

APPLICATION FOR FEDERAL PSD APPROVAL

NEW WALES CHEMICALS, INC.  
POLK COUNTY, FLORIDA

DECEMBER, 1980  
REVISED JANUARY 22, 1981  
Revised 3/24/87

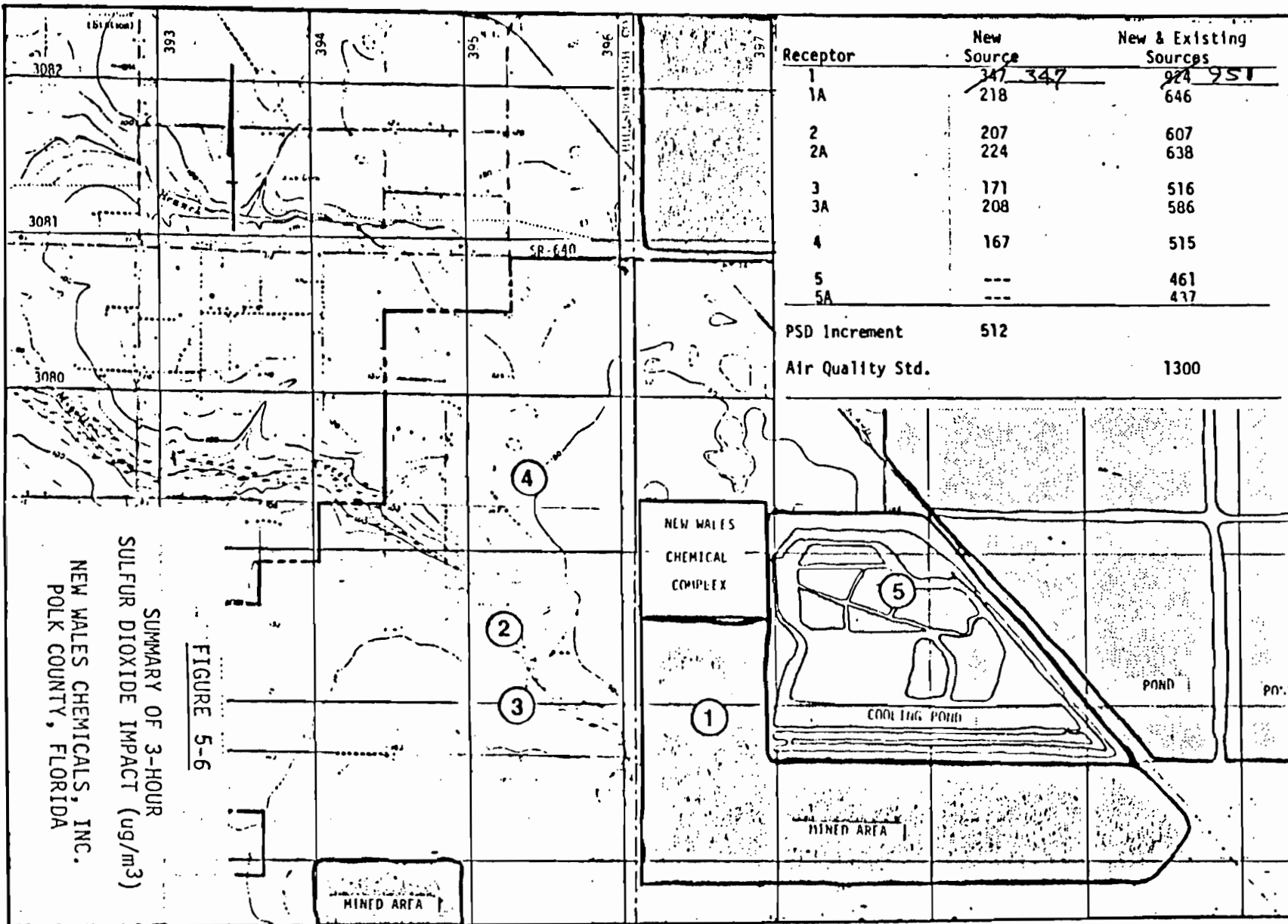
*JK*

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ENVIRONMENTAL CONSULTANTS  
1213 NW 6TH STREET  
GAINESVILLE, FLORIDA  
(904) 377-5822

SULFUR DIOXIDE  
AIR QUALITY MODELING RESULTS

NEW WALES CHEMICALS, INC.  
POLK COUNTY, FLORIDA

REVISED JANUARY 22, 1981



SUMMARY OF 3-HOUR  
SULFUR DIOXIDE IMPACT (ug/m<sup>3</sup>)  
NEW WALES CHEMICALS, INC.  
POLK COUNTY, FLORIDA

FIGURE 5-6

See run #20 for New Source Impact Revision of run #21 for All Source Revision

OSK  
3/24/07

<u>Model Run</u>	<u>Model</u>	<u>Description</u>
1/74-1/78	CRSTER	Area of Impact of proposed project
2/74-2/78	CRSTER	Max. impact of proposed project
3/74-3/78	CRSTER	Max. impact of all New Wales sources
Max new source impact; 24-hr → 10	PTMTPW	24-hour impact at receptor 1*, new sources
Max. all source impact; 24-hr → 11	PTMTPW	24-hour impact at receptor 1, all sources
12	PTMTPW	24-hour impact at receptor 2, new sources
13	PTMTPW	24-hour impact at receptor 2, all sources
14	PTMTPW	24-hour impact at receptor 3, new sources
15	PTMTPW	24-hour impact at receptor 3, all sources
16	PTMTPW	24-hour impact at receptor 4, new sources
17	PTMTPW	24-hour impact at receptor 4, all sources
18	PTMTPW	24-hour impact at receptor 5, all sources
Max new source impact; 3-hr → 20	PTMTPW	3-hour impact at receptor 1**, new sources
Max all source impact; 3-hr → 21	PTMTPW	3-hour impact at receptor 1, all sources
22	PTMTPW	3-hour impact at receptor 2, new sources
23	PTMTPW	3-hour impact at receptor 2, all sources
24	PTMTPW	3-hour impact at receptor 3, new sources
25	PTMTPW	3-hour impact at receptor 3, all sources
26	PTMTPW	3-hour impact at receptor 4, new sources
27	PTMTPW	3-hour impact at receptor 4, all sources
28	PTMTPW	3-hour impact at receptor 5, all sources
50	AQDM	Annual impact of proposed project
51	AQDM	Annual impact of new sources
52	AQDM	Annual impact of all sources

\* See receptor locations in Figure 5-5, attached  
 \*\* See receptor locations in Figure 5-6, attached

*JBK*  
 3/24/87



STACK HEIGHT ADJUSTMENT = 0.0

\*\*\* SOURCE DATA \*\*\*

	SOURCE NAME	EMM. RATE (G/SEC)	STACK HT. (M)	STACK TEMP. (DEG-K)	EXIT VEL. (M/SEC)	STACK DIA. (M)	VOL. FLOW (M <sup>3</sup> /SEC)	X-COORD. (KM)	Y-COORD. (KM)
1 59 94	NW	57.75	60.7	349.7	0.0	2.60	71.	396.490	3078.640
1 59 95	NW #2DAP	57.75	60.7	349.7	0.0	2.60	71.	396.560	3078.640
1 59 96	NW	5.54 <del>14.11</del>	36.6	319.1	0.0	1.80	53.	396.450	3079.150
1 59 27	NEW WALES	3.78	52.4	321.9	0.0	2.40	59.	396.750	3079.350
1 59 33	NEW WALES	5.36	52.4	319.1	0.0	2.40	32.	396.830	3079.430
2 53 26	FARMLAND	2.30	14.0	444.0	12.70	1.20	0.	409.500	3079.500
2 52 14	C. F.	52.90	67.1	351.0	9.80	2.40	0.	408.500	3083.000
2 52 21	C. F.	4.30	9.1	450.0	22.50	0.70	0.	408.500	3083.000
2 46 16	W. R. GRACE	36.80	61.0	346.0	7.30	2.80	0.	409.700	3086.000
2 46 17	W. R. GRACE	36.80	61.0	346.0	7.30	2.80	0.	409.700	3086.000

Sulfuric plants 1, 2 & 3 are  
existing sources & do not  
affect this run

JJK  
3/24/87

## \* \* \* R E C E P T O R S \* \* \*

NO.	X(KM)	Y(KM)	Z(KM)
1.	394.600	3078.800	0.0
2.	394.600	3078.700	0.0
3.	394.600	3078.600	0.0
4.	394.600	3078.500	0.0
5.	394.600	3078.400	0.0
6.	394.600	3078.300	0.0
7.	394.700	3078.800	0.0
8.	394.700	3078.700	0.0
9.	394.700	3078.600	0.0
10.	394.700	3078.500	0.0
11.	394.700	3078.400	0.0
12.	394.700	3078.300	0.0
13.	394.800	3078.800	0.0
14.	394.800	3078.700	0.0
15.	394.800	3078.600	0.0
16.	394.800	3078.500	0.0
17.	394.800	3078.400	0.0
18.	394.800	3078.300	0.0
19.	394.900	3078.900	0.0
20.	394.900	3078.700	0.0
21.	394.900	3078.600	0.0
22.	394.900	3078.500	0.0
23.	394.900	3079.400	0.0
24.	394.900	3078.300	0.0
25.	395.000	3079.800	0.0
26.	395.000	3078.700	0.0
27.	395.000	3078.600	0.0
28.	395.000	3078.500	0.0
29.	395.000	3078.400	0.0
30.	395.000	3078.300	0.0
31.	395.100	3078.800	0.0
32.	395.100	3078.700	0.0
33.	395.100	3078.600	0.0
34.	395.100	3078.500	0.0
35.	395.100	3078.400	0.0
36.	395.100	3078.300	0.0
37.	395.200	3078.800	0.0
38.	395.200	3078.700	0.0
39.	395.200	3078.600	0.0
40.	395.200	3078.500	0.0
41.	395.200	3078.400	0.0
42.	395.200	3078.300	0.0
43.	395.300	3078.800	0.0
44.	395.300	3078.700	0.0
45.	395.300	3078.600	0.0
46.	395.300	3078.500	0.0
47.	395.300	3078.400	0.0
48.	395.300	3078.300	0.0

## \*\*\* METEOROLCGY \*\*\*

	WIND DIR. (DEG)	WIND VEL. (M/SEC)	STABILITY CLASS	MIX.HT. (M)	AMB.TEMP. (DEG-K)	PRESS. (MB)
1.	56.	2.60	5	658.	297.	1000.00
2.	60.	3.10	5	658.	297.	1000.00
3.	70.	2.60	5	658.	297.	1000.00
4.	66.	3.10	5	658.	295.	1000.00
5.	64.	3.10	5	658.	294.	1000.00
6.	60.	3.10	4	737.	294.	1000.00
7.	75.	3.10	3	914.	297.	1000.00
8.	70.	4.60	3	1091.	300.	1000.00
9.	84.	4.10	3	1269.	303.	1000.00
10.	57.	4.60	3	1445.	304.	1000.00
11.	94.	2.10	2	1622.	304.	1000.00
12.	56.	5.70	3	1799.	305.	1000.00
13.	79.	5.70	3	1976.	307.	1000.00
14.	84.	7.20	3	2153.	306.	1000.00
15.	84.	5.70	3	2153.	305.	1000.00
16.	72.	4.60	3	2153.	304.	1000.00
17.	83.	5.70	4	2153.	304.	1000.00
18.	91.	5.10	4	2153.	303.	1000.00
19.	78.	4.60	4	2153.	301.	1000.00
20.	86.	3.10	5	1832.	299.	1000.00
21.	86.	2.50	6	1435.	298.	1000.00
22.	89.	2.10	6	1037.	297.	1000.00
23.	85.	2.10	6	640.	296.	1000.00
24.	87.	1.50	7	242.	295.	1000.00



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NEW WALES - PROPOSED SOURCES - 24 HR MAX IMPACT @ 260 DEG. - 78149

EPA DIFFUSION MODEL PT4TP

PAGE 4

AVERAGE CONCENTRATIONS (UG/M\*\*3) AND PERCENT CONTRIBUTIONS FOR 24 HOURS

RECEPTORS		1.		2.		3.		4.		5.		5.	
SOURCE NAME		PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 94	NW	6.33	20.55	9.69	27.21	13.20	32.47	16.64	35.91	19.16	37.55	19.56	37.33
1 59 95	NW	6.27	20.47	9.47	26.59	12.75	31.36	15.97	34.46	18.45	36.16	19.06	36.37
1 59 96	NW	9.67	31.55	8.41	23.61	6.83	16.80	5.91	12.75	5.46	10.70	5.57	10.63
1 59 27	NEW WALES	1.35	4.41	1.12	3.15	0.94	2.32	0.82	1.77	0.77	1.51	0.80	1.53
1 59 33	NEW WALES	1.79	5.84	1.56	4.37	1.42	3.49	1.35	2.91	1.40	2.75	1.53	2.91
2 53 26	FARMLAND	0.55	1.80	0.59	1.67	0.64	1.57	0.67	1.45	0.69	1.36	0.69	1.31
2 52 14	C. F.	1.08	3.51	1.16	3.25	1.25	3.08	1.36	2.93	1.46	2.87	1.57	3.00
2 52 21	C. F.	0.20	0.65	0.23	0.63	0.25	0.63	0.29	0.62	0.32	0.52	0.35	0.66
2 46 16	W. R. GRACE	1.70	5.56	1.70	4.77	1.69	4.15	1.67	3.61	1.65	3.24	1.64	3.13
2 46 17	W. R. GRACE	1.70	5.56	1.70	4.77	1.69	4.15	1.67	3.61	1.65	3.24	1.64	3.13

TOTAL CONCENTRATION (UG/M\*\*3)

30.64                      35.61                      40.65                      46.33                      51.01                      52.40

RECEPTORS		7.		8.		9.		10.		11.		12.	
SOURCE NAME		PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 94	NW	6.40	20.33	10.00	27.38	13.89	32.96	17.66	36.45	20.19	37.85	20.22	37.24
1 59 95	NW	6.35	20.18	9.78	26.79	13.40	31.80	16.94	34.96	19.47	36.50	19.77	36.41
1 59 96	NW	10.24	32.54	8.60	23.56	6.91	16.39	5.93	12.24	5.55	10.41	5.87	10.82
1 59 27	NEW WALES	1.37	4.35	1.12	3.07	0.93	2.22	0.81	1.68	0.79	1.48	0.85	1.57
1 59 33	NEW WALES	1.81	5.76	1.57	4.31	1.42	3.38	1.39	2.86	1.48	2.78	1.63	3.00
2 53 26	FARMLAND	0.56	1.77	0.60	1.64	0.64	1.53	0.68	1.40	0.70	1.31	0.69	1.27
2 52 14	C. F.	1.11	3.52	1.19	3.27	1.29	3.07	1.40	2.89	1.51	2.84	1.62	2.98
2 52 21	C. F.	0.21	0.67	0.24	0.65	0.27	0.63	0.30	0.62	0.33	0.62	0.36	0.66
2 46 16	W. R. GRACE	1.71	5.44	1.70	4.67	1.69	4.01	1.68	3.46	1.66	3.11	1.64	3.03
2 46 17	W. R. GRACE	1.71	5.44	1.70	4.67	1.69	4.01	1.68	3.46	1.66	3.11	1.64	3.03

TOTAL CONCENTRATION (UG/M\*\*3)

31.46                      36.53                      42.14                      48.46                      53.33                      54.29

RECEPTORS		13.		14.		15.		15.		17.		18.	
SOURCE NAME		PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 94	NW	6.45	20.02	10.31	27.60	14.62	33.47	18.75	36.98	21.20	38.02	20.76	37.03
1 59 95	NW	6.42	19.90	10.10	27.03	14.10	32.29	17.98	35.47	20.50	36.75	20.39	36.37
1 59 96	NW	10.79	33.46	8.74	23.40	6.94	15.39	5.91	11.66	5.73	10.28	6.26	11.16
1 59 27	NEW WALES	1.38	4.27	1.12	2.99	0.92	2.10	0.81	1.60	0.83	1.48	0.91	1.62
1 59 33	NEW WALES	1.83	5.68	1.58	4.23	1.43	3.28	1.44	2.85	1.58	2.84	1.72	3.07
2 53 26	FARMLAND	0.56	1.75	0.61	1.62	0.65	1.49	0.68	1.35	0.70	1.26	0.69	1.23
2 52 14	C. F.	1.14	3.55	1.24	3.31	1.34	3.07	1.45	2.86	1.56	2.80	1.66	2.97
2 52 21	C. F.	0.22	0.68	0.25	0.67	0.28	0.64	0.31	0.62	0.34	0.62	0.37	0.67
2 46 16	W. R. GRACE	1.72	5.34	1.71	4.58	1.70	3.88	1.68	3.31	1.66	2.98	1.65	2.94
2 46 17	W. R. GRACE	1.72	5.34	1.71	4.58	1.70	3.88	1.68	3.31	1.66	2.98	1.65	2.94

TOTAL CONCENTRATION (UG/M\*\*3)

32.23                      37.35                      43.67                      50.70                      55.77                      56.06

RECEPTORS		19.		20.		21.		22.		23.		24.	
SOURCE NAME		PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 94	NW	6.49	19.74	10.60	27.84	15.39	34.03	19.90	37.44	22.16	38.02	21.15	36.75
1 59 95	NW	6.47	17.66	10.40	27.32	14.85	32.83	19.09	35.93	21.50	36.39	20.90	36.31
1 59 96	NW	11.28	34.23	8.91	23.15	6.90	15.26	5.91	11.12	6.04	10.36	6.67	11.60

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2 53 26	FARMLAND	0.57	1.73	0.61	1.61	0.66	1.45	0.69	1.30	0.71	1.21	0.69	1.21
2 52 14	C. F.	1.18	3.59	1.28	3.36	1.39	3.07	1.50	2.82	1.61	2.76	1.71	2.97
2 52 21	C. F.	0.23	0.70	0.26	0.69	0.29	0.65	0.33	0.61	0.36	0.61	0.39	0.67
2 46 16	W. R. GRACE	1.73	5.25	1.72	4.51	1.70	3.76	1.69	3.17	1.67	2.86	1.66	2.88
2 46 17	W. R. GRACE	1.73	5.25	1.72	4.51	1.70	3.76	1.68	3.17	1.67	2.86	1.66	2.88

**TOTAL CONCENTRATION (UG/M\*\*3)**

32.90	38.07	45.22	53.13	58.29	57.54
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**RECEPTORS**

SOURCE NAME	25.		26.		27.		28.		29.		30.	
	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 94 NW	6.51	19.49	10.86	28.10	16.17	34.58	21.06	37.75	22.99	37.85	21.32	36.55
1 59 95 NW	6.50	19.46	10.68	27.65	15.62	33.40	20.25	36.30	22.43	36.92	21.22	36.40
1 59 96 NW	11.68	34.95	8.80	22.79	6.77	14.48	6.01	10.77	6.50	10.70	6.90	11.83
1 59 27 NEW WALES	1.37	4.10	1.07	2.77	0.88	1.89	0.86	1.55	0.95	1.56	0.97	1.66
1 59 33 NEW WALES	1.84	5.50	1.56	4.05	1.50	3.21	1.65	2.95	1.80	2.96	1.73	2.96
2 53 26 FARMLAND	0.57	1.72	0.62	1.60	0.66	1.42	0.70	1.25	0.71	1.17	0.70	1.20
2 52 14 C. F.	1.22	3.66	1.32	3.43	1.43	3.07	1.55	2.77	1.66	2.73	1.75	3.01
2 52 21 C. F.	0.24	0.73	0.27	0.71	0.31	0.66	0.34	0.61	0.37	0.61	0.40	0.69
2 46 16 W. R. GRACE	1.74	5.19	1.72	4.45	1.70	3.64	1.69	3.03	1.67	2.75	1.66	2.85
2 46 17 W. R. GRACE	1.74	5.19	1.72	4.45	1.70	3.64	1.69	3.03	1.67	2.75	1.66	2.85

**TOTAL CONCENTRATION (UG/M\*\*3)**

33.41	38.63	46.77	55.78	60.76	58.32
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**RECEPTORS**

SOURCE NAME	31.		32.		33.		34.		35.		36.	
	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 94 NW	6.49	19.27	11.06	28.36	16.95	35.06	22.17	37.83	23.60	37.59	21.20	36.64
1 59 95 NW	6.51	19.32	10.92	28.01	15.41	33.94	21.40	36.51	23.21	36.95	21.32	36.84
1 59 96 NW	11.94	35.44	8.68	22.28	6.62	13.70	6.31	10.76	6.99	11.14	6.60	11.40
1 59 27 NEW WALES	1.35	4.00	1.04	2.66	0.88	1.83	0.92	1.57	0.99	1.58	0.93	1.60
1 59 33 NEW WALES	1.81	5.39	1.56	3.99	1.59	3.28	1.78	3.04	1.83	2.92	1.57	2.71
2 53 26 FARMLAND	0.58	1.73	0.63	1.61	0.67	1.39	0.70	1.20	0.72	1.14	0.70	1.21
2 52 14 C. F.	1.26	3.75	1.37	3.52	1.48	3.07	1.60	2.72	1.70	2.71	1.80	3.11
2 52 21 C. F.	0.26	0.76	0.29	0.74	0.32	0.66	0.35	0.60	0.39	0.61	0.41	0.71
2 46 16 W. R. GRACE	1.74	5.17	1.72	4.42	1.71	3.53	1.69	2.89	1.68	2.58	1.67	2.89
2 46 17 W. R. GRACE	1.74	5.17	1.72	4.42	1.71	3.53	1.69	2.89	1.68	2.68	1.67	2.89

**TOTAL CONCENTRATION (UG/M\*\*3)**

33.69	38.99	49.35	58.62	62.80	57.86
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**RECEPTORS**

SOURCE NAME	37.		38.		39.		40.		41.		42.	
	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 94 NW	6.42	19.07	11.17	28.56	17.68	35.33	23.16	37.65	23.87	37.45	20.70	37.06
1 59 95 NW	6.48	19.24	11.10	28.40	17.18	34.34	22.49	36.57	23.73	37.22	21.09	37.76
1 59 96 NW	12.02	35.71	8.43	21.57	6.57	13.14	6.85	11.14	7.16	11.23	5.61	10.04
1 59 27 NEW WALES	1.31	3.90	1.00	2.56	0.91	1.82	0.99	1.61	1.00	1.56	0.82	1.47
1 59 33 NEW WALES	1.78	5.28	1.58	4.05	1.72	3.43	1.88	3.06	1.74	2.73	1.30	2.34
2 53 26 FARMLAND	0.59	1.75	0.63	1.62	0.68	1.35	0.71	1.15	0.72	1.13	0.70	1.25
2 52 14 C. F.	1.31	3.89	1.42	3.63	1.53	3.07	1.65	2.68	1.75	2.75	1.84	3.30
2 52 21 C. F.	0.27	0.80	0.30	0.77	0.34	0.67	0.37	0.60	0.40	0.63	0.43	0.76
2 46 16 W. R. GRACE	1.75	5.19	1.73	4.42	1.71	3.42	1.70	2.76	1.69	2.65	1.68	3.01
2 46 17 W. R. GRACE	1.75	5.19	1.73	4.42	1.71	3.42	1.70	2.76	1.69	2.65	1.68	3.01

**TOTAL CONCENTRATION (UG/M\*\*3)**

33.66	39.09	50.03	61.50	63.74	55.96
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SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 94 NW	6.27	18.84	11.13	29.61	19.26	35.22	23.86	37.37	23.64	37.61	19.71	37.61
1 59 95 NW	6.38	19.19	11.17	28.72	17.87	34.47	23.41	36.66	23.86	37.96	20.46	39.03
1 59 96 NW	11.89	35.74	8.07	20.73	6.81	13.13	<del>2.92</del> 11.65	11.65	6.59	10.48	4.18	7.97
1 59 27 NEW WALES	1.26	3.78	0.98	2.52	0.98	1.88	1.04	1.63	0.93	1.48	0.67	1.28
1 59 33 NEW WALES	1.74	5.22	1.66	4.28	1.87	3.61	1.89	2.96	1.51	2.41	0.98	1.88
2 53 26 FARMLAND	0.59	1.79	0.64	1.65	0.68	1.32	0.72	1.12	0.72	1.15	0.70	1.34
2 52 14 C. F.	1.35	4.07	1.47	3.77	1.59	3.06	1.70	2.66	1.80	2.86	1.88	3.59
2 52 21 C. F.	0.28	0.65	0.32	0.81	0.35	0.68	0.38	0.60	0.41	0.66	0.44	0.84
2 46 16 W. R. GRACE	1.75	5.26	1.73	4.46	1.72	3.31	1.71	2.67	1.70	2.70	1.69	3.23
2 46 17 W. R. GRACE	1.75	5.26	1.73	4.46	1.72	3.31	1.71	2.67	1.70	2.70	1.69	3.23

TOTAL CONCENTRATION (UG/M\*\*3)

33.26

38.91

51.85

~~63.84~~

62.86

52.42

59.3

OK

3/24/87

JIC



STACK HEIGHT ADJUSTMENT = 0.0  
 \*\*\* SOURCE DATA \*\*\*

SOURCE NAME	EMM. RATE (G/SEC)	STACK HT. (M)	STACK TEMP. (DEG-K)	EXIT VEL. (M/SEC)	STACK DIA. (M)	VOL. FLOW (M**3/SEC)	X-COORD. (KM)	Y-COORD. (KM)
1 59 94 NW	57.75	60.7	349.7	0.0	2.60	71.	396.490	3078.640
1 59 95 NW	57.75	60.7	349.7	0.0	2.50	71.	396.560	3078.640
1 59 96 NW	5.54 <del>11.11</del>	35.6	319.1	0.0	1.80	53.	396.450	3079.150
1 59 27 NEW WALES	3.73	52.4	321.9	0.0	2.40	59.	396.750	3079.350
1 59 33 NEW WALES	5.36	52.4	319.1	0.0	2.40	32.	396.830	3079.430
3 59 02 NEW WALES-#1	54.60	61.0	350.2	0.0	2.50	67.	396.600	3078.750
3 59 03 NEW WALES-#2	51.91	61.0	350.2	0.0	2.50	64.	396.530	3078.750
3 59 04 NEW WALES-#3	53.03	61.0	350.2	0.0	2.50	66.	396.450	3078.750
3 59 09 NEW WALES	0.82	35.6	319.1	0.0	2.10	54.	396.540	3079.030
3 59 10 NEW WALES	1.89	36.6	325.2	0.0	1.80	52.	396.550	3079.150
3 59 13 NEW WALES	71.73	25.9	564.1	0.0	1.70	39.	396.560	3078.810
2 53 26 FARMLAND	2.30	14.0	444.0	12.70	1.20	0.	409.500	3079.500
2 52 14 C. F.	52.90	67.1	351.0	9.80	2.40	0.	408.500	3083.000
2 52 21 C. F.	4.30	9.1	450.0	22.50	0.70	0.	408.500	3083.000
2 46 16 W. R. GRACE	36.80	61.0	346.0	7.30	2.80	0.	409.700	3086.000
2 46 17 W. R. GRACE	36.80	61.0	346.0	7.30	2.90	0.	409.700	3086.000
3 53 01 FARMLAND	42.00	30.5	319.0	19.80	1.40	0.	409.500	3079.500
3 53 02 FARMLAND	42.00	30.5	319.0	22.40	1.40	0.	409.500	3079.500
3 53 03 FARMLAND	57.70	30.5	319.0	24.30	1.40	0.	409.500	3079.500
3 53 03 FARMLAND	57.70	30.5	319.0	26.50	1.40	0.	409.500	3079.500
3 52 03 C. F.	45.40	34.5	319.0	14.20	1.30	0.	408.500	3083.000
3 52 04 C. F.	46.70	34.5	319.0	20.00	1.30	0.	408.500	3083.000
3 52 05 C. F.	56.70	63.4	347.0	6.90	2.10	0.	408.500	3083.000
3 52 06 C. F.	56.70	63.4	351.0	6.90	2.10	0.	408.500	3083.000
3 46 14 W. R. GRACE	91.80	51.0	346.0	25.90	1.50	0.	409.700	3086.000
3 46 15 W. R. GRACE	57.70	45.7	322.0	16.70	1.50	0.	409.700	3086.000
3 48 02 ROYSTER	16.90	61.0	366.0	10.60	2.10	0.	406.700	3085.200

54.60g/sec = 433.3 lb/hr = 10400 lb/24hr ; ÷ 4.0 lb SO<sub>2</sub>/ton = 2600 tpd  
 Change to 2700 tpd ⇒ 450.0 lb/hr = 56.7 g/sec (this is consistent with emissions used in the screening CRSTER runs)

Change to 56.7 g/sec

Change to 56.7 g/sec

JJK  
 3124187

## \*\*\* R E C E P T O R S \*\*\*

NO.	X(KM)	Y(KM)	Z(KM)
1.	394.600	3078.200	0.0
2.	394.600	3078.700	0.0
3.	394.600	3078.600	0.0
4.	394.600	3078.500	0.0
5.	394.600	3078.400	0.0
6.	394.600	3078.300	0.0
7.	394.700	3078.800	0.0
8.	394.700	3078.700	0.0
9.	394.700	3078.500	0.0
10.	394.700	3078.500	0.0
11.	394.700	3078.400	0.0
12.	394.700	3078.300	0.0
13.	394.800	3078.800	0.0
14.	394.800	3078.700	0.0
15.	394.800	3078.600	0.0
16.	394.800	3078.500	0.0
17.	394.800	3078.400	0.0
18.	394.800	3078.300	0.0
19.	394.900	3078.800	0.0
20.	394.900	3078.700	0.0
21.	394.900	3078.600	0.0
22.	394.900	3078.500	0.0
23.	394.900	3078.400	0.0
24.	394.900	3078.300	0.0
25.	395.000	3078.800	0.0
26.	395.000	3078.700	0.0
27.	395.000	3078.600	0.0
28.	395.000	3078.500	0.0
29.	395.000	3078.400	0.0
30.	395.000	3078.300	0.0
31.	395.100	3078.800	0.0
32.	395.100	3078.700	0.0
33.	395.100	3078.600	0.0
34.	395.100	3078.500	0.0
35.	395.100	3078.400	0.0
36.	395.100	3078.300	0.0
37.	395.200	3078.800	0.0
38.	395.200	3078.700	0.0
39.	395.200	3078.600	0.0
40.	395.200	3078.500	0.0
41.	395.200	3078.400	0.0
42.	395.200	3078.300	0.0
43.	395.300	3078.800	0.0
44.	395.300	3078.700	0.0
45.	395.300	3078.600	0.0
46.	395.300	3078.500	0.0
47.	395.300	3078.400	0.0
48.	395.300	3078.300	0.0

## \*\*\* METEOROLOGY \*\*\*

	WIND DIR. (DEG)	WIND VEL. (M/SEC)	STABILITY CLASS	MIX.HT. (M)	AMB.TEMP. (DEG-K)	PRESS. (MB)
1.	56.	2.60	5	658.	297.	1000.00
2.	60.	3.10	5	658.	297.	1000.00
3.	70.	2.60	5	658.	297.	1000.00
4.	66.	3.10	5	658.	295.	1000.00
5.	64.	3.10	5	658.	294.	1000.00
6.	60.	3.10	4	737.	294.	1000.00
7.	75.	3.10	3	914.	297.	1000.00
8.	70.	4.60	3	1091.	300.	1000.00
9.	84.	4.10	3	1268.	303.	1000.00
10.	57.	4.60	3	1445.	304.	1000.00
11.	94.	2.10	2	1622.	304.	1000.00
12.	56.	5.70	3	1777.	305.	1000.00
13.	79.	5.70	3	1976.	307.	1000.00
14.	84.	7.20	3	2153.	306.	1000.00
15.	84.	5.70	3	2153.	305.	1000.00
16.	72.	4.60	3	2153.	304.	1000.00
17.	83.	5.70	4	2153.	304.	1000.00
18.	91.	5.10	4	2153.	303.	1000.00
19.	78.	4.60	4	2153.	301.	1000.00
20.	86.	3.10	5	1832.	299.	1000.00
21.	86.	2.60	6	1435.	298.	1000.00
22.	89.	2.10	6	1037.	297.	1000.00
23.	85.	2.10	6	640.	296.	1000.00
24.	87.	1.50	7	242.	295.	1000.00

## AVERAGE CONCENTRATIONS (UG/M\*\*3) AND PERCENT CONTRIBUTIONS FOR 24 HOURS

RECEPTORS			1.		2.		3.		4.		5.		6.	
SOURCE NAME			PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 94	NW		6.33	4.93	9.69	6.38	13.20	7.51	15.64	8.78	19.16	9.84	19.56	10.39
1 59 95	NW		6.27	4.89	9.47	6.24	12.75	7.34	15.97	8.43	18.45	9.48	19.06	10.12
1 59 96	NW		9.67	7.53	8.41	5.54	6.83	3.93	5.91	3.12	5.46	2.80	5.57	2.96
1 59 27	NEW WALES		1.35	1.05	1.12	0.74	0.94	0.54	0.82	0.43	0.77	0.39	0.80	0.43
1 59 33	NEW WALES		1.79	1.39	1.56	1.02	1.42	0.82	1.35	0.71	1.40	0.72	1.53	0.81
3 59 02	NEW WALES		9.26	7.21	12.25	8.07	15.20	8.76	17.41	9.19	17.92	9.20	16.71	8.88
3 59 03	NEW WALES		9.20	7.16	12.28	8.09	15.30	8.92	17.48	9.23	17.81	9.15	16.38	8.70
3 59 04	NEW WALES		9.70	7.55	13.14	8.65	16.49	9.50	19.72	9.88	18.78	9.64	16.97	9.02
3 59 09	NEW WALES		0.53	0.41	0.54	0.35	0.49	0.28	0.41	0.21	0.34	0.18	0.31	0.17
3 59 10	NEW WALES		1.17	0.91	1.05	0.69	0.87	0.50	0.74	0.39	0.67	0.34	0.66	0.35
3 59 13	NEW WALES		18.39	14.32	24.37	15.05	29.67	16.52	29.59	15.53	27.63	14.19	23.99	12.74
2 53 26	FARMLAND		0.55	0.43	0.59	0.39	0.54	0.37	0.67	0.35	0.69	0.36	0.69	0.36
2 52 14	C. F.		1.03	0.84	1.16	0.76	1.25	0.72	1.36	0.72	1.46	0.75	1.57	0.83
2 52 21	C. F.		0.20	0.16	0.23	0.15	0.25	0.15	0.29	0.15	0.32	0.16	0.35	0.18
2 46 16	W. R. GRACE		1.70	1.33	1.70	1.12	1.69	0.97	1.67	0.88	1.65	0.85	1.64	0.87
2 46 17	W. R. GRACE		1.70	1.33	1.70	1.12	1.69	0.97	1.67	0.88	1.65	0.85	1.64	0.87
3 53 01	FARMLAND		7.70	6.00	8.27	5.45	8.86	5.11	9.36	4.94	9.62	4.85	9.56	5.08
3 53 02	FARMLAND		7.52	5.86	8.08	5.32	8.66	4.99	9.13	4.82	9.39	4.82	9.33	4.96
3 53 03	FARMLAND		10.17	7.92	10.92	7.19	11.70	6.74	12.34	6.52	12.69	6.52	12.61	6.70
3 53 03	FARMLAND		9.98	7.78	10.72	7.06	11.48	6.52	12.12	6.40	12.46	6.40	12.37	6.57
3 52 03	C. F.		1.42	1.11	1.58	1.04	1.76	1.02	1.96	1.03	2.16	1.11	2.36	1.25
3 52 04	C. F.		1.44	1.12	1.60	1.05	1.78	1.03	1.98	1.05	2.18	1.12	2.38	1.26
3 52 05	C. F.		1.26	0.98	1.37	0.90	1.49	0.86	1.63	0.86	1.77	0.91	1.91	1.01
3 52 06	C. F.		1.25	0.98	1.36	0.90	1.49	0.86	1.62	0.86	1.76	0.90	1.90	1.01
3 46 14	W. R. GRACE		4.24	3.30	4.22	2.78	4.20	2.42	4.16	2.20	4.12	2.12	4.08	2.17
3 46 15	W. R. GRACE		3.58	2.79	3.56	2.35	3.53	2.03	3.49	1.84	3.44	1.77	3.40	1.80
3 48 02	ROYSTER		0.93	0.73	0.93	0.61	0.93	0.54	0.93	0.49	0.94	0.48	0.94	0.50

## TOTAL CONCENTRATION (UG/M\*\*3)

128.40                      151.86                      173.54                      189.39                      194.69                      188.24

RECEPTORS			7.		8.		9.		10.		11.		12.	
SOURCE NAME			PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 94	NW		6.40	4.86	10.00	6.39	13.89	7.71	17.66	9.00	20.19	10.10	20.22	10.57
1 59 95	NW		6.35	4.82	9.78	6.24	13.40	7.44	15.94	8.63	19.47	9.74	19.77	10.34
1 59 96	NW		10.24	7.78	8.63	5.49	6.91	3.84	5.93	3.02	5.55	2.78	5.87	3.07
1 59 27	NEW WALES		1.37	1.04	1.12	0.72	0.93	0.52	0.81	0.41	0.79	0.40	0.85	0.45
1 59 33	NEW WALES		1.81	1.38	1.57	1.00	1.42	0.79	1.39	0.71	1.48	0.74	1.63	0.85
3 59 02	NEW WALES		9.60	7.29	12.93	8.23	16.13	8.96	18.37	9.36	18.60	9.30	17.00	8.89
3 59 03	NEW WALES		9.54	7.24	12.95	8.26	16.26	9.03	18.44	9.40	18.44	9.22	16.59	8.68
3 59 04	NEW WALES		10.04	7.63	13.86	8.85	17.52	9.73	19.70	10.04	19.34	9.67	17.09	8.94
3 59 09	NEW WALES		0.57	0.43	0.57	0.36	0.51	0.28	0.41	0.21	0.35	0.18	0.32	0.17
3 59 10	NEW WALES		1.24	0.94	1.08	0.69	0.88	0.49	0.75	0.38	0.68	0.34	0.68	0.36
3 59 13	NEW WALES		19.07	14.49	25.53	16.29	30.03	16.68	30.56	15.62	28.05	14.03	23.96	12.53
2 53 26	FARMLAND		0.56	0.42	0.60	0.39	0.64	0.36	0.68	0.35	0.70	0.35	0.69	0.36
2 52 14	C. F.		1.11	0.84	1.19	0.76	1.29	0.72	1.40	0.71	1.51	0.76	1.62	0.85
2 52 21	C. F.		0.21	0.16	0.24	0.15	0.27	0.15	0.30	0.15	0.33	0.16	0.36	0.19
2 46 16	W. R. GRACE		1.71	1.30	1.70	1.09	1.69	0.94	1.68	0.85	1.66	0.83	1.64	0.86
2 46 17	W. R. GRACE		1.71	1.30	1.70	1.09	1.69	0.94	1.68	0.85	1.66	0.83	1.64	0.86
3 53 01	FARMLAND		7.78	5.91	8.36	5.33	8.96	4.97	9.44	4.81	9.59	4.85	9.60	5.02
3 53 02	FARMLAND		7.60	5.77	8.15	5.21	8.74	4.85	9.22	4.70	9.46	4.73	9.37	4.90
3 53 03	FARMLAND		10.27	7.80	11.03	7.04	11.82	6.56	12.45	6.35	12.78	6.39	12.65	6.62
3 53 03	FARMLAND		10.08	7.56	10.83	6.91	11.60	6.44	12.22	6.23	12.54	6.27	12.42	6.49
3 52 03	C. F.		1.48	1.13	1.65	1.05	1.84	1.02	2.05	1.04	2.25	1.12	2.44	1.28
3 52 04	C. F.		1.50	1.14	1.67	1.07	1.86	1.04	2.07	1.05	2.27	1.14	2.46	1.29
3 52 05	C. F.		1.30	0.99	1.42	0.90	1.55	0.86	1.69	0.86	1.83	0.92	1.97	1.03
3 52 06	C. F.		1.30	0.99	1.41	0.90	1.54	0.86	1.68	0.86	1.82	0.91	1.96	1.02
3 46 14	W. R. GRACE		4.26	3.24	4.24	2.71	4.21	2.34	4.17	2.12	4.13	2.06	4.09	2.14
3 46 15	W. R. GRACE		3.60	2.74	3.58	2.28	3.54	1.96	3.49	1.78	3.45	1.72	3.40	1.78
3 48 02	ROYSTER		0.94	0.71	0.94	0.60	0.94	0.52	0.94	0.48	0.95	0.47	0.95	0.49

## TOTAL CONCENTRATION (UG/M\*\*3)

131.65                      156.73                      180.07                      196.20                      199.95                      191.22



RECEPTORS		13.		14.		15.		15.		17.		19.	
SOURCE NAME		PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 94	NW	6.45	4.79	10.31	6.37	14.62	7.82	18.75	9.24	21.20	10.35	20.76	10.73
1 59 95	NW	6.42	4.75	10.10	5.24	14.10	7.55	17.98	8.86	20.50	10.01	20.36	10.54
1 59 96	NW	10.79	8.00	8.74	5.40	6.94	3.71	5.91	2.91	5.73	2.80	6.26	3.23
1 59 27	NEW WALES	1.38	1.02	1.12	0.69	0.92	0.49	0.81	0.40	0.83	0.40	0.91	0.47
1 59 33	NEW WALES	1.83	1.36	1.58	0.98	1.43	0.77	1.44	0.71	1.58	0.77	1.72	0.89
3 59 02	NEW WALES	9.94	7.37	13.60	8.41	17.13	9.16	19.35	9.53	19.21	9.38	17.17	8.87
3 59 03	NEW WALES	9.88	7.32	13.67	8.45	17.30	9.25	19.41	9.56	18.99	9.27	16.59	8.62
3 59 04	NEW WALES	10.38	7.70	14.63	9.05	19.52	9.76	20.64	10.17	19.79	9.66	17.06	8.81
3 59 09	NEW WALES	0.61	0.45	0.61	0.38	0.52	0.28	0.42	0.21	0.35	0.17	0.32	0.17
3 59 10	NEW WALES	1.31	0.97	1.11	0.68	0.88	0.47	0.74	0.37	0.68	0.33	0.71	0.37
3 59 13	NEW WALES	19.77	14.66	26.79	16.56	31.46	16.83	31.61	15.57	28.29	13.81	23.76	12.28
2 53 26	FARMLAND	0.56	0.42	0.61	0.37	0.65	0.35	0.68	0.34	0.70	0.34	0.69	0.36
2 52 14	C. F.	1.14	0.85	1.24	0.76	1.34	0.72	1.45	0.71	1.56	0.76	1.66	0.86
2 52 21	C. F.	0.22	0.16	0.25	0.15	0.28	0.15	0.31	0.15	0.34	0.17	0.37	0.19
2 46 16	W. R. GRACE	1.72	1.28	1.71	1.05	1.70	0.91	1.68	0.83	1.66	0.81	1.65	0.85
2 46 17	W. R. GRACE	1.72	1.28	1.71	1.06	1.70	0.91	1.68	0.83	1.66	0.81	1.65	0.85
3 53 01	FARMLAND	7.86	5.83	8.45	5.22	9.05	4.84	9.53	4.69	9.76	4.76	9.63	4.98
3 53 02	FARMLAND	7.68	5.69	8.25	5.10	8.83	4.73	9.30	4.58	9.52	4.65	9.40	4.86
3 53 03	FARMLAND	10.37	7.69	11.15	6.89	11.94	6.39	12.56	6.19	12.86	6.28	12.69	6.56
3 53 03	FARMLAND	10.18	7.55	10.95	6.77	11.72	6.27	12.33	6.07	12.62	6.16	12.46	6.44
3 52 03	C. F.	1.55	1.15	1.73	1.07	1.93	1.03	2.13	1.05	2.34	1.14	2.53	1.31
3 52 04	C. F.	1.57	1.16	1.75	1.09	1.95	1.04	2.15	1.06	2.36	1.15	2.55	1.32
3 52 05	C. F.	1.35	1.00	1.47	0.91	1.61	0.86	1.75	0.86	1.89	0.92	2.03	1.05
3 52 06	C. F.	1.34	1.00	1.46	0.90	1.60	0.86	1.74	0.86	1.88	0.92	2.02	1.04
3 46 14	W. R. GRACE	4.28	3.18	4.26	2.63	4.22	2.26	4.18	2.06	4.14	2.02	4.10	2.12
3 46 15	W. R. GRACE	3.62	2.69	3.59	2.22	3.55	1.90	3.50	1.72	3.45	1.69	3.41	1.76
3 48 02	ROYSTER	0.95	0.70	0.95	0.59	0.95	0.51	0.95	0.47	0.95	0.47	0.95	0.49

TOTAL CONCENTRATION (UG/M\*\*3)

134.88                      161.76                      186.91                      203.01                      204.85                      193.56

RECEPTORS		19.		20.		21.		22.		23.		24.	
SOURCE NAME		PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 94	NW	6.49	4.71	10.60	6.35	15.39	7.93	19.90	9.49	22.16	10.59	21.15	10.85
1 59 95	NW	6.47	4.59	10.40	6.23	14.85	7.65	19.09	9.11	21.50	10.28	20.90	10.72
1 59 96	NW	11.28	8.17	8.81	5.28	5.90	3.56	5.91	2.82	6.04	2.89	6.67	3.42
1 59 27	NEW WALES	1.38	1.00	1.10	0.66	0.90	0.46	0.83	0.39	0.88	0.42	0.96	0.49
1 59 33	NEW WALES	1.84	1.33	1.58	0.94	1.45	0.75	1.53	0.73	1.70	0.91	1.77	0.91
3 59 02	NEW WALES	10.28	7.45	14.35	8.59	18.20	9.39	20.32	9.69	19.72	9.42	17.21	8.83
3 59 03	NEW WALES	10.21	7.40	14.44	8.65	13.39	9.48	20.34	9.70	19.41	9.28	16.64	8.54
3 59 04	NEW WALES	10.70	7.75	15.44	9.25	19.76	10.18	21.50	10.25	20.06	9.59	16.94	8.64
3 59 09	NEW WALES	0.66	0.48	0.64	0.39	0.53	0.27	0.42	0.20	0.35	0.17	0.33	0.17
3 59 10	NEW WALES	1.38	1.00	1.12	0.67	0.88	0.46	0.74	0.35	0.70	0.33	0.76	0.39
3 59 13	NEW WALES	20.48	14.94	28.14	16.86	32.92	16.97	32.40	15.45	28.29	13.52	23.36	11.98
2 53 26	FARMLAND	0.57	0.41	0.61	0.37	0.66	0.34	0.69	0.33	0.71	0.34	0.69	0.36
2 52 14	C. F.	1.18	0.86	1.28	0.77	1.39	0.71	1.50	0.71	1.61	0.77	1.71	0.88
2 52 21	C. F.	0.23	0.17	0.26	0.16	0.29	0.15	0.33	0.16	0.36	0.17	0.39	0.20
2 46 16	W. R. GRACE	1.73	1.25	1.72	1.03	1.70	0.88	1.68	0.90	1.67	0.90	1.66	0.85
2 46 17	W. R. GRACE	1.73	1.25	1.72	1.03	1.70	0.88	1.68	0.80	1.67	0.80	1.66	0.85
3 53 01	FARMLAND	7.94	5.75	8.54	5.12	9.14	4.71	9.61	4.58	9.82	4.69	9.66	4.96
3 53 02	FARMLAND	7.75	5.52	8.34	5.00	8.92	4.60	9.38	4.47	9.58	4.58	9.43	4.84
3 53 03	FARMLAND	10.48	7.59	11.27	6.75	12.06	5.22	12.67	6.04	12.94	6.19	12.73	6.53
3 53 03	FARMLAND	10.28	7.45	11.06	6.63	11.83	6.10	12.44	5.93	12.70	6.07	12.50	6.41
3 52 03	C. F.	1.62	1.17	1.81	1.09	2.01	1.04	2.22	1.06	2.43	1.16	2.61	1.34
3 52 04	C. F.	1.64	1.19	1.83	1.10	2.03	1.05	2.24	1.07	2.45	1.17	2.64	1.35
3 52 05	C. F.	1.40	1.01	1.52	0.91	1.67	0.86	1.81	0.87	1.96	0.94	2.09	1.07
3 52 06	C. F.	1.39	1.01	1.52	0.91	1.66	0.86	1.80	0.86	1.94	0.93	2.07	1.06
3 46 14	W. R. GRACE	4.30	3.12	4.27	2.56	4.23	2.18	4.19	2.00	4.15	1.98	4.12	2.11
3 46 15	W. R. GRACE	3.64	2.63	3.60	2.16	3.55	1.83	3.51	1.67	3.46	1.65	3.42	1.76
3 48 02	ROYSTER	0.96	0.69	0.96	0.57	0.96	0.50	0.96	0.46	0.96	0.46	0.96	0.49

TOTAL CONCENTRATION (UG/M\*\*3)

138.03                      166.92                      193.97                      209.70                      209.21                      194.93







STACK HEIGHT ADJUSTMENT = 0.0  
 \*\*\* SOURCE DATA \*\*\*

SOURCE NAME	EMM. RATE (G/SEC)	STACK HT. (M)	STACK TEMP. (DEG-K)	EXIT VEL. (M/SEC)	STACK DIA. (M)	VOL. FLOW (M <sup>3</sup> /SEC)	X-COORD. (KM)	Y-COORD. (KM)
1 59 94 NW	57.75	60.7	349.7	0.0	2.60	71.	396.490	3078.640
1 59 95 NW	57.75	60.7	349.7	0.0	2.60	71.	396.560	3078.640
1 59 96 NW	SS4 <del>44.1</del> 36.6	36.6	319.1	0.0	1.80	53.	396.450	3075.150
1 59 27 NEW WALES	3.78	52.4	321.9	0.0	2.40	59.	396.750	3076.350
1 59 33 NEW WALES	5.36	52.4	319.1	0.0	2.40	32.	396.830	3079.430

Sulfuric acid plants 1, 2 & 3  
 are existing sources and do not  
 affect this run

JEL  
 3/24/89

## \* \* \* R E C E I P T O R S \* \* \*

NO.	X(KM)	Y(KM)	Z(KM)
1.	396.200	3078.000	0.0
2.	396.200	3077.900	0.0
3.	396.200	3077.800	0.0
4.	396.200	3077.700	0.0
5.	396.200	3077.600	0.0
6.	396.200	3077.500	0.0
7.	396.300	3078.000	0.0
8.	396.300	3077.900	0.0
9.	396.300	3077.800	0.0
10.	396.300	3077.700	0.0
11.	396.300	3077.600	0.0
12.	396.300	3077.500	0.0
13.	396.400	3078.000	0.0
14.	396.400	3077.900	0.0
15.	396.400	3077.800	0.0
16.	396.400	3077.700	0.0
17.	396.400	3077.600	0.0
18.	396.400	3077.500	0.0
19.	396.500	3078.000	0.0
20.	396.500	3077.900	0.0
21.	396.500	3077.800	0.0
22.	396.500	3077.700	0.0
23.	396.500	3077.600	0.0
24.	396.500	3077.500	0.0
25.	396.600	3078.000	0.0
26.	396.600	3077.900	0.0
27.	396.600	3077.800	0.0
28.	396.600	3077.700	0.0
29.	396.600	3077.600	0.0
30.	396.600	3077.500	0.0
31.	396.700	3078.000	0.0
32.	396.700	3077.900	0.0
33.	396.700	3077.800	0.0
34.	396.700	3077.700	0.0
35.	396.700	3077.600	0.0
36.	396.700	3077.500	0.0
37.	396.800	3078.000	0.0
38.	396.800	3077.900	0.0
39.	396.800	3077.800	0.0
40.	396.800	3077.700	0.0
41.	396.800	3077.600	0.0
42.	396.800	3077.500	0.0

## \*\*\* METEORLOGY \*\*\*

	WIND DIR. (DEG)	WIND VEL. (M/SEC)	STABILITY CLASS	MIX.HT. (M)	AMB.TEMP. (DEG-K)	PRESS. (MB)
1.	354.	2.60	2	1344.	301.	1000.00
2.	354.	1.00	1	1575.	303.	1000.00
3.	356.	1.00	1	1806.	305.	1000.00





1 59 96 NW	33.30	10.41	10.91	7.64	23.51	6.82	20.11	6.62	17.46	6.69	15.42	6.91
1 59 27 NEW WALES	2.86	0.89	<del>27.33</del>	0.69	2.24	0.65	2.03	0.67	1.87	0.72	1.75	0.75
1 59 33 NEW WALES	2.45	0.77	2.24	0.61	2.07	0.60	1.95	0.64	1.86	0.71	1.79	0.80

TOTAL CONCENTRATION (UG/M\*\*3)

319.86	<span style="border: 1px solid black; padding: 2px;">364.16 347.26</span>	344.50	303.68	261.07	223.29
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RECEPTORS

SOURCE NAME	31.		32.		33.		34.		35.		35.	
	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 94 NW	81.40	33.84	113.34	37.61	117.20	39.79	112.26	41.21	102.65	42.18	91.92	42.83
1 59 95 NW	124.17	51.63	152.43	51.96	150.43	51.07	136.25	50.02	119.26	49.01	103.18	48.08
1 59 96 NW	26.49	11.01	23.25	7.93	20.43	6.94	18.05	6.63	16.10	6.62	14.55	6.78
1 59 27 NEW WALES	4.33	1.80	3.71	1.26	3.23	1.10	2.86	1.05	2.59	1.06	2.38	1.11
1 59 33 NEW WALES	4.12	1.71	3.62	1.23	3.24	1.10	2.96	1.09	2.75	1.13	2.58	1.20

TOTAL CONCENTRATION (UG/M\*\*3)

240.50	293.35	294.53	272.39	243.34	214.60
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RECEPTORS

SOURCE NAME	37.		38.		39.		40.		41.		42.	
	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 94 NW	30.10	24.77	50.24	30.21	62.15	33.50	66.82	35.74	66.93	37.36	64.47	38.54
1 59 95 NW	63.13	51.97	90.44	54.37	100.04	53.92	98.83	52.85	92.58	51.67	84.52	50.53
1 59 96 NW	16.82	13.85	15.88	9.55	14.82	7.99	13.77	7.37	12.82	7.16	12.02	7.18
1 59 27 NEW WALES	5.50	4.53	4.67	2.81	4.03	2.17	3.55	1.90	3.18	1.78	2.90	1.73
1 59 33 NEW WALES	5.93	4.88	5.11	3.07	4.48	2.42	4.02	2.15	3.66	2.04	3.38	2.02

TOTAL CONCENTRATION (UG/M\*\*3)

121.47	166.34	185.52	186.99	179.17	167.28
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OK JPK  
3/24/87



STACK HEIGHT ADJUSTMENT = 0.0

\*\*\* SOURCE DATA \*\*\*

SOURCE NAME	EMM. RATE (G/SEC)	STACK HT. (M)	STACK TEMP. (DEG-K)	EXIT VEL. (M/SEC)	STACK DIA. (M)	VOL. FLOW (M <sup>3</sup> /SEC)	X-COORD. (KM)	Y-COORD. (KM)
1 59 94 NW	57.75	60.7	349.7	0.0	2.60	71.	396.490	3078.640
1 59 95 NW	57.75	60.7	349.7	0.0	2.60	71.	396.560	3078.640
1 59 96 NW	5.54	36.6	319.1	0.0	1.80	53.	396.450	3079.150
1 59 27 NEW WALES	3.78	52.4	321.9	0.0	2.40	59.	396.750	3079.350
1 59 33 NEW WALES	5.36	52.4	319.1	0.0	2.40	32.	396.830	3079.430
1 59 02 NEW WALES	54.60	61.0	350.2	0.0	2.50	67.	396.600	3078.750
1 59 03 NEW WALES	51.91	61.0	350.2	0.0	2.50	64.	396.530	3078.750
1 59 04 NEW WALES	53.93	61.0	350.2	0.0	2.50	66.	396.450	3078.750
1 59 05 NEW WALES	0.82	36.6	319.1	0.0	2.10	54.	396.540	3079.030
1 59 10 NEW WALES	1.89	36.6	325.2	0.0	1.80	52.	396.550	3079.150
1 59 13 NEW WALES	71.73	25.9	564.1	0.0	1.70	39.	396.560	3078.810

1-#1 } H<sub>2</sub>SO<sub>4</sub>  
 2-#2 }  
 3-#3 }

54.60 g/sec = 433.3 lb SO<sub>2</sub>/hr = 10400 lb/day ÷ 4.0 lb/ton = 2600 tpd  
 Change to 2700 tpd ⇒ 450.0 lb/hr = 56.7 g/sec

56.7 g/sec

56.7 g/sec

5/24/87  
 ASK

## \* \* \* R E C E P T O R S \* \* \*

NO.	X(KM)	Y(KM)	Z(KM)
1.	396.200	3079.000	0.0
2.	396.200	3077.900	0.0
3.	396.200	3077.800	0.0
4.	396.200	3077.700	0.0
5.	396.200	3077.600	0.0
6.	396.200	3077.500	0.0
7.	396.300	3078.000	0.0
8.	396.300	3077.900	0.0
9.	396.300	3077.800	0.0
10.	396.300	3077.700	0.0
11.	396.300	3077.600	0.0
12.	396.300	3077.500	0.0
13.	396.400	3078.000	0.0
14.	396.400	3077.900	0.0
15.	396.400	3077.800	0.0
16.	396.400	3077.700	0.0
17.	396.400	3077.600	0.0
18.	396.400	3077.500	0.0
19.	396.500	3078.000	0.0
20.	396.500	3077.900	0.0
21.	396.500	3077.800	0.0
22.	396.500	3077.700	0.0
23.	396.500	3077.600	0.0
24.	396.500	3077.500	0.0
25.	396.600	3078.000	0.0
26.	396.600	3077.900	0.0
27.	396.600	3077.800	0.0
28.	396.600	3077.700	0.0
29.	396.600	3077.600	0.0
30.	396.600	3077.500	0.0
31.	396.700	3078.000	0.0
32.	396.700	3077.900	0.0
33.	396.700	3077.800	0.0
34.	396.700	3077.700	0.0
35.	396.700	3077.600	0.0
36.	396.700	3077.500	0.0
37.	396.800	3078.000	0.0
38.	396.800	3077.900	0.0
39.	396.800	3077.800	0.0
40.	396.800	3077.700	0.0
41.	396.800	3077.600	0.0
42.	396.800	3077.500	0.0

## \*\*\* METEOROLOGY \*\*\*

	WIND DIR. (DEG)	WIND VEL. (M/SEC)	STABILITY CLASS	MIX.HT. (M)	AMB. TEMP. (DEG-K)	PRESS. (MB)
1.	354.	2.60	2	1344.	301.	1000.00
2.	354.	1.00	1	1575.	303.	1000.00
3.	356.	1.00	1	1806.	305.	1000.00



1 59 96 NW	32.79	4.39	26.88	3.48	22.36	3.16	18.90	3.05	16.25	3.05	14.25	3.11
1 59 27 NEW WALES	1.61	0.22	1.43	0.19	1.36	0.19	1.28	0.21	1.22	0.23	1.17	0.26
1 59 33 NEW WALES	1.29	0.17	1.23	0.16	1.18	0.17	1.16	0.19	1.14	0.21	1.14	0.25
3 59 02 NEW WALES	89.32	11.83	87.43	11.32	79.27	11.19	69.55	11.22	60.37	11.32	52.39	11.42
3 59 03 NEW WALES	132.54	17.75	122.54	15.87	106.24	15.00	90.29	14.57	76.46	14.33	65.04	14.18
3 59 04 NEW WALES	165.71	22.19	152.39	19.73	131.66	18.59	111.53	18.00	94.15	17.65	79.82	17.40
3 59 09 NEW WALES	1.95	0.26	1.58	0.20	1.30	0.18	1.09	0.18	0.93	0.17	0.80	0.17
3 59 10 NEW WALES	3.32	0.44	2.76	0.36	2.32	0.33	1.98	0.32	1.72	0.32	1.53	0.33
3 59 13 NEW WALES	92.11	12.34	102.20	13.24	99.40	14.03	91.20	14.72	81.57	15.29	72.33	15.77

TOTAL CONCENTRATION (UG/M\*\*3)

746.68	772.22	708.28	619.69	533.56	458.69
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RECEPTORS

SOURCE NAME	25.		26.		27.		28.		29.		30.	
	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 94 NW	137.72	14.98	164.39	17.47	158.78	18.47	141.46	18.84	122.24	18.94	104.69	18.89
1 59 95 NW	143.53	15.61	167.19	17.77	157.90	18.37	138.13	18.40	117.64	18.22	99.64	17.98
1 59 96 NW	33.30	3.62	31.27	2.96	23.51	2.74	20.11	2.68	17.46	2.70	15.42	2.78
1 59 27 NEW WALES	2.86	0.31	2.51	0.27	2.24	0.26	2.03	0.27	1.87	0.29	1.75	0.32
1 59 33 NEW WALES	2.45	0.27	2.24	0.24	2.07	0.24	1.95	0.26	1.86	0.29	1.79	0.32
3 59 02 NEW WALES - #1	150.00	16.32	138.92	14.76	123.41	14.01	102.19	13.61	86.40	13.38	73.36	13.24
3 59 03 NEW WALES - #2	165.58	18.01	151.52	16.13	130.72	15.21	110.70	14.75	93.45	14.48	79.24	14.30
3 59 04 NEW WALES - #3	145.10	15.79	140.46	14.93	126.31	14.69	110.36	14.70	95.44	14.78	82.45	14.88
3 59 09 NEW WALES	2.50	0.27	2.01	0.21	1.64	0.19	1.36	0.18	1.15	0.18	0.99	0.18
3 59 10 NEW WALES	4.31	0.47	3.54	0.38	2.95	0.34	2.50	0.33	2.15	0.33	1.89	0.34
3 59 13 NEW WALES	131.88	14.35	140.31	14.91	133.02	15.48	119.95	15.98	105.87	16.40	92.87	16.76

TOTAL CONCENTRATION (UG/M\*\*3)

919.23	940.32	859.56	750.75	645.53	554.09
revised impact = 950.6 ug/m <sup>3</sup>	924.02	14.26	165.50	147.67	

RECEPTORS

SOURCE NAME	31.		32.		33.		34.		35.		36.	
	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 94 NW	81.40	10.79	110.34	13.58	117.20	15.10	112.26	15.95	102.65	16.46	91.92	16.76
1 59 95 NW	124.17	16.46	152.43	19.77	153.43	19.38	135.25	19.36	119.26	19.13	103.18	18.81
1 59 96 NW	26.45	3.51	23.25	2.86	20.43	2.63	18.05	2.57	16.10	2.58	14.55	2.65
1 59 27 NEW WALES	4.33	0.57	3.71	0.46	3.23	0.42	2.86	0.41	2.59	0.42	2.38	0.43
1 59 33 NEW WALES	4.12	0.55	3.62	0.45	3.24	0.42	2.96	0.42	2.75	0.44	2.58	0.47
3 59 02 NEW WALES	164.09	21.76	153.92	18.55	135.00	17.39	115.67	16.44	98.49	15.79	84.05	15.33
3 59 03 NEW WALES	132.53	17.57	129.65	15.96	117.75	15.17	103.75	14.74	90.35	14.49	78.51	14.32
3 59 04 NEW WALES	83.51	11.07	90.97	11.20	89.51	11.53	83.90	11.92	76.74	12.31	69.37	12.65
3 59 09 NEW WALES	2.38	0.32	1.98	0.24	1.66	0.21	1.40	0.20	1.20	0.19	1.04	0.19
3 59 10 NEW WALES	4.37	0.58	3.67	0.45	3.10	0.40	2.66	0.38	2.31	0.37	2.05	0.37
3 59 13 NEW WALES	126.82	16.82	138.67	17.07	134.67	17.35	123.88	17.61	111.15	17.82	98.80	18.02

TOTAL CONCENTRATION (UG/M\*\*3)

754.21	812.20	776.21	703.66	623.59	548.40
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RECEPTORS

SOURCE NAME	37.		38.		39.		40.		41.		42.	
	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 94 NW	30.10	7.00	50.24	9.84	62.15	11.70	66.82	12.94	66.93	13.81	64.47	14.42
1 59 95 NW	63.13	14.68	90.44	17.70	100.04	18.83	98.83	19.13	92.58	19.10	84.52	18.91
1 59 96 NW	16.82	3.91	15.88	3.11	14.92	2.79	13.77	2.67	12.82	2.64	12.02	2.66
1 59 27 NEW WALES	5.50	1.28	4.67	0.91	4.03	0.76	3.55	0.69	3.18	0.66	2.90	0.65
1 59 33 NEW WALES	5.93	1.38	5.11	1.00	4.48	0.84	4.02	0.78	3.66	0.75	3.38	0.76
3 59 02 NEW WALES	115.88	26.94	118.51	23.20	111.06	20.90	100.17	19.40	88.83	18.32	78.29	17.52
3 59 03 NEW WALES	70.54	16.40	78.56	15.38	78.76	14.82	74.97	14.52	69.46	14.33	63.45	14.20
3 59 04 NEW WALES	33.71	7.84	43.33	8.49	48.46	9.12	50.21	9.72	49.81	10.28	48.13	10.77
3 59 09 NEW WALES	1.71	0.40	1.52	0.30	1.34	0.25	1.19	0.23	1.05	0.22	0.94	0.21
3 59 10 NEW WALES	3.48	0.81	3.06	0.60	2.70	0.51	2.39	0.46	2.13	0.44	1.93	0.43
3 59 13 NEW WALES	83.29	19.37	99.45	19.47	103.47	19.49	103.55	19.47	94.32	19.46	86.95	19.45

TOTAL CONCENTRATION (UG/M\*\*3)

15/12/87

430.08

510.82

531.31

516.47

484.77

446.97