3M XL

Scenario 1

North Plant

Coater	1995 Allowable VOC Emissions (tpy)	1996 Allowable VOC Emissions (tpy)	1997 Allowable VOC Emissions (tpy)	1998 Allowable VOC Emissions (tpy)	Basis
22	1086	1086	1086	1086	Not modified. No MACT appl.
23	4802	240	240	240	Mag Mact in 1996, 95% control.
24	4340	217	217	217	Mag Mact in 1996, 95% control.
25	5255	263	263	263	Mag Mact in 1996, 95% control.
26	4989	260	260	260	Mag Mact in 1996, 95% control.
27	936	250	250	250	Modified to make pharmaceuticals. Would've limited to actuals + 39 = 58. No 112(g) or MACT.
28	936	58	58	58	New in 1998 - no 112(g) or MACT. Low VOC coating satisfies NSPS and BACT.
ST5	na	na	na	5	same as ST5 above.
ST6	na	na	na	13	New in 1996 - total enclosure with 95% TO satisfies BACT, NSPS, and 112(g).
LM9	na	140	140	140	Mag Mact in 1996, 95% control plus some small sources not requiring review or MACT.
Other	664	70	70	70	
Total North	23008	2584	2584	2602	

South Plant

Coater	1995 Allowable VOC Emissions (tpy)	1996 Allowable VOC Emissions (tpy)	1997 Allowable VOC Emissions (tpy)	1998 Allowable VOC Emissions (tpy)	Basis
1 (1L)	3483	3483	3483	3483	Not modified. No MACT appl.
2 (2L)	4596	4596	4596	4596	Not modified. No MACT appl.
3 (3L)	863	863	863	70	Modified in 1993. 92% TO satisfies PSTL NSPS, BACT, and 112(g).
4 (5L)	1371	1371	1371	1371	Not modified. No MACT appl.
5 (6L)	220	220	220	220	Not modified. No MACT appl.
Others	448	440	440	440	Adjusted for production + some removal of equipment
Total South	10981	10973	10973	10180	
Total Facility	33989	13557	13557	12782	

All numbers are fictitious.

Scenario 1

North Plant

Coater	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)	Basis for Planned Actuals
22	90	93	95	99	394	under XL, effectively capped at 99.
23	82	84	82	80	186	MACT only would require 95% vs 97.8%
24	64	68	71	69	176	MACT only would require 95% vs 98%
25	87	91	94	97	203	MACT only would require 95% vs 97.6%
26	77	81	80	85	193	MACT only would require 95% vs 97.8%
27	12	25	60	83	190	MACT only would require 95% vs 97.8%
28	9	8	8	5	50	Will operate TO at 97% to leave room
ST5	na	na	na	5	5	no difference
ST6	na	na	na	13	13	no difference
LM3	na	80	90	100	140	Will operate TO at 96.5% to leave room
Other	460	300	280	200	70	Will control only top emitters and new small lines vs. all MACT sources.
Total North	881	830	860	836	1620	

South Plant

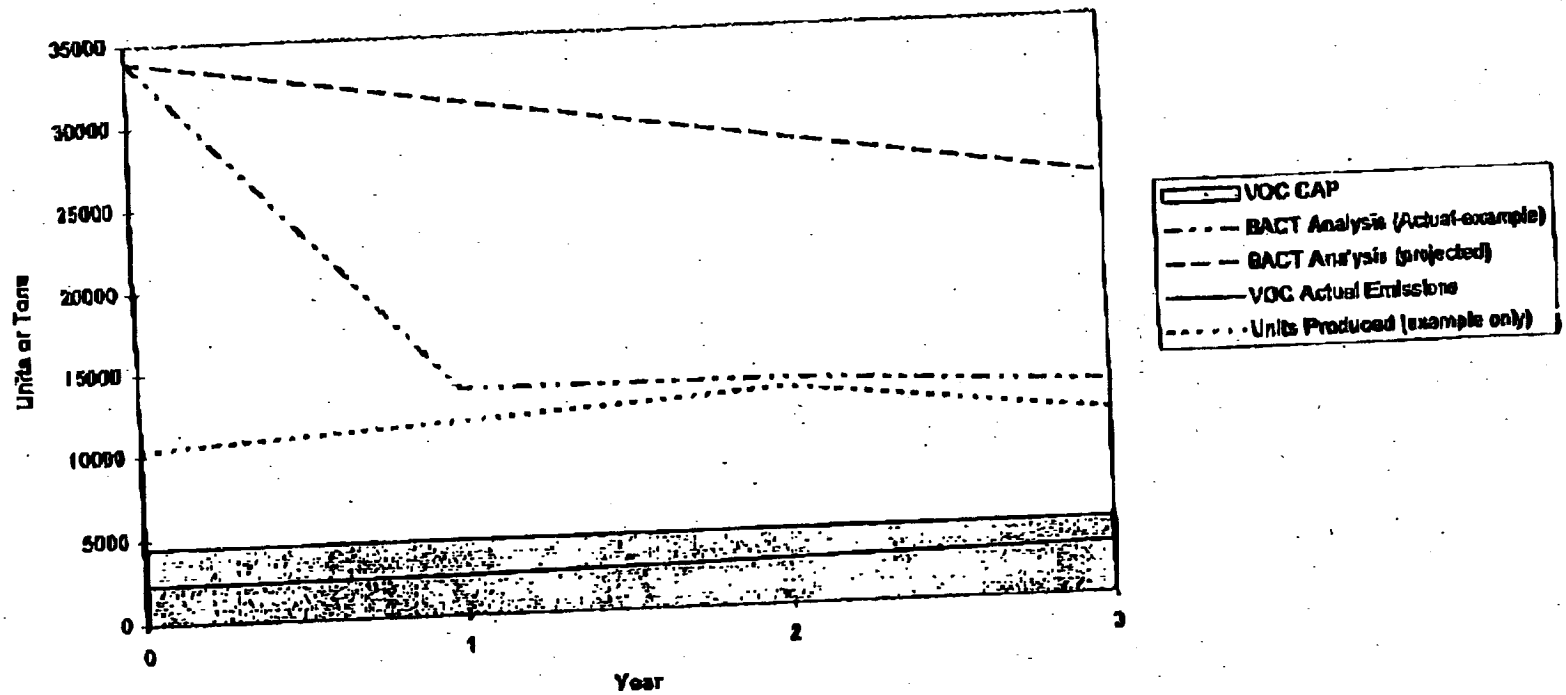
Coater	1996 Actual VOC Emissions (tpy)	1996 Actual VOC Emissions (tpy)	1997 Actual VOC Emissions (tpy)	1998 Actual VOC Emissions (tpy)	"Planned" Actuals in 1998 Absent ProjectXL (tpy)	
1 (1L)	380	425	475	560	560	no difference
2 (2L)	230	260	325	420	420	no difference
3 (3L)	75	84	120	36	41	Achieve better than 92% control
4 (5L)	500	540	610	630	630	no difference
5 (6L)	43	52	90	130	122	Under XL vent w/o control occasionally
Others	198	220	200	150	265	Will add control to compounding due to XL savings.
Total South	1426	1581	1820	1926	2038	

Total Facility	2307	2411	2680	2762	3658

All numbers are fictitious.

Scenario 1- Favorable

	0	1	2	3
Tons/Unit of Production	0.222	0.2078	0.208	0.276364
Units Produced*	10375	11600	13000	11000
VOC CAP	4500	4500	4500	4500
VOC Actual Emissions	2307	2411	2708	3040
BACT Analysis (projected)	33989	31117	28245	25373
BACT Analysis (Actual-example)	33989	13557	13557	12782
*Example based on the production ratio				



3M XL

Scenario 2

North Plant

Coater	1995 Allowable VOC Emissions (tpy)	1996 Allowable VOC Emissions (tpy)	1997 Allowable VOC Emissions (tpy)	1998 Allowable VOC Emissions (tpy)	Basis
22	1086	1086	1086	86	Modified in 1998 - 92% for NSPS, 112(g) and BACT
23	4802	240	240	240	Mag Mact in 1996, 95% control.
24	4340	217	217	217	Mag Mact in 1996, 95% control.
25	5255	263	263	263	Mag Mact in 1996, 95% control.
26	4989	260	260	260	Mag Mact in 1996, 95% control.
27	936	250	250	250	Mag Mact in 1996, 95% control.
28	936	58	58	58	Modified to make pharmaceuticals. Would've limited to actuals + 39 = 58. No 112(g) or MACT.
ST5	na	na	na	5	New in 1998 - no 112(g) or MACT. Low VOC coating satisfies NSPS and BACT.
ST6	na	na	na	13	same as ST5 above.
LM3	na	140	140	140	New in 1996 - total enclosure with 95% TO satisfies BACT, NSPS, and 112(g).
Other	664	70	70	70	Mag Mact in 1996, 95% control plus some small sources not requiring review or MACT.
Total North	23008	2584	2584	1602	

South Plant

Coater	1995 Allowable VOC Emissions (tpy)	1996 Allowable VOC Emissions (tpy)	1997 Allowable VOC Emissions (tpy)	1998 Allowable VOC Emissions (tpy)	Basis
1 (1L)	3403	278	278	278	Modified in 1996- 92% satisfies NSPS, BACT, 112(g)
2 (2L)	4596	4596	368	368	Modified in 1997- 92% satisfies NSPS, BACT, 112(g)
3 (3L)	863	863	863	70	Modified in 1998. 92% TO satisfies PSTL NSPS, BACT, and 112(g).
4 (5L)	1371	1371	137	137	Modified in 1997- 92% satisfies NSPS, BACT, 112(g)
5 (6L)	220	220	220	220	not modified.
Others	440	440	440	200	Some equipment modified in 1998 - 92% for 112(g)
Total South	10981	7768	2306	1273	
Total Facility	33989	10352	4890	2875	

All numbers are fictitious.

Scenario 2

North Plant

Coater	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)	Basis for Planned Actuals
22	90	93	95	98	82	w/o XL, control required. Under XL, not required until over 100 tpy.
23	82	84	87	105	186	MACT only would require 95% vs 97.8%
24	64	68	71	80	176	MACT only would require 95% vs 98%
25	87	91	100	120	203	MACT only would require 95% vs 97.6%
26	77	81	87	100	193	MACT only would require 95% vs 97.8%
27	12	25	60	83	190	MACT only would require 95% vs 97.8%
28	9	6	8	5	50	Will operate TO at 97% to leave room
ST5	na	na	na	5	5	no difference
ST6	na	na	na	13	13	no difference
LM3	na	80	100	130	140	Will operate TO at 98.5% to leave room
Other	460	300	260	250	70	Controlled only top emitters and new small lines vs. all MACT sources.
Total North	881	830	888	990	1308	

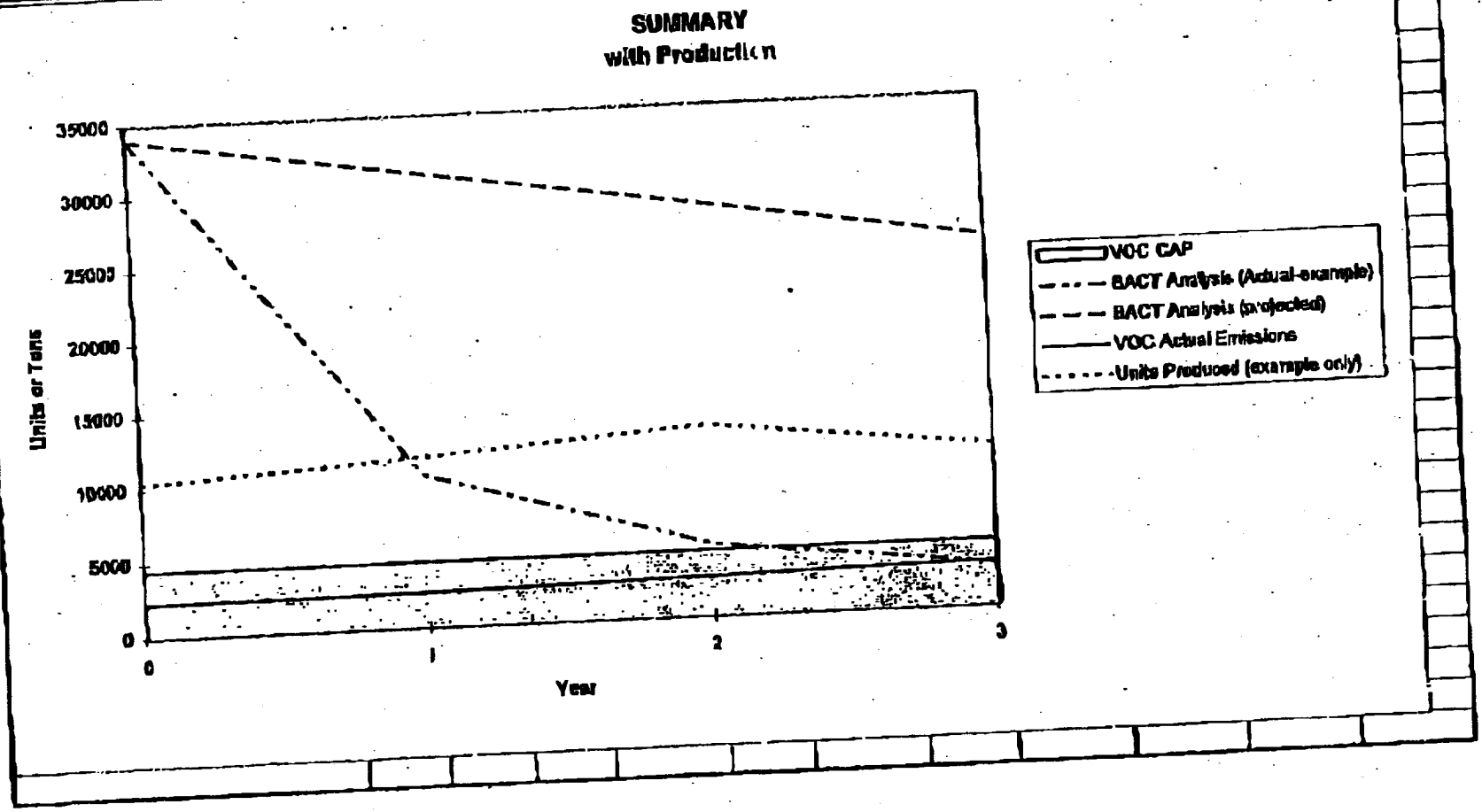
South Plant

Coater	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)	
1 (1L)	380	425	475	560	260	For all of these, w/o XL, would've been required to operate control at all times. Under XL, frequently vented w/o control.
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	1581	1820	2050	1140	

Total Facility	2307	2411	2708	3040	2448

All numbers are fictitious.

Scenario 2 - unfavorable

	0	1	2	3
Tons/Unit of Production	0.222	0.2078	0.208	0.276364
Units Produced*	10375	11600	13000	11000
VOC CAP	4500	4500	4500	4500
VOC Actual Emissions	2307	2411	2708	3040
BACT Analysis (projected)	33989	31117	28245	25373
BACT Analysis (Actual-example)	33989	10352	4890	2875

*Example based on the production ratio