

US EPA ARCHIVE DOCUMENT

08/17/96 09:43 919 541 5689  
 JUL 14 1996  
 ENVIRONMENTAL HEALTH SAFETY DIVISION

Scenario 1

3M XL

North Plant	1995 Allowable VOC Emissions (tpy)	1996 Allowable VOC Emissions (tpy)	1997 Allowable VOC Emissions (tpy)	1998 Allowable VOC Emissions (tpy)	Basis
Coaler	1088	1086	1086	1086	Not modified. No MACT appl. Mag Mact in 1996, 95% control. Mag Mact in 1996, 95% control. Mag Mact in 1996, 95% control. Mag Mact in 1996, 95% control. Mag Mact in 1996, 95% control. Mag Mact in 1996, 95% control. Modified to make pharmaceuticals. Would've limited to actuals + 39 = 58. No 112(g) or MACT. New in 1998 - no 112(g) or MACT. Low VOC cooling satisfies NSPS and BACT. same as ST5 above. New in 1996 - total enclosure with 95% TO satisfies BACT, NSPS, and 112(g). Mag Mact in 1996, 95% control plus some small sources not requiring review or MACT.
22	4002	240	240	240	
23	4340	217	217	217	
24	5255	263	263	263	
25	4989	260	260	260	
26	936	250	250	250	
27	936	58	58	58	
28	na	na	na	5	
ST5	na	na	na	13	
ST6	na	140	140	140	
LM9	na	70	70	70	
Other	684	70	70	70	
Total North	23008	2584	2584	2602	

South Plant	1995 Allowable VOC Emissions (tpy)	1996 Allowable VOC Emissions (tpy)	1997 Allowable VOC Emissions (tpy)	1998 Allowable VOC Emissions (tpy)	Basis
Coaler	3483	3483	3483	3483	Not modified. No MACT appl. Not modified. No MACT appl. Modified in 1999, 92% TO satisfies PSTL NSPS, BACT, and 112(g). Not modified. No MACT appl. Not modified. No MACT appl. Adjusted for production + some removal of equipment
1 (1L)	4596	4596	4596	4596	
2 (2L)	863	863	863	70	
3 (3L)	1371	1371	1371	1371	
4 (5L)	220	220	220	220	
5 (6L)	440	440	440	440	
Others	10981	10973	10973	10180	
Total South	33989	13557	13567	12702	
Total Facility					

All numbers are fictitious.

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Scenario 1

North Plant	1995 Actual VOC Emissions (tpy)	1996 Actual VOC Emissions (tpy)	1997 Actual VOC Emissions (tpy)	1998 Actual VOC Emissions (tpy)	"Planned" Actuals in 1998 Absent Project XL (tpy)
Coater	90	93	95	99	394
22	82	84	82	80	185
23	64	68	71	69	176
24	87	91	94	97	203
25	77	81	80	85	193
26	12	25	60	83	190
27	9	8	8	5	50
28	na	na	na	5	5
ST5	na	na	na	13	13
ST6	na	na	na	100	140
LM3	na	80	90	200	70
Other	460	300	280	200	
Total North	881	830	850	836	1620

Basis for  
Planned Actuals

under XL, effectively capped at 99.  
 MACT only would require 95% vs 87.8%  
 MACT only would require 95% vs 98%  
 MACT only would require 95% vs 97.6%  
 MACT only would require 95% vs 97.8%  
 MACT only would require 95% vs 97.8%  
 Will operate TO at 97% to leave room  
 no difference  
 no difference  
 Will operate TO at 96.5% to leave room  
 Will control only top emitters and new  
 small lines vs. all MACT sources.

South Plant:	1996 Actual VOC Emissions (tpy)	1996 Actual VOC Emissions (tpy)	1997 Actual VOC Emissions (tpy)	1998 Actual VOC Emissions (tpy)	"Planned" Actuals in 1998 Absent Project XL (tpy)
Coater	380	425	475	580	560
1 (1L)	230	260	325	420	420
2 (2L)	75	84	120	36	41
3 (3L)	500	540	610	630	630
4 (5L)	43	52	90	130	122
5 (6L)	198	220	200	150	265
Others					
Total South	1426	1581	1820	1926	2038
Total Facility	2307	2411	2580	2762	3658

no difference  
 no difference  
 Achieve better than 92% control  
 no difference  
 Under XL vent who control occasionally  
 Will add control to compounding due to  
 XL savings.

All numbers are fictitious.

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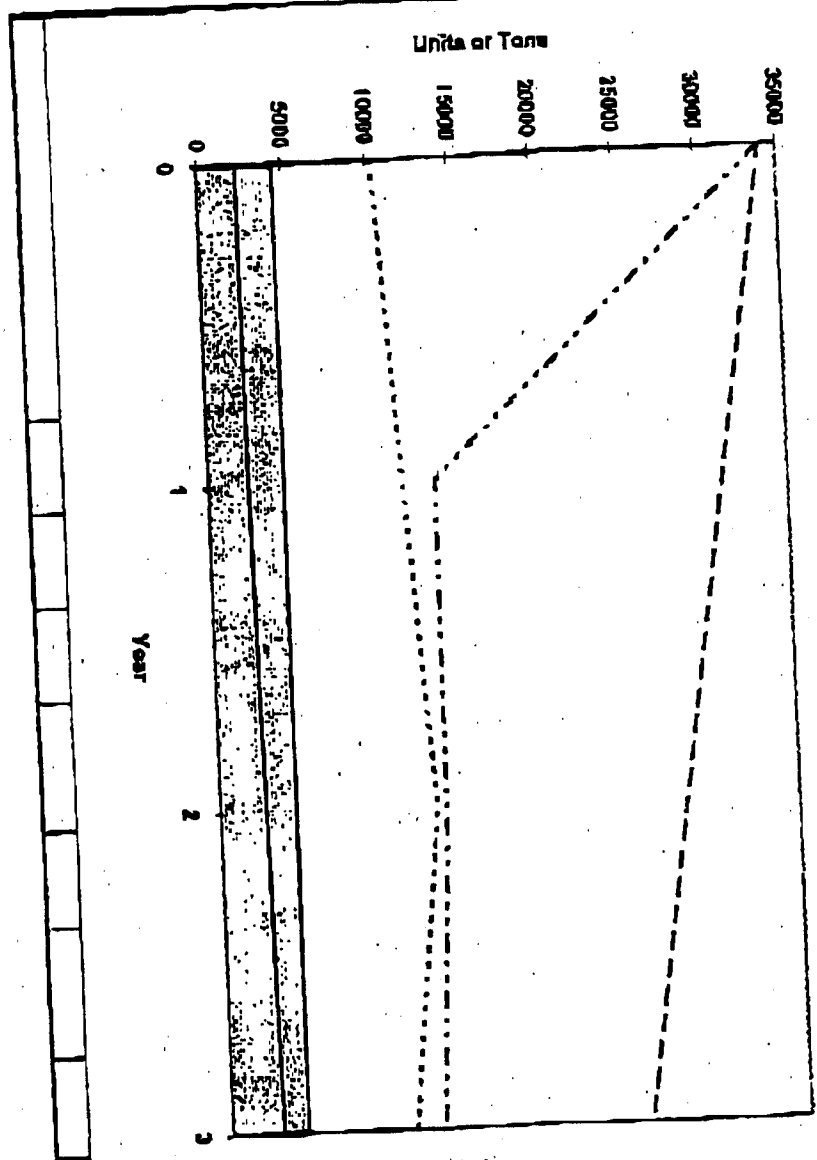
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Tons/Unit of Production	0	1	2	3																
Units Produced*	0.222	0.2078	0.208	0.276364																
VOC CAP	4600	4500	4500	4500	4500	3040														
VOC Actual Emissions	2307	2411	2708	25373																
BACT Analysis (projected)	33889	31117	26245	12782																
BACT Analysis (Actual-example)	33889	13557	13657																	

**SUMMARY**  
with Production



— VOC CAP  
 - - - BACT Analysis (Actual-example)  
 . . . VOC Actual Emissions  
 [Shaded Area] Units Produced (example only)

Scenario 1- Favorable

North Plant		1995 Allowable VOC Emissions (tpy)	1996 Allowable VOC Emissions (tpy)	1997 Allowable VOC Emissions (tpy)	1998 Allowable VOC Emissions (tpy)	Basis
Coalter		1086	1086	1086	86	Modified in 1998 - 92% for NSPS, 112(g) and BACT Mag Mact in 1996, 95% control. Mag Mact in 1996, 95% control. Mag Mact in 1996, 95% control. Mag Mact in 1996, 95% control. Mag Mact in 1996, 95% control. Mag Mact in 1996, 95% control. Modified to make pharmaceuticals. Would've limited to actuals + 39 = 58. No 112(g) or MACT. New in 1998 - no 112(g) or MACT. Low VOC coating satisfies NSPS and BACT. same as ST5 above. New in 1996 - total enclosure with 95% TO satisfies BACT, NSPS, and 112(g). Mag Mact in 1996, 95% control plus some small sources not requiring review or MACT.
22		1086	1086	1086	86	
23		4802	240	240	240	
24		4340	217	217	217	
25		5255	263	263	263	
26		4989	260	260	260	
27		936	250	250	250	
28		936	58	58	58	
ST5		na	na	na	5	
ST6		na	na	na	13	
LM3		na	140	140	140	
Other		664	70	70	70	
<b>Total North</b>		<b>23008</b>	<b>2584</b>	<b>2584</b>	<b>1802</b>	
South Plant		1995 Allowable VOC Emissions (tpy)	1996 Allowable VOC Emissions (tpy)	1997 Allowable VOC Emissions (tpy)	1998 Allowable VOC Emissions (tpy)	Basis
Coalter		3483	278	278	278	Modified in 1996 - 92% satisfies NSPS, BACT, 112(g) Modified in 1997 - 92% satisfies NSPS, BACT, 112(g) Modified in 1996, 92% TO satisfies PSTL NSPS, BACT, and 112(g). Modified in 1997 - 92% satisfies NSPS, BACT, 112(g) not modified. Some equipment modified in 1998 - 92% for 112(g)
1 (1L)		4596	4596	368	368	
2 (2L)		863	863	863	70	
3 (3L)						
4 (5L)		1371	1371	137	137	
5 (6L)		220	220	220	220	
Others		440	440	440	200	
<b>Total South</b>		<b>10981</b>	<b>7768</b>	<b>2306</b>	<b>1273</b>	
<b>Total Facility</b>		<b>33989</b>	<b>10352</b>	<b>4890</b>	<b>2875</b>	

All numbers are fictitious.

Scenario 2

North Plant	1995 Actual VOC Emissions (tpy)	1996 Actual VOC Emissions (tpy)	1997 Actual VOC Emissions (tpy)	1998 Actual VOC Emissions (tpy)	"Planned" Actuals in 1998 Absent ProjectXL (tpy)
Coaler	90	93	95	98	82
22					
23	82	84	87	105	186
24	64	68	71	80	176
25	87	91	100	120	203
26	77	81	87	100	193
27	12	25	60	83	190
28	9	6	8	5	50
ST5	na	na	na	5	5
ST6	na	na	na	13	13
LMA3	na	80	100	130	140
Other	460	300	280	250	70
Total North	884	830	888	990	1308

Basis for Planned Actuals  
 w/o XL, control required. Under XL, not required until over 100 tpy.  
 MACT only would require 95% vs 97.8%  
 MACT only would require 95% vs 98%  
 MACT only would require 95% vs 97.6%  
 MACT only would require 85% vs 97.8%  
 MACT only would require 95% vs 97.8%  
 MACT only would require 95% vs 97.8%  
 Will operate TO at 97% to leave room no difference  
 no difference  
 Will operate TO at 98.5% to leave room  
 Controlled only top emitters and new small fires vs. all MACT sources.

South Plant	1995 Actual VOC Emissions (tpy)	1996 Actual VOC Emissions (tpy)	1997 Actual VOC Emissions (tpy)	1998 Actual VOC Emissions (tpy)	"Planned" Actuals in 1998 Absent ProjectXL (tpy)
Coaler					
1 (1L)	380	425	475	560	260
2 (2L)	230	260	325	420	350
3 (3L)	75	84	120	60	68
4 (5L)	500	540	610	630	130
5 (6L)	43	52	90	140	122
Others	198	220	200	220	210
Total South	1426	1584	1820	2050	1140
Total Facility	2307	2411	2708	3040	2448

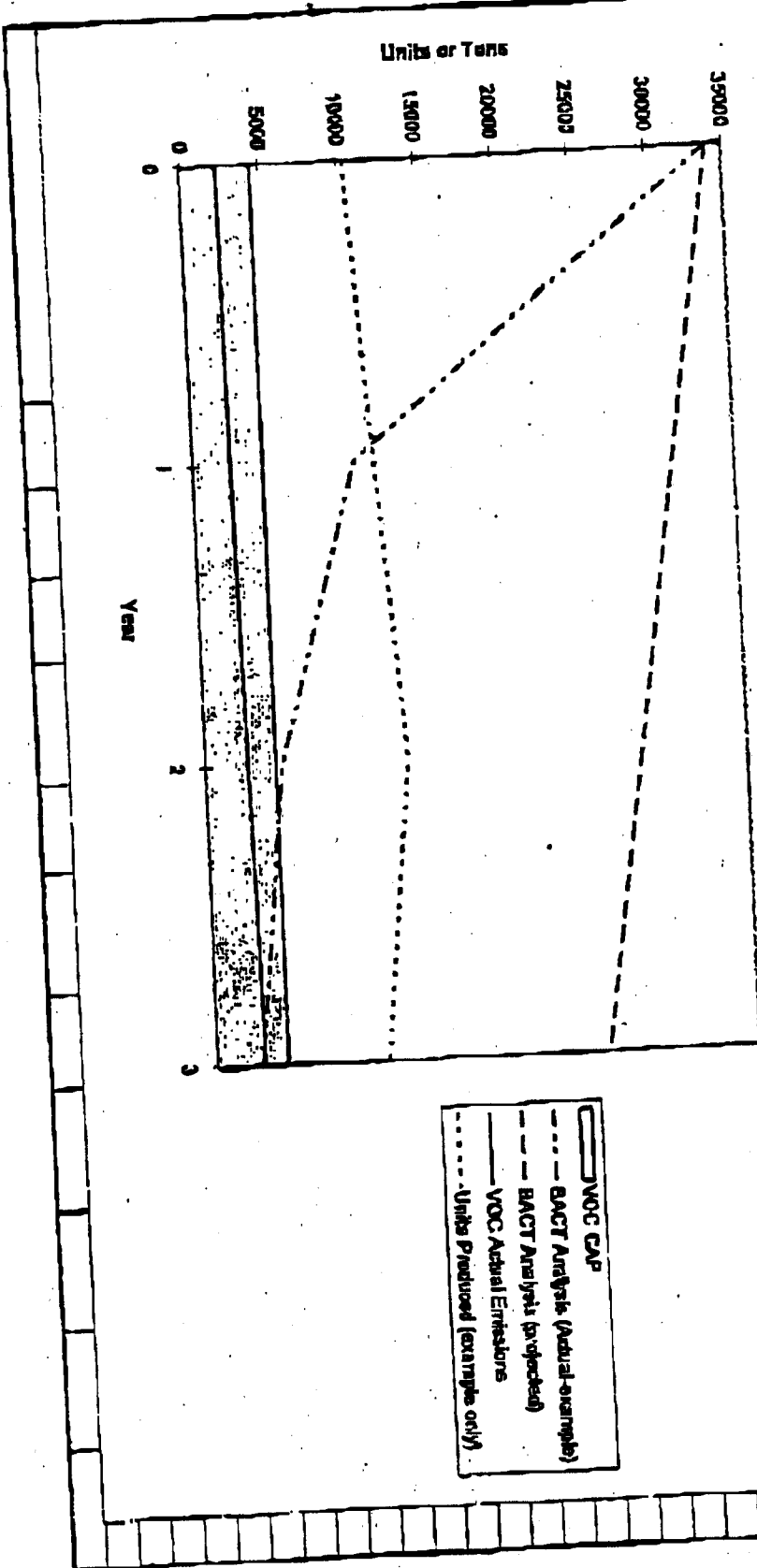
For all of these, w/o XL, would've been required to operate control at all times. Under XL, frequently vented w/o control.

All numbers are fictitious.

Tons/Unit of Production	0	1	2	3															
Units Produced*	0.222	0.2078	0.208	0.276354															
VOC CAP	10375	11600	13000	11000															
VOC Actual Emissions	4500	4500	4500	4500															
BACT Analysis (projected)	2307	2411	2708	3040															
VOC Actual Emissions	33989	31117	28245	25373															
BACT Analysis (Actual-example)	10352	4890	2875																
*Example based on the production rate																			

Scenario 2 - unfavorable

SUMMARY  
with Production



— VOC CAP  
 - - - BACT Analysis (Actual-example)  
 - - - BACT Analysis (projected)  
 . . . VOC Actual Emissions  
 - . - . Units Produced (example only)