

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



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

Date Issued: September 6, 2001

Permit Number:  
953862P

Date Expires: December 1, 2001

Issued To:  
Eastman Chemical Company  
Tennessee Operations  
P.O. Box 511, Kingsport, TN 37662

Installation Address:  
South Eastman Road  
Kingsport

Installation Description:

Emission Source Reference No.:

**Chemical Manufacturing Operations:  
Technical Modifications -  
Listing in Attachment 2**

**82-0003-51  
complete source listing in Attachment 1**

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 applications that were utilized in the preparation of this permit are listed in Attachment 1 of this permit. If the individuals who signed the applications terminate 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 the next page)

  
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

2. This construction permit revises and/ or deletes certain permit conditions for the sources noted in Attachment 1 of this permit. The sources are grouped to correspond to the same source listings used in the major source (Title V) operating permit (MSOP) number. The modifications to the conditions of the most recent permit for each source are noted in the tables and notes of Attachment 2 of this permit. All permit conditions for these sources that are not modified by this permit remain effective.

**(End of Conditions)**

**ATTACHMENT 1**

**LISTING OF SOURCES**

**MSOP-07:**

Reference Title V Permit Application dated May 30, 1997 and revisions dated February 18, 1999 and June 6, 2000. Requested permit modifications are noted on Forms V.30b for the following sources:

<b><u>Emission Source I.D.</u></b>	<b><u>Emission Source Number</u></b>	<b><u>Permit Number</u></b>
B-244A-1	82-1003-13	951231P
B-244B-1	82-1003-14	948289P
T-234-1	82-0003-51	946666P

**MSOP-21**

Reference Title V Permit Application dated June 24, 1997 and revisions dated March 31, 1999, September 24, 1999, October 23, 2000, and August 23, 2001. Requested permit modifications are noted on Forms V.30b for the following sources:

<b><u>Emission Source I.D.</u></b>	<b><u>Emission Source Number</u></b>	<b><u>Permit Number</u></b>
B-244-1	82-1003-08	948040P
B-244-2	82-1003-09	947375P
B-244D-1	82-0003-70	948625P
B-244D-2	82-1006-03	948121P
B-244E-1	82-0003-23	949838P

**ATTACHMENT 2**

**SOURCE SPECIFIC MODIFICATIONS**

**TO PERMIT CONDITIONS**

Permit number 953862P

Expiration date: December 1, 2001

**MSOP-07**

Permit number 953862P

TENNESSEE DIVISION OF AIR POLLUTION CONTROL  
9<sup>TH</sup> FLOOR, L&C ANNEX  
401 CHURCH STREET  
NASHVILLE, TN 37243-1531

Expiration date: December 1, 2001

APC V.30b

**MAJOR SOURCE OPERATING PERMIT APPLICATION: APPROVED CHANGES TO CONSTRUCTION PERMIT CONDITIONS**

1. FACILITY NAME: Tennessee Eastman Division of Eastman Chemical Company		2. EMISSION SOURCE NUMBER: B-244A-1			
3. DESCRIBE THE PROCESS EMISSION SOURCE/FUEL BURNING INSTALLATION/INCINERATOR: Ketone Production					
4. EMISSION SOURCE REFERENCE NUMBER: 82-1003-13		5. PERMIT NUMBER: 951231P		6. DATE PERMIT ISSUED: May 19, 1999	
7. CONSTRUCTION PERMIT CONDITION NUMBER	8. PERMIT CONDITION	9. NATURE OF APPROVED (DELETION/REVISION)	10. REASON FOR APPROVED DELETION/REVISION	11. NEW LIMITATION OR STANDARD FOR THIS SOURCE	
2	The production rate of ketones, including off specification production, shall not exceed the number stated in APC-21 & 24 dated March 5, 1999, that accompanied the Request for Protection Order for Confidential Information dated March 5, 1999, and signed by Linda Lewis, until such time as the Technical Secretary issues a major 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).	Deletion	Production rate is part of the compliance demonstration plan for this source.		
3	For as long as condition 2 exists, a record of the production rate of Ketones, including off specification production, 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 five years.	Deletion	This condition has been combined in the revised Condition 2 above.		
4	The source owner or operator shall maintain records of tank identification, capacity, and an estimate of projected throughput for uncontrolled Tanks 71, 69, 73, 72, 64, 65, 63, 70, 200, 77, 78, 94, 95, and 79 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).	Deletion	Tank identification and capacity no longer required. Compliance demonstration using recordkeeping of tank emissions will serve to demonstrate compliance with emission limitations.		
Footnotes: N/A					
11. PAGE NUMBER:		REVISION NUMBER: NA		DATE OF REVISION:	

Permit number 953862P

TENNESSEE DIVISION OF AIR POLLUTION CONTROL  
9<sup>TH</sup> FLOOR, L&C ANNEX  
401 CHURCH STREET  
NASHVILLE, TN 37243-1531

Expiration date: December 1, 2001

APC V.30b

**MAJOR SOURCE OPERATING PERMIT APPLICATION: APPROVED CHANGES TO CONSTRUCTION PERMIT CONDITIONS**

1. FACILITY NAME: Tennessee Eastman Division of Eastman Chemical Company		2. EMISSION SOURCE NUMBER: B-244A-1	
3. DESCRIBE THE PROCESS EMISSION SOURCE/FUEL BURNING INSTALLATION/INCINERATOR: Ketone Production			
4. EMISSION SOURCE REFERENCE NUMBER: 82-1003-13		5. PERMIT NUMBER: 951231P	
6. DATE PERMIT ISSUED: May 19, 1999			
7. CONSTRUCTION PERMIT CONDITION NUMBER	8. PERMIT CONDITION	9. NATURE OF APPROVED (DELETION/REVISION)	10. REASON FOR APPROVED DELETION/REVISION
7	Fugitive VOCs emitted from pumps, valves, etc. associated with this source (Vent X) shall not exceed 26.47 ton/yr.	Revision	Change to Work Practice Standard
11	Fugitive Acetone emitted from pumps, valves, etc. associated with this source (Vent X) shall not exceed 17.01 ton/yr.	Revision	Change to Work Practice Standard
8	VOCs emitted from this source shall not exceed 71.4 ton/yr.	Revision	Change to Work Practice Standard
12	Acetone emitted from this source shall not exceed 80.11 ton/yr.	Revision	Change to Work Practice Standard
11. NEW LIMITATION OR STANDARD FOR THIS SOURCE			
Quarterly Leak inspection and repair. (1) (Fugitive VOC emissions from pumps, valves, flanges, etc. are estimated at 26.47 ton/yr)			
Quarterly Leak inspection and repair. (1) (Acetone emissions from pumps, valves, flanges, etc. are estimated at 17.01 ton/yr)			
VOCs emitted from this source excluding fugitive emissions from pumps, valves, flanges, etc. shall not exceed 44.93 ton/yr.			
Acetone emitted from this source excluding fugitive emissions from pumps, valves, flanges, etc. shall not exceed 63.1 ton/yr.			
Footnotes: 1 Refer to Quarterly / Annual Leak Inspection Guidance in the Table Notes.			
11. PAGE NUMBER:		REVISION NUMBER: NA	DATE OF REVISION:



Permit number 953862P

TENNESSEE DIVISION OF AIR POLLUTION CONTROL  
9<sup>TH</sup> FLOOR, L&C ANNEX  
401 CHURCH STREET  
NASHVILLE, TN 37243-1531

Expiration date: December 1, 2001

APC V.30b

**MAJOR SOURCE OPERATING PERMIT APPLICATION: APPROVED CHANGES TO CONSTRUCTION PERMIT CONDITIONS**

1. FACILITY NAME: Tennessee Eastman Division of Eastman Chemical Company		2. EMISSION SOURCE NUMBER: B-244B-1	
3. DESCRIBE THE PROCESS EMISSION SOURCE/FUEL BURNING INSTALLATION/INCINERATOR: Ketone Production			
4. EMISSION SOURCE REFERENCE NUMBER: 82-1003-14		5. PERMIT NUMBER: 948289P	6. DATE PERMIT ISSUED: February 18, 1998
7. CONSTRUCTION PERMIT CONDITION NUMBER	8. PERMIT CONDITION	9. NATURE OF APPROVED (DELETION/REVISION)	10. REASON FOR APPROVED DELETION/REVISION
4	The source owner or operator shall maintain records of tank identification, capacity, and an estimate of projected throughput for uncontrolled tanks 272, 264, 265, 269, 273, 201, 271, 270, 263, 5, 66, DD-161/162, and 293 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).	Deletion	Tank identification and capacity no longer required. Compliance demonstration using recordkeeping of tank emissions will serve to demonstrate compliance with emission limitations.
8	VOCs emitted from this source shall not exceed 57.18 ton/yr.	Revision	Change to Work Practice Standard
7	Fugitive VOCs emitted from pumps, valves, etc. associated with this source shall not exceed 25.25 ton/yr.	Revision	Change to Work Practice Standard
12	Acetone emitted from this source shall not exceed 15.93 ton/yr.	Revision	Change to Work Practice Standard
11	Fugitive acetone emission emitted from pumps, valves, etc. associated with this source shall not exceed 10.25 ton/yr.	Revision	Change to Work Practice Standard
Footnotes: 1 Refer to Quarterly / Annual Leak Inspection Guidance in the Table Notes.			
11. PAGE NUMBER:		REVISION NUMBER: NA	DATE OF REVISION:

Permit number 953862P

TENNESSEE DIVISION OF AIR POLLUTION CONTROL  
9<sup>TH</sup> FLOOR, L&C ANNEX  
401 CHURCH STREET  
NASHVILLE, TN 37243-1531

Expiration date: December 1, 2001

APC V.30b

**MAJOR SOURCE OPERATING PERMIT APPLICATION: APPROVED CHANGES TO CONSTRUCTION PERMIT CONDITIONS**

1. FACILITY NAME: Tennessee Eastman Division of Eastman Chemical Company		2. EMISSION SOURCE NUMBER: T-234-1	
3. DESCRIBE THE PROCESS EMISSION SOURCE/FUEL BURNING INSTALLATION/INCINERATOR: Tanks 70-06 and 70-07			
4. EMISSION SOURCE REFERENCE NUMBER: 82-0003-51		5. PERMIT NUMBER: 946666P	6. DATE PERMIT ISSUED: March 6, 1997
7. CONSTRUCTION PERMIT CONDITION NUMBER	8. PERMIT CONDITION	9. NATURE OF APPROVED (DELETION/REVISION)	10. REASON FOR APPROVED DELETION/REVISION
2	The source owner or operator shall maintain records of tank identification, capacity, and an estimate of projected throughput for uncontrolled tanks 70-06 and 70-07 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).	DELETION	Tank identification, capacity, and throughput are no longer required for compliance demonstration.
4	Fugitive VOCs emitted from pumps, valves, etc associated with this source (Vent A) shall not exceed 0.86 ton/yr.	REVISION	Change to Work Practice Standard.
			Annual leak inspection and repair. (1) (Fugitive VOC emissions from pumps, valves, flanges, etc. are estimated at 0.86 ton/yr.)
Footnotes: 1 Refer to Quarterly / Annual Leak Inspection Guidance in the Table Notes.			
11. PAGE NUMBER:		REVISION NUMBER: NA	DATE OF REVISION:

Permit number 953862P

Expiration date: December 1, 2001

**MSOP-21**

Permit number 953862P

Expiration date: December 1, 2001

TENNESSEE DIVISION OF AIR POLLUTION CONTROL  
9<sup>TH</sup> FLOOR, L&C ANNEX  
401 CHURCH STREET  
NASHVILLE, TN 37243-1531

APC V.30b

**MAJOR SOURCE OPERATING PERMIT APPLICATION: APPROVED CHANGES TO CONSTRUCTION PERMIT CONDITIONS**

1. FACILITY NAME: Tennessee Operations, Eastman Chemical Company		2. EMISSION SOURCE NUMBER: B-244-1			
3. DESCRIBE THE PROCESS EMISSION SOURCE/FUEL BURNING INSTALLATION/INCINERATOR: Diketene Refining and Acetic Anhydride Recovery					
4. EMISSION SOURCE REFERENCE NUMBER: 82-1003-08		5. PERMIT NUMBER: 948040P		6. DATE PERMIT ISSUED: October 16, 1997	
7. CONSTRUCTION PERMIT CONDITION NUMBER	8. PERMIT CONDITION	9. NATURE OF APPROVED (DELETION/REVISION)	10. REASON FOR APPROVED DELETION/REVISION	11. NEW LIMITATION OR STANDARD FOR THIS SOURCE	
2	The production rate of Refined Diketene, including off-specification production, shall not exceed the number stated in APC-21 & 24 dated June 18, 1997, that accompanied the Request for Protection Order for Confidential Information dated May 22, 1997, and signed by B. M. Mitchell, 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).	Deletion	Production rate is used as part of the compliance demonstration plan for Vent A.	N/A	
3	For as long as condition 2 exists, a record of the production rate of refined Diketene, including off specification production, 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 maintained for a period of not less than five years.	Deletion	Production rate is used as part of the compliance demonstration plan for Vent A.	N/A	
4	The source owner or operator shall maintain records of tank identification, capacity, and an estimate of projected throughput for uncontrolled tanks 12, DD-154, DD-155, 11, 3, 6, 23, 24, 25, 15, 35, and DD-160 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).	Deletion	Records of tank identification, capacity, and an estimate of projected throughput no longer needed for compliance demonstration.	N/A	

Permit number 953862P

Expiration date: December 1, 2001

1. FACILITY NAME: Tennessee Operations, Eastman Chemical Company		2. EMISSION SOURCE NUMBER: B-244-1	
3. DESCRIBE THE PROCESS EMISSION SOURCE/FUEL BURNING INSTALLATION/INCINERATOR: Diketene Refining and Acetic Anhydride Recovery			
7	Fugitive VOCs emitted from pumps, valves, etc. associated with this source (Vent G) shall not exceed 10.25 ton/yr.	Revision	Change to work practice standard.
8	VOCs emitted from this source shall not exceed 24.19 ton/yr.	Revision	Change to work practice standard for fugitive emissions.
Quarterly Leak Inspection and Repair (1) (Fugitive VOCs from pumps, valves, flanges, etc. are estimated at 10.25 ton/yr)			
VOCs emitted from this source (excluding fugitive equipment leaks from pumps, valves, flanges, etc.) shall not exceed 13.94 ton/yr.			
Footnotes: 1 Refer to Quarterly / Annual Leak Inspection Guidance in the Table Notes.			
11. PAGE NUMBER:		REVISION NUMBER: NA	DATE OF REVISION:

Permit number 953862P

Expiration date: December 1, 2001

TENNESSEE DIVISION OF AIR POLLUTION CONTROL  
9<sup>TH</sup> FLOOR, L&C ANNEX  
401 CHURCH STREET  
NASHVILLE, TN 37243-1531

APC V.30b

**MAJOR SOURCE OPERATING PERMIT APPLICATION: APPROVED CHANGES TO CONSTRUCTION PERMIT CONDITIONS**

1. FACILITY NAME: Tennessee Operations, Eastman Chemical Company		2. EMISSION SOURCE NUMBER: B-244-2	
3. DESCRIBE THE PROCESS EMISSION SOURCE/FUEL BURNING INSTALLATION/INCINERATOR: Manufacture of Acetoacetic Esters			
4. EMISSION SOURCE REFERENCE NUMBER: 82-1003-09		5. PERMIT NUMBER: 947375P	6. DATE PERMIT ISSUED: July 25, 1997
7. CONSTRUCTION PERMIT CONDITION NUMBER	8. PERMIT CONDITION	9. NATURE OF APPROVED (DELETION/REVISION)	10. REASON FOR APPROVED DELETION/REVISION
2	The production rate of Acetoacetic Esters, including off-specification production, shall not exceed CBI pounds per 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 methods to meet the monitoring and related recordkeeping and reporting requirements of subpart 1200-3-9-.02(11)(e)1.(iii).	Deletion	Production rate is not needed for compliance demonstration.
3	For as long as condition 2 exists, a record of the production rate of Acetoacetic Esters, including off-specification production, 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 maintained for a period of not less than five years.	Deletion	Production rate is not needed for compliance demonstration.
4	The source owner or operator shall maintain records of tank identification, capacity, and an estimate of projected throughput for uncontrolled tanks 34, DD-156/DD-157, TK 33 CAT POT, and 4 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).	Deletion	Records of tank identification, capacity, and an estimate of projected throughput for uncontrolled tanks no longer needed for compliance demonstration.
5	Volatile Organic Compounds (VOCs) emitted from Vents A, B, F, I, and J shall not exceed 0.53 pounds per hour (lb/hr).	Revision	Added new vent N from existing emissions.
			Volatile Organic Compounds (VOCs) emitted from Vents A, B, F, I, J, and N shall not exceed 0.53 pounds per hour (lb/hr).

Permit number 953862P

Expiration date: December 1, 2001

1. FACILITY NAME: Tennessee Operations, Eastman Chemical Company		2. EMISSION SOURCE NUMBER: B-244-2	
3. DESCRIBE THE PROCESS EMISSION SOURCE/FUEL BURNING INSTALLATION/INCINERATOR: Manufacture of Acetoacetic Esters			
7	Fugitive VOCs emitted from equipment leaks (pumps, valves, connectors, etc) associated with this source (Vent K) shall not exceed 1.42 tons per year (ton/yr).	Revision	Change to work practice standard.
		Annual Leak Inspection and Repair (1) (Fugitive VOCs from pumps, valves, flanges, etc. are estimated at 1.42 ton/yr)	
Footnotes: 1 Refer to Quarterly / Annual Leak Inspection Guidance in the Table Notes.			
11. PAGE NUMBER:		REVISION NUMBER: NA	DATE OF REVISION:

Permit number 953862P

Expiration date: December 1, 2001

TENNESSEE DIVISION OF AIR POLLUTION CONTROL  
9<sup>TH</sup> FLOOR, L&C ANNEX  
401 CHURCH STREET  
NASHVILLE, TN 37243-1531

APC V.30b

**MAJOR SOURCE OPERATING PERMIT APPLICATION: APPROVED CHANGES TO CONSTRUCTION PERMIT CONDITIONS**

1. FACILITY NAME: Tennessee Operations, Eastman Chemical Company		2. EMISSION SOURCE NUMBER: B-244-2	
3. DESCRIBE THE PROCESS EMISSION SOURCE/FUEL BURNING INSTALLATION/INCINERATOR: Manufacture of Acetoacetic Esters			
4. EMISSION SOURCE REFERENCE NUMBER: 82-1003-09		5. PERMIT NUMBER: 947375P	
6. DATE PERMIT ISSUED: July 25, 1997			
7. CONSTRUCTION PERMIT CONDITION NUMBER	8. PERMIT CONDITION	9. NATURE OF APPROVED (DELETION/REVISION)	10. REASON FOR APPROVED DELETION/REVISION
8	VOCs emitted from this source shall not exceed 14.49 ton/yr	Revision	Change to work practice standard for fugitive emissions.
11	Fugitive acetone emitted from equipment leaks (pumps, valves, connectors, etc.) associated with this source (Vent K) shall not exceed 0.89 ton/yr.	Revision	Change to work practice standard.
12	Acetone emitted from this source shall not exceed 6.54 ton/yr.	Revision	Change to work practice standard for fugitive emissions.
Footnotes: 1 Refer to Quarterly / Annual Leak Inspection Guidance in the Table Notes.			
11. PAGE NUMBER:		REVISION NUMBER: NA	DATE OF REVISION:



Permit number 953862P

Expiration date: December 1, 2001

TENNESSEE DIVISION OF AIR POLLUTION CONTROL  
9<sup>TH</sup> FLOOR, L&C ANNEX  
401 CHURCH STREET  
NASHVILLE, TN 37243-1531

APC V.30b

**MAJOR SOURCE OPERATING PERMIT APPLICATION: APPROVED CHANGES TO CONSTRUCTION PERMIT CONDITIONS**

1. FACILITY NAME: Tennessee Operations, Eastman Chemical Company		2. EMISSION SOURCE NUMBER: B-244D-1			
3. DESCRIBE THE PROCESS EMISSION SOURCE/FUEL BURNING INSTALLATION/INCINERATOR: Crude Methanol and Amine Refining					
4. EMISSION SOURCE REFERENCE NUMBER: 82-0003-70		5. PERMIT NUMBER: 948625P		6. DATE PERMIT ISSUED: February 12, 1998	
7. CONSTRUCTION PERMIT CONDITION NUMBER	8. PERMIT CONDITION	9. NATURE OF APPROVED (DELETION/REVISION)	10. REASON FOR APPROVED DELETION/REVISION	11. NEW LIMITATION OR STANDARD FOR THIS SOURCE	
2	The production rate of refined amine or methanol, including off-specification production, shall not exceed the number stated in APC-21 & 24 dated August 22, 1997, that accompanied the Request for Protection Order for Confidential Information dated August 18, 1997 and signed by B. M. Mitchell, until such time as the Technical Secretary issues a major source operating permit for this source pursuant to paragraph 1200-3-9-.02 (11) (e) 1.(iii).	Deletion	Production rate is included in the compliance demonstration plan for Tanks 209, 210, and 103.	N/A	
3	For as long as condition 2 exists, a record of the production rate of refined amine or methanol, including off-specification production, 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 five years.	Deletion	Production rate is included in the compliance demonstration plan for Tanks 209, 210, and 103.	N/A	
4	The source owner or operator shall maintain records of tank identification, capacity, and an estimate of projected throughput for uncontrolled tanks 209, 210, and 103 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).	Deletion	A compliance demonstration plan exists for Tanks 209, 210, and 103.	N/A	

Permit number 953862P

Expiration date: December 1, 2001

1. FACILITY NAME: Tennessee Operations, Eastman Chemical Company		2. EMISSION SOURCE NUMBER: B-244D-1	
3. DESCRIBE THE PROCESS EMISSION SOURCE/FUEL BURNING INSTALLATION/INCINERATOR: Crude Methanol and Amine Refining			
6	Fugitive VOCs emitted from pumps, valves, etc. associated with this source shall not exceed 1.67 ton/yr.	Revision	Change to Work Practice Standard
7	Fugitive acetone emitted from pumps, valves, etc. associated with this source shall not exceed 0.11 ton/yr.	Revision	Change to Work Practice Standard
Annual Leak Inspection and Repair (1) (Fugitive VOC emissions from pumps, valves, flanges, etc. are estimated at 1.67 ton/yr.)			
Annual Leak Inspection and Repair (1) (Fugitive acetone emissions from pumps, valves, flanges, etc. are estimated at 0.11 ton/yr.)			
Footnotes: 1 Refer to Quarterly / Annual Leak Inspection Guidance in the Table Notes.			
11. PAGE NUMBER:		REVISION NUMBER: NA	DATE OF REVISION:

Permit number 953862P

Expiration date: December 1, 2001

TENNESSEE DIVISION OF AIR POLLUTION CONTROL  
9<sup>TH</sup> FLOOR, L&C ANNEX  
401 CHURCH STREET  
NASHVILLE, TN 37243-1531

APC V.30b

**MAJOR SOURCE OPERATING PERMIT APPLICATION: APPROVED CHANGES TO CONSTRUCTION PERMIT CONDITIONS**

1. FACILITY NAME: Tennessee Operations, Eastman Chemical Company		2. EMISSION SOURCE NUMBER: B-244D-2	
3. DESCRIBE THE PROCESS EMISSION SOURCE/FUEL BURNING INSTALLATION/INCINERATOR: Manufacture of Acetoacetamides or Acrylic Esters			
4. EMISSION SOURCE REFERENCE NUMBER: 82-1006-03		5. PERMIT NUMBER: 948121P	6. DATE PERMIT ISSUED: October 24, 1997
7. CONSTRUCTION PERMIT CONDITION NUMBER	8. PERMIT CONDITION	9. NATURE OF APPROVED (DELETION/REVISION)	10. REASON FOR APPROVED DELETION/REVISION
2	The production of acetoacetamides or acrylic esters, including off specification production, shall not exceed the number stated in APC-21 & 24 dated June 19, 1997, that accompanied the Request for Protection Order for Confidential Information dated June 19, 1997, and signed by B. M. Mitchell, until such time as the Technical Secretary issues a major 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).	Deletion	Process production rate is used as part of the compliance demonstration plan for this source.
3	For as long as condition 2 exists, a record of the production rate of acetoacetamides or acrylic esters, including off specification production, 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 five years.	Deletion	Process production rate is used as part of the compliance demonstration plan for this source.
6	VOCs emitted from pumps, valves, etc. associated with this source (Vent E), and exiting building through exhaust fans, windows, doors, etc., shall not exceed 3.53 ton/yr.	Revision	Change to work practice standard. Annual Leak Inspection and Repair (1) (Fugitive VOCs from pumps, valves, flanges, etc. are estimated at 3.53 ton/yr)

Permit number 953862P

Expiration date: December 1, 2001

1. FACILITY NAME: Tennessee Operations, Eastman Chemical Company		2. EMISSION SOURCE NUMBER: B-244D-2	
3. DESCRIBE THE PROCESS EMISSION SOURCE/FUEL BURNING INSTALLATION/INCINERATOR: Manufacture of Acetoacetamides or Acrylic Esters			
7	VOCs emitted from this source shall not exceed 3.74 ton/yr.	Revision	Change to work practice standard for fugitive emissions.
9	Acetone emitted from pumps, valves, etc. associated with this source (Vent E), and exiting building through exhaust fans, windows, doors, etc., shall not exceed 0.02 ton/yr.	Revision	Change to work practice standard.
10	Acetone emitted from this source shall not exceed 2.38 ton/yr.	Revision	Change to work practice standard for fugitive emissions.
Footnotes: 1 Refer to Quarterly / Annual Leak Inspection Guidance in the Table Notes.			
11. PAGE NUMBER:		REVISION NUMBER: NA	DATE OF REVISION:

Expiration date: December 1, 2001

APC V.30b

1. FACILITY NAME: Tennessee Operations, Eastman Chemical Company		2. EMISSION SOURCE NUMBER: B-244E-1			
3. DESCRIBE THE PROCESS EMISSION SOURCE/FUEL BURNING INSTALLATION/INCINERATOR: Acetoacetarylide Manufacture					
4. EMISSION SOURCE REFERENCE NUMBER: 82-0003-23		5. PERMIT NUMBER: 949838P		6. DATE PERMIT ISSUED: July 31, 1998	
7. CONSTRUCTION PERMIT CONDITION NUMBER	8. PERMIT CONDITION	9. NATURE OF APPROVED (DELETION/ REVISION)	10. REASON FOR APPROVED DELETION/ REVISION	11. NEW LIMITATION OR STANDARD FOR THIS SOURCE	
2	The production rate of acetoacetarylides, including off-specification production, shall not exceed the number stated in APC 21 & 24 dated April 1, 1998, that accompanied the Request for Protection Order for Confidential Information dated March 30, 1998, and signed by R. C. Lindsay, until such time as the Technical Secretary issues a major 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).	Deletion	Production rate is part of the compliance demonstration plan for this source.	N/A	
3	For as long as condition 2 exists, a record of the production rate of acetoacetarylides, including off-specification production, 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 five years.	Deletion	Production rate is part of the compliance demonstration plan for this source.	N/A	

Permit number 953862P

Expiration date: December 1, 2001

1. FACILITY NAME: Tennessee Operations, Eastman Chemical Company		2. EMISSION SOURCE NUMBER: B-244E-1	
3. DESCRIBE THE PROCESS EMISSION SOURCE/FUEL BURNING INSTALLATION/INCINERATOR: Acetoacetarylide Manufacture			
4	The source owner or operator shall maintain records of tank identification, capacity, and an estimate of projected throughput for uncontrolled tanks 235, 90-68, 274, and 275 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).	Deletion	Tank identification and capacity are no longer required. Compliance demonstration using recordkeeping of tank emissions will serve to demonstrate compliance with emission limitations.
Footnotes: 1 Refer to Quarterly / Annual Leak Inspection Guidance in the Table Notes.			
11. PAGE NUMBER:		REVISION NUMBER: NA	DATE OF REVISION:

Permit number 953862P

Expiration date: December 1, 2001

TENNESSEE DIVISION OF AIR POLLUTION CONTROL  
9<sup>TH</sup> FLOOR, L&C ANNEX  
401 CHURCH STREET  
NASHVILLE, TN 37243-1531

APC V.30b

**MAJOR SOURCE OPERATING PERMIT APPLICATION: APPROVED CHANGES TO CONSTRUCTION PERMIT CONDITIONS**

1. FACILITY NAME: Tennessee Operations, Eastman Chemical Company		2. EMISSION SOURCE NUMBER: B-244E-1		
3. DESCRIBE THE PROCESS EMISSION SOURCE/FUEL BURNING INSTALLATION/INCINERATOR: Acetoacetarylde Manufacture				
4. EMISSION SOURCE REFERENCE NUMBER: 82-0003-23		5. PERMIT NUMBER: 949838P		6. DATE PERMIT ISSUED: July 31, 1998
7. CONSTRUCTION PERMIT CONDITION NUMBER	8. PERMIT CONDITION	9. NATURE OF APPROVED (DELETION/REVISION)	10. REASON FOR APPROVED DELETION/REVISION	11. NEW LIMITATION OR STANDARD FOR THIS SOURCE
10	Fugitive acetone emitted from pumps, valves, etc. associated with this source shall not exceed 1.08 ton/yr.	Revision	Change to work practice standard.	Annual Leak Inspection and Repair (1) (Fugitive acetone emissions from pumps, valves, flanges, etc. are estimated at 1.08 ton/yr)
11	Fugitive VOCs emitted from pumps, valves, etc. associated with this source shall not exceed 0.88 ton/yr.	Revision	Change to work practice standard.	Annual Leak Inspection and Repair (1) (Fugitive VOC emissions from pumps, valves, flanges, etc. are estimated at 0.88 ton/yr.)
12	VOCs emitted from this source shall not exceed 1.08 ton/yr.	Revision	Change to work practice standard for fugitive emissions.	VOCs emitted from this source (excluding fugitive equipment leaks from pumps, valves, flanges, etc.) shall not exceed 0.20 ton/yr.
13	Acetone emitted from this source shall not exceed 13.22 ton/yr.	Revision	Change to work practice standard for fugitive emissions.	Acetone emitted from this source (excluding fugitive equipment leaks from pumps, valves, flanges, etc.) shall not exceed 12.14 ton/yr.
Footnotes: 1 Refer to Quarterly / Annual Leak Inspection Guidance in the Table Notes.				
11. PAGE NUMBER:		REVISION NUMBER: NA		DATE OF REVISION:

## Table Notes: Quarterly/Annual Leak Inspection Guidance

### Quarterly Leak Inspection

a) A leak inspection of all equipment in air contaminant service (contains or contacts a process fluid that is at least 10% air contaminant by weight) that is not "in heavy liquid service" or "in vacuum service" shall be performed once per calendar quarter. For this inspection, detection methods incorporating sight (e.g. looking for drips), sound (e.g. hissing sounds indicative of a leak), or smell (e.g. strong odors traceable to piping leaks) shall be used as appropriate. "Equipment" includes pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, and flanges. "In heavy liquid service" means when the maximum true vapor pressure of the pure air contaminant components is equal to or less than 0.044 psia at 68 degrees F. "In vacuum service" means equipment that is operating at an internal pressure which is at least 0.7 psia below ambient pressure. Equipment that is covered by insulation or obstructed from sight when standing on existing floors or walkways is exempt from this inspection. Equipment that is subject to or exempted from a federally required work practice standard (e.g. 40 CFR Part 60, Subpart VV, 40 CFR Part 63, Subpart H, 40 CFR Part 265, Subpart BB) is exempt from this inspection.

b) When a leak is detected, an initial attempt at repair shall be made no later than 10 calendar days after the leak is detected. Repair or replacement of leaking equipment shall be completed within 30 calendar days after detection of each leak, except as provided in paragraph (c) below.

c) 1) Delay of repair of leaking equipment will be allowed if the repair is technically infeasible without a process unit shutdown or if repair personnel would be exposed to an immediate danger if attempting a repair without a process shutdown. Repair of this equipment shall occur by the end of the next process unit shutdown.

(2) Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in air contaminant service.

(3) Delay of repair for valves, connectors, and agitators is also allowed if the owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair.

(4) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown.

(5) Delay of repair of pumps for up to 6 months after leak detection is allowed if the pump is replaced with (i) a dual mechanical seal system, (ii) a pump with no externally actuated shaft penetrating the pump housing, or (iii) a new system that the permittee has determined will provide better performance.

### d) Recordkeeping Requirements

(1) Records must be maintained that identify piping systems or process areas subject to this plan.

(2) Records of all inspections must be kept documenting the inspection was conducted and the date of the inspection. If no leaks are detected during the inspection, the record must indicate this result.

(3) When a leak is detected during the quarterly inspection, the following information shall be recorded:

(i) Component identifier or description of location and operator name, initials, or identification number.

(ii) The date the leak was detected.

(iii) The date the initial attempt at repair is made.

(iv) The date of successful repair of the leak. "Successful repair" means the leak is no longer detected using the inspection procedure outlined in item 10(a).

(v) "Repair delayed" and the reason for the delay if a leak is not repaired within 30 days after discovery of the leak.



## Annual Leak Inspection

- (a) A leak inspection of all equipment in air contaminant service (contains or contacts a process fluid that is at least 10% air contaminant by weight) that is not "in heavy liquid service" or "in vacuum service" shall be performed once per calendar year. For this inspection, detection methods incorporating sight (e.g. looking for drips), sound (e.g. hissing sounds indicative of a leak), or smell (e.g. strong odors traceable to piping leaks) shall be used as appropriate. "Equipment" includes pumps, compressors, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, and flanges. "In heavy liquid service" means when the maximum true vapor pressure of the pure air contaminant components is equal to or less than 0.044 psia at 68 degrees F. "In vacuum service" means equipment that is operating at an internal pressure which is at least 0.7 psia below ambient pressure. Equipment that is covered by insulation or obstructed from sight when standing on existing floors or walkways is exempt from this inspection. Equipment that is subject to or exempted from a federally required work practice standard (e.g. 40 CFR Part 60, Subpart VV, 40 CFR Part 63, Subpart H, 40 CFR Part 265, Subpart BB) is exempt from this inspection.
- (b) When a leak is detected, an initial attempt at repair shall be made no later than 10 calendar days after the leak is detected. Repair or replacement of leaking equipment shall be completed within 30 calendar days after detection of each leak, except as provided in paragraph (c) below.
- (c)
- (1) Delay of repair of leaking equipment will be allowed if the repair is technically infeasible without a process unit shutdown or if repair personnel would be exposed to an immediate danger if attempting a repair without a process shutdown. Repair of this equipment shall occur by the end of the next process unit shutdown.
- (2) Delay of repair of equipment for which leaks have been detected is allowed for equipment that is isolated from the process and that does not remain in air contaminant service.
- (3) Delay of repair for valves, connectors, and agitators is also allowed if the owner or operator determines that emissions of purged material resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair.
- (4) Delay of repair beyond a process unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the second process unit shutdown will not be allowed unless the third process unit shutdown occurs sooner than 6 months after the first process unit shutdown.
- (5) Delay of repair of pumps for up to 6 months after leak detection is allowed if the pump is replaced with (i) a dual mechanical seal system, (ii) a pump with no externally actuated shaft penetrating the pump housing, or (iii) a new system that the permittee has determined will provide better performance.
- (d) Recordkeeping Requirements
- (1) Records must be maintained that identify piping systems or process areas subject to this plan.
- (2) Records of all inspections must be kept documenting the inspection was conducted and the date of the inspection. If no leaks are detected during the inspection, the record must indicate this result.
- (3) When a leak is detected during the annual inspection, the following information shall be recorded:
- (i) Component identifier or description of location and operator name, initials, or identification number.
- (ii) The date the leak was detected.
- (iii) The date the initial attempt at repair is made.
- (iv) The date of successful repair of the leak. "Successful repair" means the leak is no longer detected using the inspection procedure outlined in item 10(a).
- (v) "Repair delayed" and the reason for the delay if a leak is not repaired within 30 days after discovery of the leak.