 1992 and signed by Mr. John F. Webb, P & S Division Superintendent along with a letter dated April 28, 1993 signed by Ms. Nancy F. Whitten, Environmental Representative of the permitted facility. This permit does not cover any air contaminant source that does not conform to the conditions of this permit and the information given in the approved application. This includes compliance with the following operating parameters:

   The input capacity for this source shall not exceed 780 million Btu per hour.

(continued on the next page)

John W. Walton
TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule or Regulation of the State of Tennessee or any of its Political Subdivisions.

NON TRANSFERABLE

POST OR FILE AT INSTALLATION ADDRESS

JUL 0 8 1993

2. The maximum allowable emissions from Vent A of this source shall not exceed the following:

Pollutant	Pounds per MM Btu	Pounds per Hour
TSP	0.018	14
SO_2	1.2	936
NO_x	0.60	468
CO	0.065	51
VOC	0.013	10

After Boiler 31 (ESRN 82-1010-15, Permit No. 932325F) is in full, steady state operation, the maximum allowable emissions from Vent A of this source shall not exceed the following:

Pollutant	Pounds per MM Btu	Pounds per Hour
TSP	0.018	14
SO_2	0.41	317
NO_x	0.60	468
CO	0.065	51
VOC	0.013	10

3. The existing #30 boiler shall be retrofitted with a spray dryer absorber to reduce sulfur dioxide emissions, and this reduction in emissions shall be accomplished by the time the new boiler #31 becomes operational.

4. Fluorides emitted from the existing boiler #30 shall not exceed 2.25 pounds per hour. To determine the decrease in fluoride emissions as a result of the proposed spray dryer absorber, tests shall be conducted at the inlet and the outlet of the proposed spray dryer absorber.

5. Hydrogen chloride emitted from the existing boiler #30 shall not exceed 25.0 pounds per hour.

6. Particulate matter emitted from Vent C shall not exceed 1.06 pounds per hour.

7. Operating time shall not exceed 8,568 hours per year for Vent A and 1,500 hours per year for Vent C.

8. A log of the operating hours for Vents A and C must be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. This log must be retained for a period of not less than two years.

(continued on the next page)

9. Periods of excess emissions with the sulfur dioxide emission limitation shall be any three-hour period during which the average emissions of sulfur dioxide exceeds the applicable standard.

10. This source shall not exhibit greater than 20 percent opacity except that a maximum of 40 percent opacity standard shall be permissible for not more than 2 minutes in any hour as stated in subparagraph 1200-3-16-.02(3)(a)2 of the Tennessee Air Pollution Control Regulations.

11. Quality assurance checks shall be performed on the opacity monitor(s) on a biennial calendar basis and in a manner prescribed by the Technical Secretary. Written reports of these quality assurance checks shall be submitted in a format prescribed by the Technical Secretary.

Furthermore, within ninety (90) days of each major modification or major repair of the opacity monitor, a repeat of the performance test shall be conducted, and a written report of it submitted to the Technical Secretary as proof of the continuous operation of the opacity monitor within acceptable accuracy limits.

12. Quality assurance checks shall be performed on both the sulfur dioxide and diluent monitoring system on a calendar basis and in a manner prescribed by the Technical Secretary. Written reports of these quality assurance checks shall be submitted in a format prescribed by the Technical Secretary.

Furthermore, within ninety (90) days of each major modification or major repair of either the sulfur dioxide monitor or diluent monitor, a repeat of the monitor performance test shall be conducted, and a written report of it submitted to the Technical Secretary as proof of the continuous operation of the sulfur dioxide monitor within acceptable accuracy limits.

13. The use of continuous in-stack monitoring for sulfur dioxide is the method by which this fuel burning installation demonstrates continual compliance with the applicable sulfur dioxide emission limitation. Therefore, for this fuel burning installation to demonstrate continual compliance with the applicable sulfur dioxide emissions limitation, the in-stack sulfur dioxide monitor and companion diluent monitor shall be simultaneously fully operational for at least eighty-five (85) percent of the operational time of the monitored unit during any calendar quarter. An operational availability of less than this amount may be considered the basis for declaring the fuel burning installation to be in non-compliance with the applicable monitoring requirements unless the reasons for the failure to maintain this level of operational availability are accepted by this Division as being legitimate malfunctions of the instruments.

(continued on the next page)

14. The use of a Division approved continuous in-stack opacity monitor is one of the methods of demonstrating continual compliance with the applicable opacity limitation for this fuel burning installation. Therefore, for this fuel burning installation to demonstrate continual compliance with the applicable opacity limitation, the in-stack opacity monitor shall be fully operational for at least ninety-five (95) percent of the operational time of the monitored unit during any calendar quarter. An operational availability of less than this amount may be considered the basis for declaring the fuel burning installation to be in non-compliance with the applicable monitoring requirements, unless the reasons for the failure to maintain this level of operational availability are accepted by this Division as being legitimate malfunctions of the instrument. In the event of a disparity of the instrument's reading versus that of a qualified visible emission evaluator, the Technical Secretary may require the source to conduct any necessary testing or investigations needed to resolve the disparity.

15. This permit supersedes any previous operating permit(s) for this source.

16. The permittee shall apply for renewal of this permit not less than sixty (60) days prior to the permit's expiration date pursuant to Division Rule 1200-3-9-.02(3).

(End of Conditions)

TENNESSEE AIR POLLUTION CONTROL BOARD
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-1531

Permit to Operate and
Permit to Construct or Modify an Air Contaminant Source Issued Pursuant to Tennessee Air Quality Act

Date Issued: JAN 17 1998

Permit Number: 743568P

Date Expires: November 1, 1998

Issued To:

Eastman Chemical Company

Installation Address:

South Eastman Road
Kingsport

Installation Description:

B-335-1
Alcohol Production

Emission Source Reference No.

82-1007-66

The holder of this permit shall comply with the conditions contained in this permit as well as all applicable provisions of the Tennessee Air Pollution Control Regulations.

CONDITIONS:

1. The application that was utilized in the preparation of this permit is dated October 6, 1995 and signed by B.M. Mitchell of the permitted facility. If this person terminates his/her employment or is reassigned different duties such that he/she is no longer the responsible person to represent and bind the facility in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification shall be in writing and submitted within thirty (30) days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the facility in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the facility until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

(Continued on next page)

John W. Walton

TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

NON-TRANSFERABLE

POST AT INSTALLATION ADDRESS

2. The production rate (total alcohol production) shall not exceed 1,900,000 pounds per day (lb/day) on a rolling thirty (30) day average until such time as the Technical Secretary issues a major Stationary Source Operating Permit for this source pursuant to paragraph 1200-3-9-.02(11) that includes some other compliance demonstration methods to meet the monitoring and related recordkeeping and reporting requirements of subpart 1200-3-9-.02(11)(e)1.(iii).

3. For as long as condition 2 exists, a production record of the process material input or output rate, in a form that readily shows compliance with condition 2, must be maintained at the source location and kept available for inspection by the Technical Secretary or his representative. This record must be retained for a period of not less than two years.

4. Volatile Organic Compounds (VOCs) emitted from storage tanks scrubber vent (Vents A and B) shall not exceed 3.26 tons per year (ton/yr).

5. Unless allowed otherwise in 1200-3, the control device for Vents A and B shall be operated with a control efficiency of 98 and 99% respectively, at the control device design rating.

6. Carbon monoxide (CO) emitted from depressurization vent for Purification Bed (Vent C) shall not exceed 126 pounds per hour and 0.063 ton/yr.

7. VOCs emitted from pumps, valves, etc. shall not exceed 10.68 ton/yr.

8. Visible emissions from this source shall not exceed 20 percent or greater opacity as determined by EPA Method 9, as published in the Federal Register, Volume 39, Number 219 on November 12, 1974. (6 minute average).

9. The issuance of this combined construction/operating permit supersedes any previously issued construction and/or operating permit for this air contaminant source.

10. The permittee shall apply for renewal of this permit not less than sixty (60) days prior to the expiration of this permit, pursuant to Division Rule 1200-3-9-.02(3).

(End of conditions)

TENNESSEE AIR POLLUTION CONTROL BOARD
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-1531

Permit to Operate and
Permit to Construct or Modify an Air Contaminant Source Issued Pursuant to Tennessee Air Quality Act

Date Issued: JUN 23 1995

Permit Number:
741878P

Date Expires: November 1, 1997

Issued To:

Eastman Chemical Company

Installation Address:

South Eastman Road
Kingsport

Installation Description:
B-354-1
Production of Methyl Acetate

Emission Source Reference No.
82-1003-25
[Federal NSPS as indicated]
[State NSPS as indicated]

The holder of this permit shall comply with the conditions contained in this permit as well as all applicable provisions of the Tennessee Air Pollution Control Regulations.

CONDITIONS:

1. The application that was utilized in the preparation of this permit is dated April 6, 1995 and signed by B.M. Mitchell of the permitted facility. If this person terminates his/her employment or is reassigned different duties such that he/she is no longer the responsible person to represent and bind the facility in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Technical Secretary of the change. Said notification shall be in writing and submitted within thirty (30) days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the facility in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the facility until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

(Continued on next page)

John W. Walter

TECHNICAL SECRETARY

No Authority is Granted by this Permit to Operate, Construct, or Maintain any Installation in Violation of any Law, Statute, Code, Ordinance, Rule, or Regulation of the State of Tennessee or any of its Political Subdivisions.

NON-TRANSFERABLE

POST AT INSTALLATION ADDRESS

2. The production rate shall not exceed 1,910,000 pounds per day (lb/day) until such time as the Technical Secretary issues a major stationary source operating permit for this source pursuant to paragraph 1200-3-9-.02(11) that includes some other compliance demonstration method to meet the monitoring and related recordkeeping and reporting requirements of subpart 1200-3-9-.02(11)(e)1.(iii).

3. This permit is valid for the storage tanks listed below:

Tank I.D.	Capacity (Gallons)	Status
31C-2	2,540	
31C-61	184	
31D-2	81,218	NSPS (Federal)
29D-20/21	37,600	NSPS (State)

4. For storage tank 31D-2, the source owner or operator shall comply with the requirements specified in the Federal Register, Volume 52, Number 67, April 8, 1987, Subpart Kb.

5. Storage tank 29D-20/21 is subject to Rules 1200-3-16-.01(7) and 1200-3-16-.61 of the Tennessee Air Pollution Control Regulations.

6. This source is subject to Rule 1200-3-16-.43 of the Tennessee Air Pollution Control Regulations.

7. The permittee shall certify the start-up date of the modified air contaminant source (storage tank 29D-20/21) regulated by this permit by submitting A COPY OF ALL PAGES OF THIS PERMIT, with the information required in A) and B) of this condition completed, to the Technical Secretary's representatives listed below:

A) DATE OF START-UP: _____ / _____ / _____
month / day / year

B) Anticipated operating rate: _____ percent of maximum rated capacity

For the purpose of complying with this condition, "start-up" of the modified air contaminant source shall be the date of the setting in operation of the modified source (storage tank 29D-20/21) for the production of product for sale or use as raw materials or steam or heat production.

The undersigned represents that he/she has the full authority to represent and bind the permittee in environmental permitting affairs. The undersigned further represents that the above provided information is true to the best of his/her knowledge and belief.

Signature		Date
Signer's name (type or print)	Title	Phone (with area code)

The completed certification shall be delivered to Compliance Validation Program and the Field Office at the addresses listed below no later than 30 days after the modified air contaminant source (storage tank 29D-20/21)is started-up.

Compliance Validation Program
Division of Air Pollution Control
9th Floor, L & C Annex
401 Church Street
Nashville, TN 37243-1531

Johnson City Field Office
Division of Air Pollution Control
2305 Silverdale Road
Johnson City, TN 37601-2162

(Continued on next page)

8. Volatile Organic Compounds (VOCs) emitted from this source shall not exceed 0.12 lb/hr.

9. Fugitive Volatile Organic Compounds emitted from pumps, valves, etc. (Process units 1 and 2) shall not exceed 5.8 tons per year (ton/yr).

10. Visible emissions from this source shall not exceed 20 percent or greater opacity as determined by EPA Method 9, as published in the Federal Register, Volume 39, Number 219 on November 12, 1974. (6 minute average)

11. This permit shall supersede permit 032303P.

12. Sixty (60) days prior to the expiration of this permit, permittee shall apply for permit renewal.

(End of conditions)

APPENDIX V

AGENCY CORRESPONDENCE

EASTMAN

Eastman Chemical Company
P.O. Box 431
Kingsport, Tennessee 37662

February 25, 1994

Joe Garrison
State Historical Commission
B-30 Customs House
701 Broadway
Nashville, TN 37243-0442

Mr. Garrison:

Air Products and Chemicals Inc. (APCI), Tennessee Eastman Division (TED) of Eastman Chemical Company, and the U.S. Department of Energy (DOE) are proposing to build a small commercial-scale methanol production facility in the existing TED manufacturing facility in Kingsport, Tennessee. The .34 acre proposed project site is located just outside the Kingsport, TN city limits in unincorporated Sullivan County. The proposed site is located between the South Fork of the Holston River and the Big Sluice in an area called Long Island. The parcel of land on which the proposed site is located was purchased by the then-Tennessee Eastman Corporation (which is now Tennessee Eastman Division of Eastman Chemical) from Tom C. Childress on November 26, 1941.

Currently, Eastman Chemical operates a methanol production plant on Long Island. The proposed plant will use existing synthesis gas capacity from the coal gasification facility to produce methanol, but a different catalyst system will be utilized. The proposed production facility is one of the projects in the U.S. Department of Energy's Clean Coal Technology Program and will aid the Department of Energy in finding technologies to produce cleaner burning fuels and to reduce dependence on foreign oil imports.

Since DOE will be funding part of this project, a review, as defined in 36 CFR 800, is needed to satisfy requirements of Section 106 of the National Historic Preservation Act and the National Environmental Policy Act (NEPA). We understand that your office will coordinate this review, send back comments, and that the criteria to determine effects used are found in 36 CFR 800.9.

The first criteria to determine effects, defined in 36 CFR 800.9(a), is "when the undertaking may alter characteristics of the property that may qualify the property for inclusion in the National Register (of Historic Places)." Since all of Long Island is already listed in the National Register, this project is not believed to have an effect based on this criteria.

The second criteria (36 CFR 800.9(b)) states that "An undertaking is considered to have an adverse effect when the effect on a historic property may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association." The National Register of Historic Places Inventory Nomination Form for Long Island, Item 10, states, "Modern residential and industrial development on the eastern half of Long Island does not contribute to the national significance of the site;..." The proposed project site is located on the eastern half, and, therefore, based on the previous statement, is not believed to have an adverse effect based on this criteria.

The referenced statement in the nomination form concludes, "...however, that area is included in the landmark designation because of its potential for productive archeological investigation." During the early 1980s, members of the Kingsport Chapter of the Tennessee Archeological Society investigated various plots on Long Island owned by Tennessee Eastman. According to the project leader from the local chapter, no significant artifacts were found.

In a conversation with S.D. Dean, a prominent local amateur archeologist, Mr. Dean commented that he believed the potential of significant archeological finds on this part of Long Island has been overstated. Mr. Dean surface-hunted this part of Long Island during the 1960s. Although he did find artifacts during this time, there were no indications of a major site.

The extensive development on the project site may also lessen the probability of finding significant archeological artifacts. Before TED's development of the site, it was used for grazing and farming. During expansions of TED in the 1980s, the site was prepared for construction by filling with 6 feet of fill dirt and surface levelling with gravel.

The ground below the fill material will not be disturbed significantly during construction. Disturbances will be limited to caissons placed through the fill material until bedrock is reached (which is 20 to 30 feet below the level of the fill material). Foundations and any required underground utilities will be located within the fill material. Other than the caissons, the ground below the fill will not be disturbed.

To aid your review, part of a USGS Quadrangle, an aerial photograph, and pictures of the proposed site have been included to identify the location of the proposed plant site, existing structures in the area, and development of the proposed site.

Mr. Garrison, I hope this letter and the other items included meet your needs. I look forward to your response. Please let me know if you need further information.

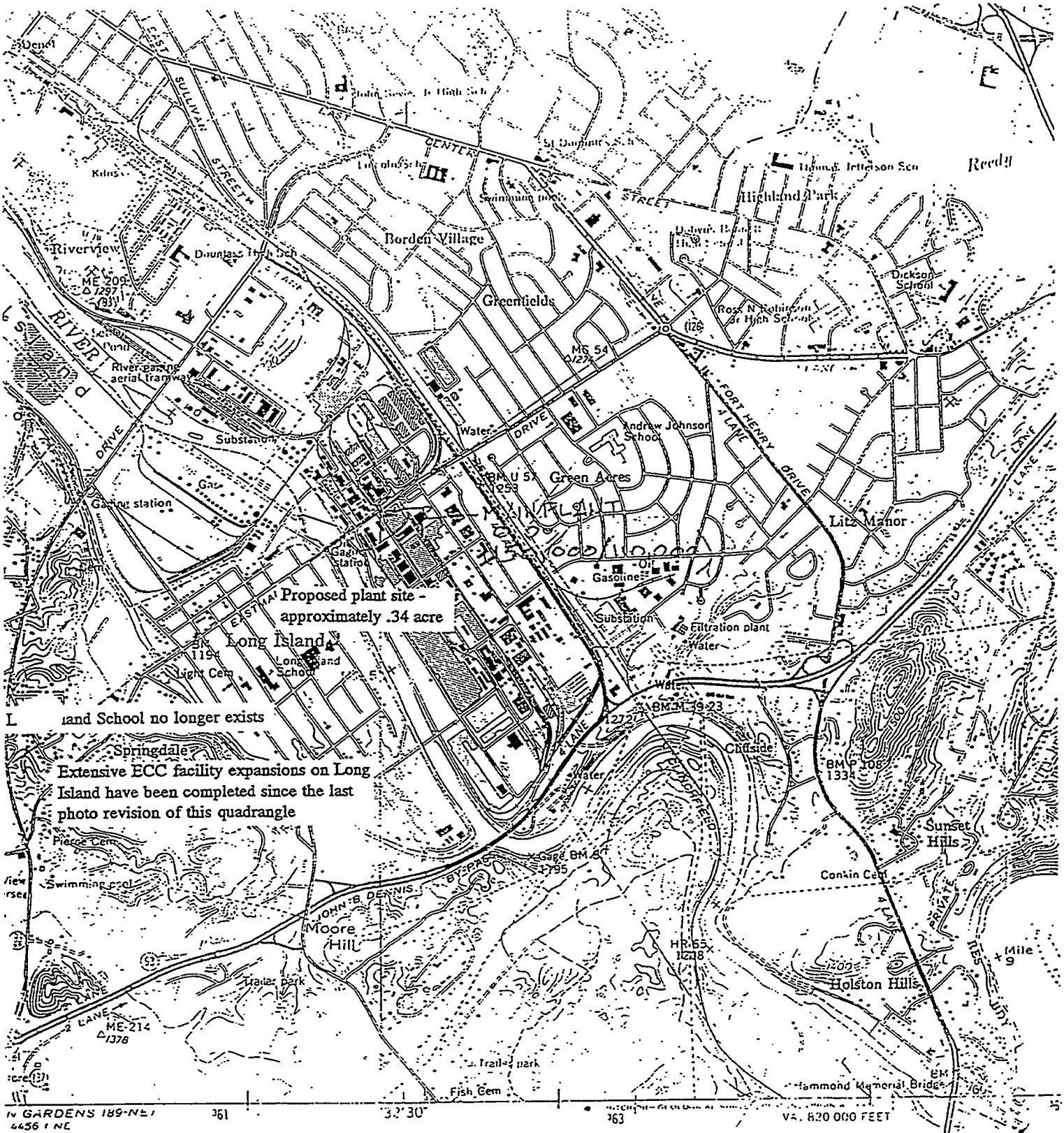
Sincerely,

Ryan Vannice

Ryan Vannice
Eastman Chemical Company
P.O. Box 511
Kingsport, TN 37662-5054
(615)229-2885

.cc Jerry Bewley
Larry Daniels
Sharon Nolen
Tennessee Eastman Division

enclosures



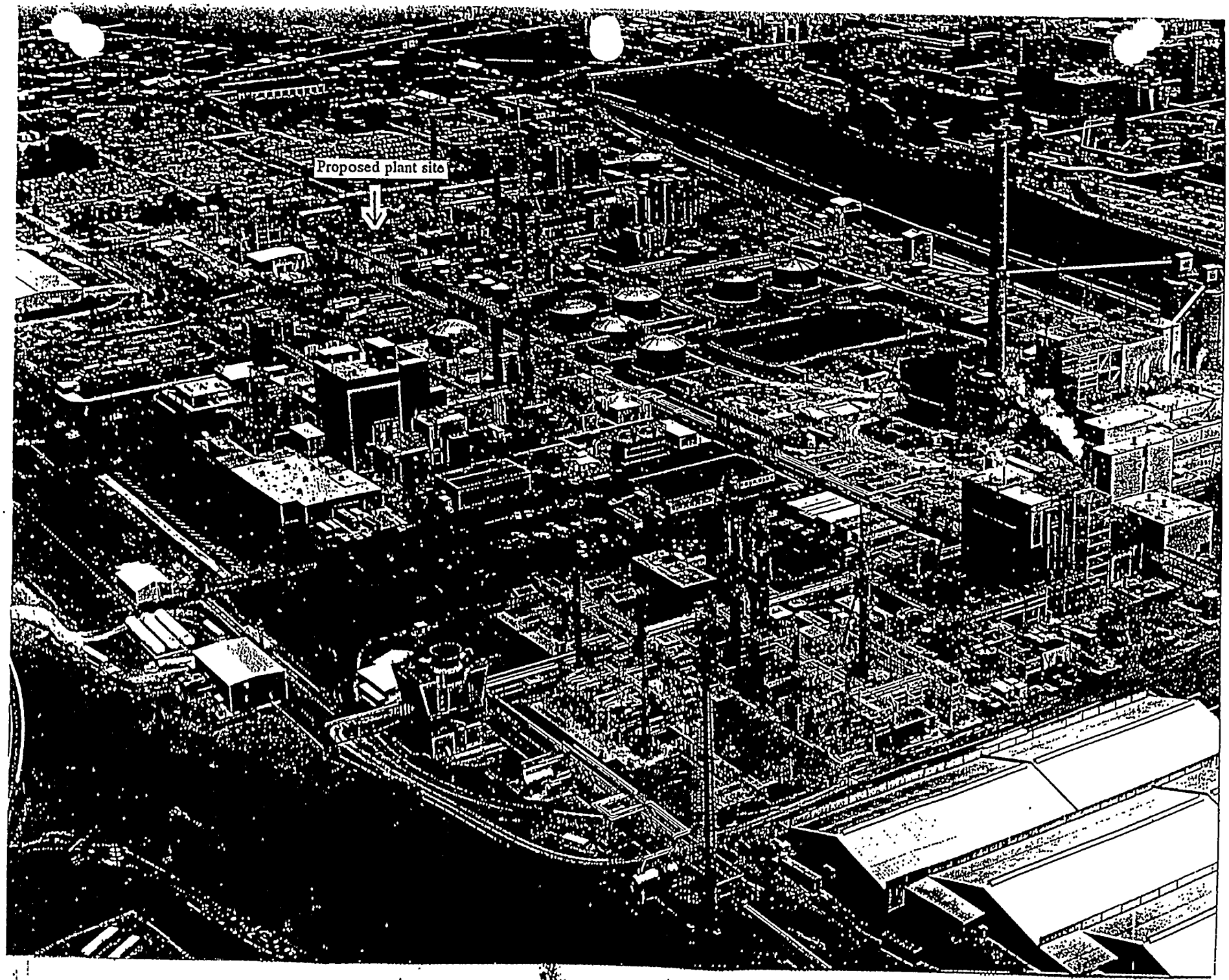
Kingsport, TN-VA Quadrangle

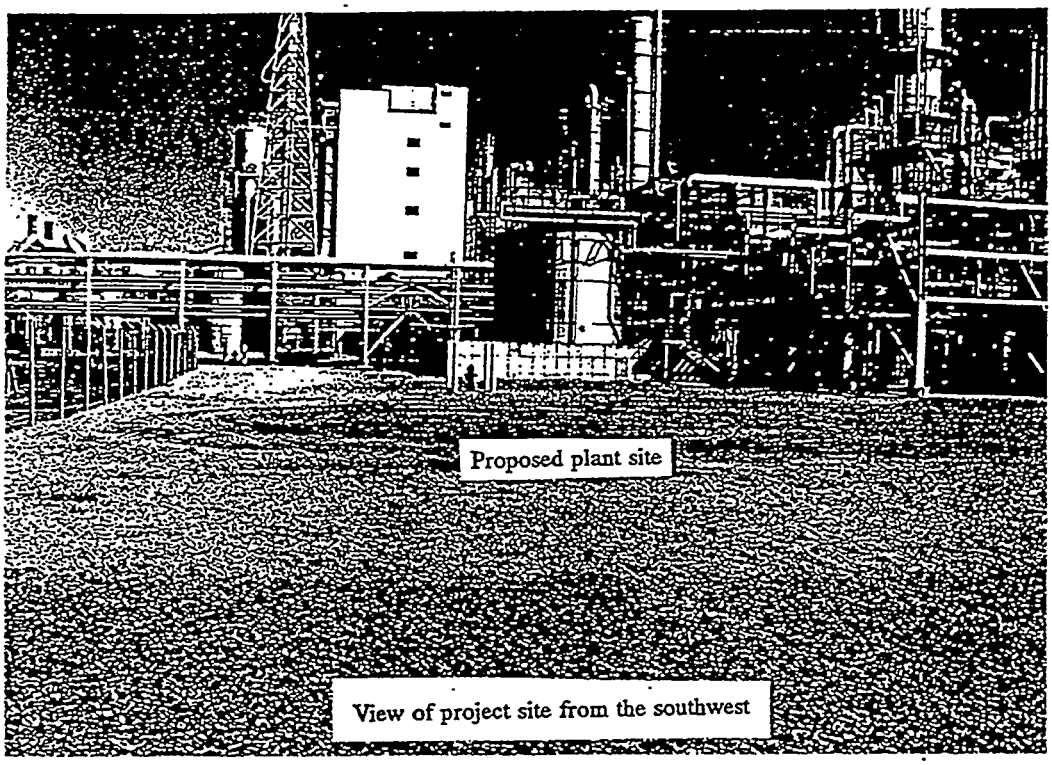
KENTUCKY
TENNESSEE
MO
ILL
MISS
ALA
GA

ROAD CLASSIFICATION
Heavy-duty
Medium-duty
Light-duty
U.S. Route

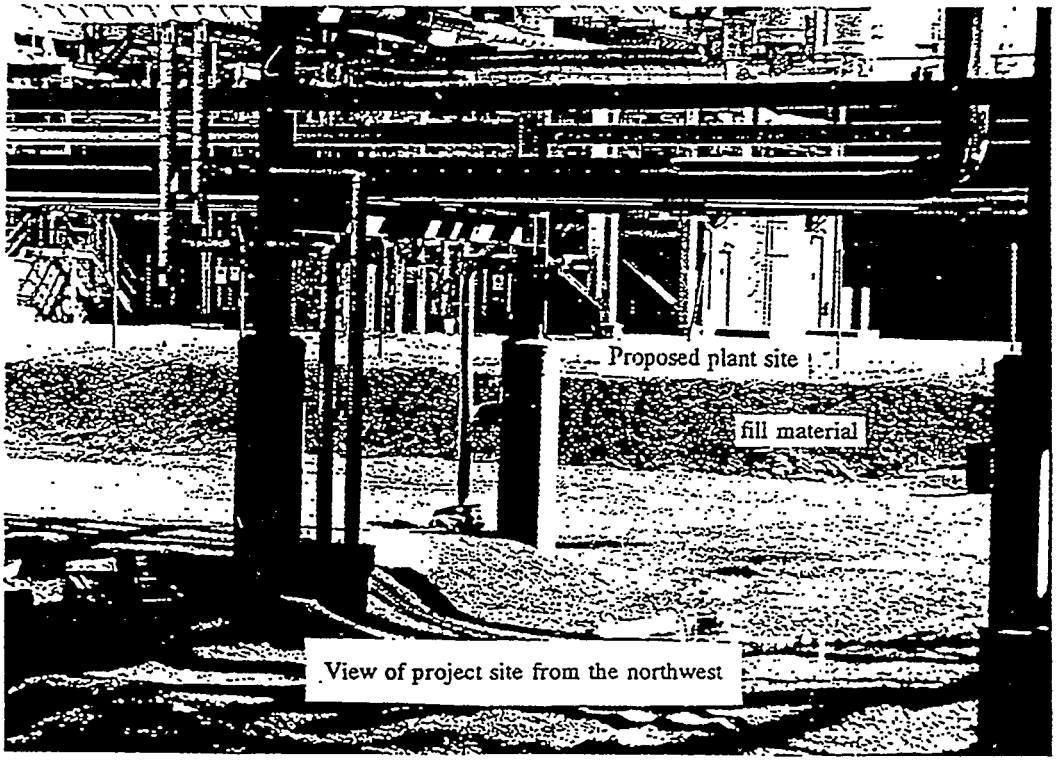
CONTOUR INTERVAL 20 FEET
DATUM OF 1929

KINGSPORT


Proposed plant site



View of project site from the southwest



View of project site from the northwest

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
401 Church Street
Nashville, Tennessee 37243

To: Richard Strang

From: William M. Christie, WMC
Ecological Services Division

Subject: Environmental Review for Threatened and Endangered Species.

Date: 2/25/94

Project: Industrial Project Site

Be advised that a review of our data base indicate no recorded threatened and endangered species for this specific project area.

The results of this review does not mean that a comprehensive biological survey has been completed for this and other sites.

/wmc

Ecological Services Division: 8th Floor, L & C Tower, 401 Church St., Nashville, TN 37243-0447 * Phone (615)532-0437 * FAX(615)532-0046

a. listed at 40 CFR 372.65 pursuant to Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986, also titled the Emergency Planning and Community Right-to-Know Act of 1986;

b. present at or above threshold levels at a facility subject to SARA Title III, Section 313 reporting requirements; and,

c. that meet at least one of the following criteria:

i. are listed in Appendix D of 40 CFR 122 on either Table II (organic priority pollutants), Table III (certain metals, cyanides, and phenols) or Table V (certain toxic pollutants and hazardous substances);

ii. are listed as a hazardous substance pursuant to section 311(b)(2)(A) of the CWA at 40 CFR 116.4; or,

iii. are pollutants for which EPA has published acute or chronic toxicity criteria.

SBL

02640PMT.DOC

TENNESSEE HISTORICAL COMMISSION
701 BROADWAY
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-0442

March 13, 1994

Mr. Ryan Vannice
Eastman Chemical Company
Post Office Box 511
Kingsport, Tennessee 37662-5054

Re: DOE; PROPOSED METHANOL PRODUCTION FACILITY; LONG ISLAND OF THE HOLSTON; SULLIVAN COUNTY

Dear Mr. Vannice:

The above-referenced undertaking has been reviewed pursuant to Section 106 of the National Historic Preservation Act for compliance by the participating federal agency or applicant for federal assistance. Procedures for implementing Section 106 of the act are codified at 36 CFR 800 (51 FR 31115, September 2, 1986).

Based on the documentation submitted, we concur with your determination that the above-referenced project will have no effect on the characteristics of the Long Island of the Holston which qualified the property for inclusion in the National Register of Historic Places.

If you are applying for federal funds, license or permit, you should submit this letter as evidence of compliance with Section 106 to the appropriate federal agency, which, in turn, should contact this office as required by 36 CFR 800. If you represent a federal agency, you should submit a formal determination to this office for comment. Questions or comments should be directed to Joe Garrison at (615) 532-1559. Your cooperation is appreciated.

Sincerely,

Herbert L. Harper

Herbert L. Harper, Executive Director
Deputy State Historic Preservation Officer

HLH:kes

United States Department of the Interior

FISH AND WILDLIFE SERVICE
446 Neal Street
Cookeville, TN 38501

April 21, 1994

Mr. Richard M. Strang
Principal Environmental Representative
Eastman Chemical Company
P.O. Box 511
Kingsport, Tennessee 37662

Dear Mr. Strang:

Thank you for your letter and enclosures of April 5, 1994, regarding the proposed construction of a methanol production demonstration project in Kingsport, Sullivan County, Tennessee. The Fish and Wildlife Service (Service) has reviewed the information submitted and offers the following comments.

Review of the Kingsport quadrangle of the Service's National Wetlands Inventory maps reveals that there are no forested, emergent, or scrub-shrub wetlands in the vicinity of the project. Therefore, the Service anticipates that there will be no project-related adverse impacts to valuable wetland resources.

We have also reviewed the proposed methanol production demonstration project with regard to endangered species. According to our records, there are no federally listed or proposed endangered or threatened plant or animal species in the project impact area. In view of this, we believe that the requirements of Section 7 of the Endangered Species Act have been fulfilled and no further consultation is needed at this time. However, consultation should be reinitiated if: (1) new information reveals that the proposed project may affect listed species in a manner not previously considered, (2) the proposed project is subsequently modified to include activities which were not considered during this review, or (3) new species are listed or critical habitat designated that might be affected.

Thank you for the opportunity to comment on this action. If you have any questions, please contact Sharon Martin of my staff at 615/528-6481.

Sincerely,

Lee A. Barclay

Lee A. Barclay, Ph.D.
Field Supervisor

EASTMAN

Eastman Chemical Company
P.O. Box 511
Kingsport, Tennessee 37662

April 5, 1994

Mr. Jim Widlak
U. S. Fish and Wildlife Services
446 Neal Street
Cookeville, TN 38501

Dear Mr. Widlak:

Air Products and Chemicals Inc., Tennessee Eastman Division (TED) and the U.S. Department of Energy (DOE) are proposing to build a small commercial-scale methanol production demonstration project in Kingsport, Tennessee at the existing TED manufacturing facility. The project is part of DOE's Clean Coal Technology Program and is designed to demonstrate a production process which can produce cleaner burning fuels for trucks, automobiles and electric power generating plants.

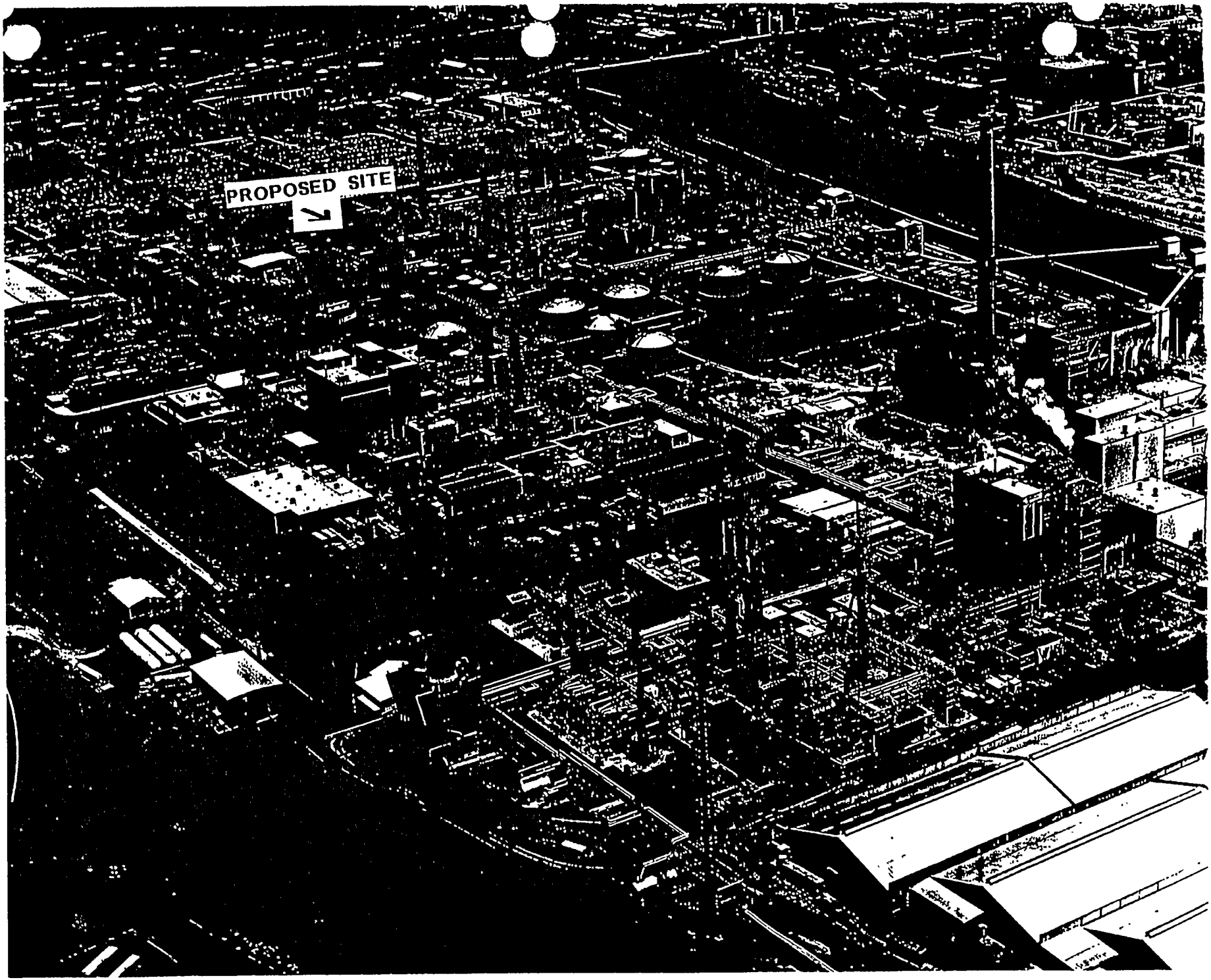
The proposed site for the project is a 0.34 acre plot located adjacent to existing manufacturing buildings at TED. The area has been backfilled with approximately six feet of compacted shale and a six inch gravel cover. A copy of a topographical map is enclosed showing the location of the site. Extensive expansions of the TED manufacturing complex have occurred since this map was revised. The Long Island School and many of the other residential structures indicated on the map have been removed and replaced by manufacturing buildings. A recent photograph of the 0.34 acres which shows the current level of development is also enclosed.

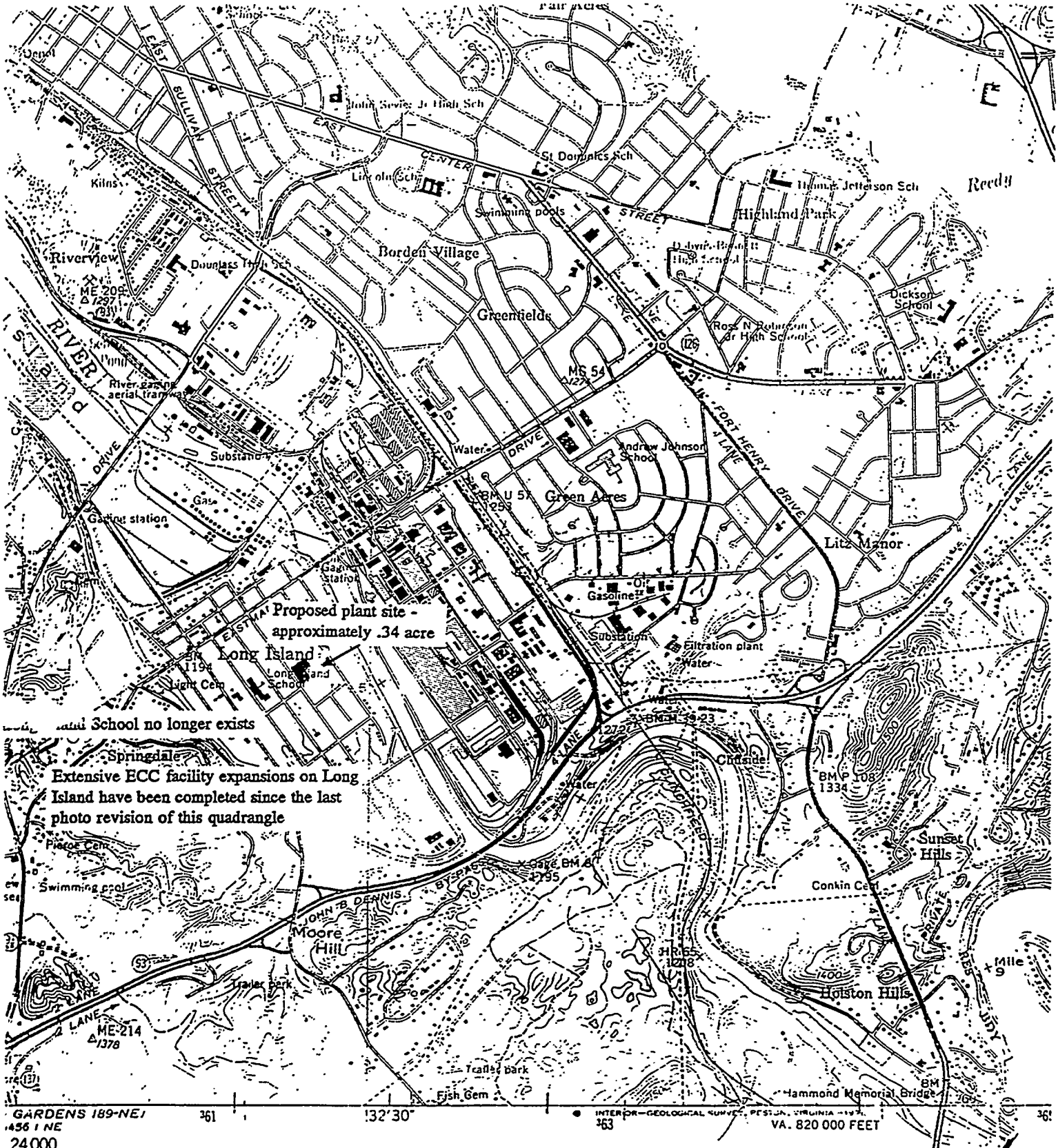
I am in the process of preparing an Environmental Information Volume for DOE. A discussion of the rare or endangered plant and wildlife species which might be impacted by this project is required as part of this effort. Please provide me with any information you have concerning rare plants or wildlife known to exist in the vicinity of the proposed site.

Thank you for you assistance in this matter. If you have any questions, you may call me at (615) 229-6677.

Very truly yours,

Richard M. Strang
Principal Environmental Representative


PROPOSED SITE



GARDENS 189-NE/
456 I NE

.24000

361 | 132°30" | 363 | VA. 820 000 FEET

INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA

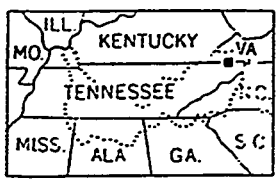
Kingsport, TN-VA Quadrangle

0 4000 5000 6000 7000 FEET

1 KILOMETER

RVAL CONTOURS
DATUM OF 1929

AL MAP ACCURACY STANDARDS
RVEY, RESTON, VIRGINIA 22092.
GY, NASHVILLE, TENN. 37219.
ES, CHARLOTTESVILLE, VIRGINIA 22903
GA, TENN. 37401 OR KNOXVILLE, TENN. 37902
AND SYMBOLS IS AVAILABLE ON REQUEST



QUADRANGLE LOCATION

ROAD CLASSIFICATION

Heavy-duty ..... Poor motor
Medium-duty ..... Wagon and
Light-duty ..... Foot tra
U. S. Route Sta

In developed areas, or through roads ar

KINGSPORT,
N363°—W

19

EASTMAN

Eastman Chemical Company
P.O. Box 511
Kingsport, Tennessee 37662

March 15, 1994

TO: Community Advisory Panel Members

The meeting last night included a presentation on acid rain, health, safety and environmental programs in some of the manufacturing areas and a recommendation that the Panel serve to assess Eastman's effectiveness in implementing the Community Awareness and Emergency Response Code (CAER) for Responsible Care®.

The following members were absent:

Dick Gendron
Betty Ottenfeld
Brenda Walters
Keith Westmoreland

The next meeting is scheduled for Monday, May 9. The meeting will be dedicated to assessment of the CAER Code by the Panel.

Please mark the date on your calendars.

Very truly yours,

Bill

Bill D. Edwards
Manager
Community Relations

ptw/caer

Betty:

Hope you are feeling better. We missed you. Enclosed is copy of an article on CAPs with reference to ours on page 20. Will send you the magazine when we receive a supply.

A G E N D A

March 14, 1994

Introduction . . . . . Edwards

Acid Rain Report . . . . . Dr. Elaine Zoeller

Grass Roots Safety and Environmental Representatives Employee Environmental Survey . . . . . TED Environmental Representatives

Information Update . . . . . Garwood

- Powerhouse Precipitators
- Tank Farm Relocation
- Education Involvement
- HDC Report

CAER Code . . . . . Ron Bumpers

Nascar . . . . . Edwards

ptw/Marchcap

APPENDIX VI

EASTMAN AND AIR PRODUCTS LITERATURE

FOR CURRENT COPIES OF THIS LITERATURE PLEASE CALL FRANK FRENDUTO (AIR PRODUCTS AT 610-481-7857)

RESPONSIBLE CARE®

OUR PLEDGE TO IMPROVED HEALTH, SAFETY AND ENVIRONMENTAL PERFORMANCE

Eastman Chemical Company is committed to protecting health, safety, and the environment and to continually improving the performance of all company operations in these areas through the endorsement and implementation of **RESPONSIBLE CARE®**.

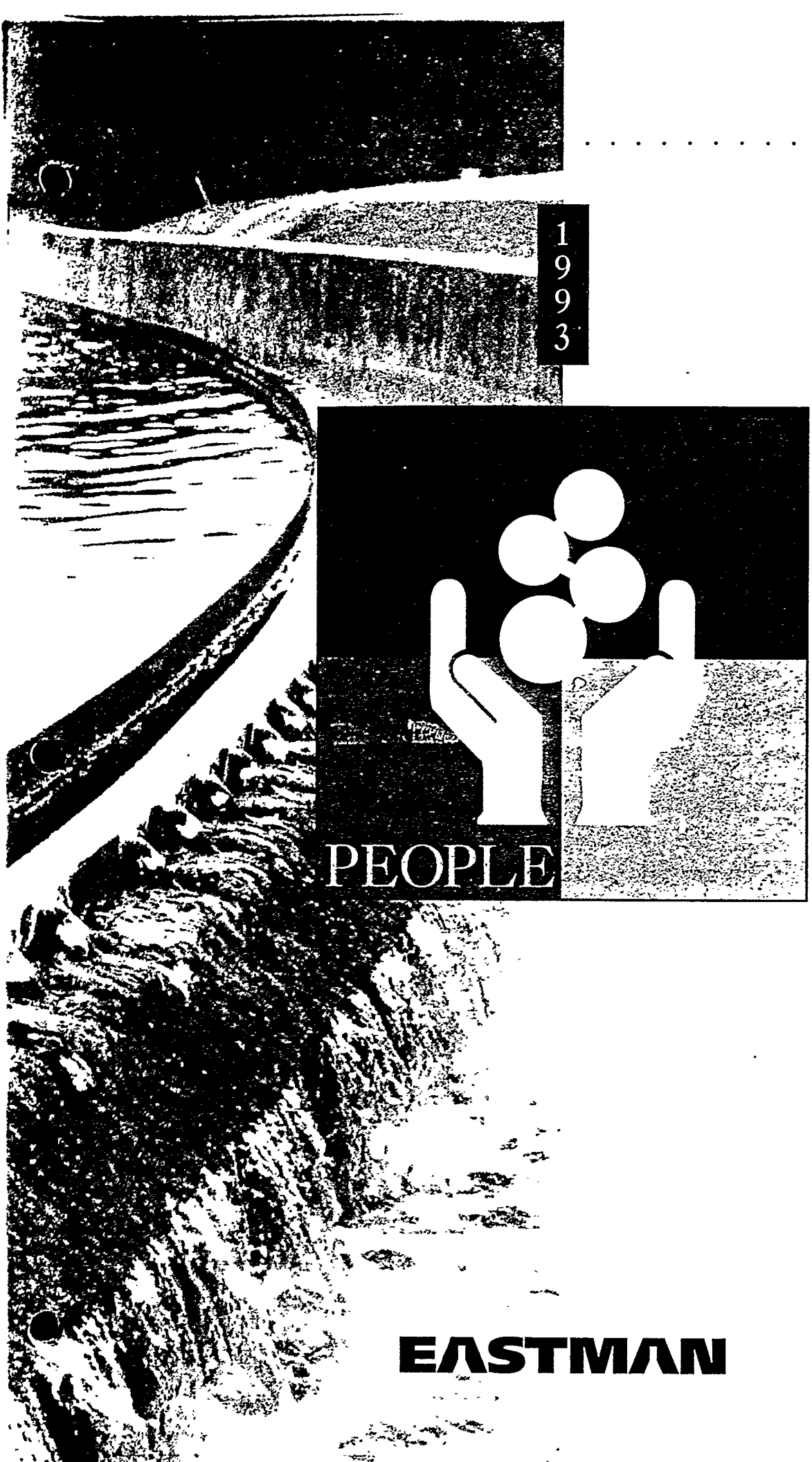
We will conduct business according to these **RESPONSIBLE CARE** principles:

- **To recognize** and respond to community concerns about chemicals and our operations.
- **To develop** and produce chemicals that can be manufactured, transported, used and disposed of safely.
- **To make** health, safety and environmental considerations a priority in our planning for all existing and new products and processes.
- **To report** promptly to officials, employees, customers and the public, information on chemical-related health or environmental hazards and to recommend protective measures.
- **To counsel** customers on the use, transportation and disposal of chemical products.
- **To operate** our plants and facilities in a manner that protects the environment and the health and safety of our employees and the public.
- **To extend** knowledge by conducting or supporting research on the health, safety and environmental effects of our products, processes and waste materials.
- **To work** with others to resolve problems created by past handling and disposal of hazardous substances.
- **To participate** with government and others in creating responsible laws, regulations and standards to safeguard the community, workplace and environment.
- **To promote** the principles and practices of **RESPONSIBLE CARE** by sharing experiences and offering assistance to others who produce, handle, use, transport or dispose of chemicals.

Earnie Deavenport

E.W. Deavenport, Jr.
President

EASTMAN



EASTMAN CHEMICAL COMPANY

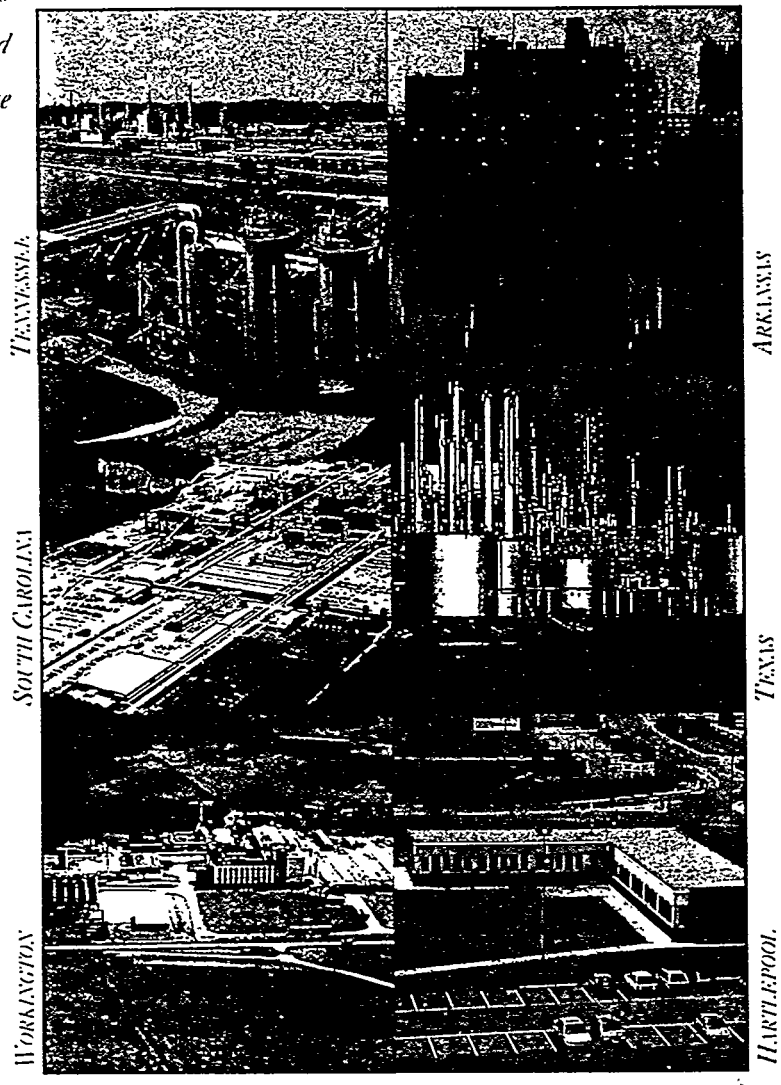
RESPONSIBLE CARE PROGRESS REPORT

HEALTH, SAFETY & THE ENVIRONMENT

EASTMAN

Eastman Chemical Company manufactures chemicals, fibers and plastics, which it markets to more than 7,000 customers around the world. Eastman's headquarters are in Kingsport, Tennessee as are its largest manufacturing site, sales headquarters, research and development, and corporate administrative offices.

Other major manufacturing operations are located in Longview, Texas; Batesville, Arkansas; Columbia, South Carolina; and England. Eastman employs about 18,000 people worldwide with annual sales of $3.9 billion in 1993.



EASTMAN

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