PSD FL~~014~~ 034

SUPPLEMENTAL INFORMATION
AIR QUALITY MODELING

NEW WALES CHEMICALS, INC.
POLK COUNTY, FLORIDA

FEBRUARY 15, 1980

SHOLTES & KOOGLER
Environmental Consultants
1213 NW 6TH ST ■ GAINESVILLE, FL 32601 ■ 904-377-5822

K.W.

SHOLTES & KOOGLER, ENVIRONMENTAL CONSULTANTS
1213 N.W. 6th Street Gainesville, Florida 32601 (904) 377-5822

SKEC 124-79-01

February 14, 1980

Mr. Tommy Gibbs
U.S. Environmental Protection Agency
Region IV
345 Courtland Street
Atlanta, GA 30308

Subject: New Wales Chemicals, Inc.
PSD Application
Federal File No. PSD-FL014

Dear Tom:

Attached are comments and information related to the New Wales PSD application which respond to concerns raised by the Florida Department of Environmental Regulation (FDER) in a letter dated January 18, 1980 (copy attached). The information herein responds to general comments made in the letter and clarifies discrepancies in the initial particulate matter impact analysis. For your information I would like to report that all concerns addressed in the FDER letter have been resolved to the satisfaction of FDER.

The two major concerns raised by FDER were a calculated sulfur dioxide impact and discrepancies and/or ambiguities in our initial particulate matter modeling. The sulfur dioxide impact in question was a calculated violation of the 24-hour air quality standard (260 micrograms per cubic meter) at a receptor approximately one kilometer east of the Chemical Complex. This calculated violation resulted from rather unusual meteorological conditions which followed Hurricane Agnes in June of 1972. Furthermore, the calculated violation occurred in the gypsum stack/cooling pond area and slimes pond area. It is my understanding that EPA does not consider receptors which fall on applicant property if the area is either physically inaccessible to the general public or if the applicant can reasonably restrict access of the general public to the area. In the particular case in point, the area where the calculated air quality standard violation occurred is physically inaccessible since it falls in pond areas and further, the area can be restricted by New Wales security personnel.

I have attached the air quality modeling conducted by FDER showing their calculated violation and a figure showing that all areas effected by the calculated violation occur on New Wales property in areas physically inaccessible to the general public. Our modeling (attached) shows no violation of air quality standards.

Another matter which should be considered in evaluating the calculated violation is that 57 micrograms per cubic meter of the 267 micrograms per cubic meter total impact resulted from emissions from sources in Tampa approximately 35 kilometers to the west. The meteorology resulting in the 267 microgram per cubic meter impact was from day 173, 1972, Tampa meteorology. These data showed a very persistent wind from 270°. Meteorological data for the same day from Orlando, Florida showed a wind not quite as persistent, and with an average direction of 240°. Since the New Wales Chemical Complex is approximately mid-way between Tampa and Orlando, one could question whether or not a 270° wind would have existed at the site and, in reality, transported the pollutants from Tampa to the receptor which the air quality standard violation was calculated.

Regarding the resolution of the calculated violation, New Wales satisfied the FDER concern by modifying the stack height of an existing boiler. The stack height was increased from 35 feet to 85 feet; the latter still being less than good engineering practice stack height. I feel the attached Figure A showing that receptors exceeding 260 micrograms per cubic meter are in areas inaccessible to the general public, will satisfy the Federal concern.

My letter dated February 13, 1980 to the Florida Department of Environmental Regulation addressing particulate matter air quality analyses is attached hereto. As stated previously, all information in this letter has been discussed with FDER and the information satisfies the concerns raised by FDER. In addition to the information required by FDER, I have included for Federal review, the impact of particulate matter emissions resulting from the meteorological data of day 173, 1972 (FDER excluded these data in their particulate matter impact analysis).

As with the sulfur dioxide impact resulting from day 173, 1972 meteorology, the particulate matter impact resulting from these data occurs at receptors falling in areas inaccessible to the general public. This is illustrated in Figures B and C.

Regarding the general comments made by FDER in the January 18, 1980 letter, I would like to provide the following comments for your consideration.

1. Regarding the misnumbering of our meteorological data, it is true that our initial preprocesser run did add one day to each year of meteorological data we used. This in no way however, effected the results of our modeling. For example, day 173, 1972 was identified by our preprocesser as day 175, 1972. When our CRSTER run indicated a highest second-high impact occurring with day 175 meteorology, we utilized the data identified by the preprocesser as day 175 for the modeling; data which in actuality were for day 173. Our use of the data was consistent even though our identification was in error.

2. The comment regarding receptor locations on the edge of a receptor grid is correct. Additional receptors were not investigated if those receptors would fall in areas restricted to the general public or if an evaluation of adjacent receptors indicated that the receptor on the edge of the grid was probably the receptor at which maximum impact occurred.

I hope that the attached information will resolve any questions your office or your contractor may have had as a result of questions raised by the Florida Department of Environmental Regulation. If you have any additional questions, please contact me at your earliest convenience.

Very truly yours,

SHOLTES & KOOGLER
ENVIRONMENTAL CONSULTANTS

John B. Koogler, Ph.D., P.E.

JBK:sc
Attachments

cc: Mr. Jeff Shumaker, TRW, Inc.
Mr. George Clark, TRW, Inc.
Mr. Larry George, FDER
Mr. A. L. Girardin, New Wales

FIGURE A

AREA IN WHIH CALCULATED 24-HR
SO_2 LEVELS EXCEED
260 ug/m^3
(Day 173, 1972 Meteorology)

NEW WALES CHEMICALS, INC.
POLK COUNTY, FLORIDA

NWCRSP72

J9029 A

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****A  START  JOB 9029  NWCRSP72  ARROYO        80001046.002  8.48.11 PM  23 JAN 80  PRINTER1  NER1  JOB 9029  START  A****
****A  START  JOB 9029  NWCRSP72  ARROYO        80001046.002  8.48.11 PM  23 JAN 80  PRINTER1  NER1  JOB 9029  START  A****
****A  START  JOB 9029  NWCRSP72  ARROYO        80001046.002  8.48.11 PM  23 JAN 80  PRINTER1  NER1  JOB 9029  START  A****
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****A  START  JOB 9029  NWCRSP72  ARROYO        80001046.002  8.48.11 PM  23 JAN 80  PRINTER1  NER1  JOB 9029  START  A****
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CRSTER
1972 Meteorology
All days
Allowable Part. Matter
Emissions

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PLANT NAME: NEW WALES MODELING          POLLUTANT: PART       EMISSION UNITS: GM/SEC     AIR QUALITY UNITS: GM/M**3
NEW WALES NEW SOURCE PARTICULATE EMISSIONS
SHOLTES & KOOGLER ENVIRONMENTAL CONSULTANTS
JANUARY 1980

              MET FILE       REQUESTED
             STN NO. YR     STN NO. YR
 SURFACE      12842  72      12842  72
 UPPER AIR    12842  72      12842  72
PLANT LOCATION: RURAL
NO TAPE OUTPUT
MET DATA WILL NOT BE PRINTED

DAY-- 1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
      1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1

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     ALL TABLES, INCLUDING SOURCE CONTRIBUTION, THAT CONTAIN "ANNUAL" IN THE HEADING ARE BASED ONLY ON THOSE DAYS

     MARKED BY "1" IN THE ABOVE TABLE
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72A/1

RING DISTANCES(KM)= 1.00 1.50 2.00 2.50 3.00

STACK # 1--SOURCE NO 1 AFI MULTI
STACK # 2--SOURCE NO 2 AFI-STG, 29630
STACK # 3--SOURCE NO 4 AFI TRUCK,LIME, MPCOOL
STACK # 4--SOURCE NO 5 AFI RAIL & L/G 263
STACK # 5--SOURCE NO 8 MULTIPHOS SIZING
STACK # 6--SOURCE NO 9 MP-CLASS & SHIP
STACK # 7--SOURCE NO 13 DAP-2 SCRUBBERS
STACK # 8--SOURCE NO 14 DAP-1 BAG COLLECTOR

STACK	MONTH	EMISSION RATE (GMS/SEC)	HEIGHT (METERS)	DIAMETER (METERS)	EXIT VELOCITY (M/SEC)	TEMP (DEG.K)	VOLUMETRIC FLOW (M**3/SEC)
1	ALL	5.0500	52.40	2.44	9.78	322.00	45.73
2	ALL	14.2300	35.00	0.76	8.82	319.00	4.00
3	ALL	5.1300	24.30	0.37	13.21	319.00	1.42
4	ALL	7.8600	31.30	0.66	11.05	319.00	3.78
5	ALL	3.9000	5.20	0.40	8.04	319.00	1.01
6	ALL	4.0200	17.10	0.50	12.17	319.00	2.39
7	ALL	4.3200	36.60	1.83	19.77	319.00	52.00
8	ALL	0.5400	24.39	1.83	9.97	319.00	26.22

PLANT NAME: NEW WALES MODELING POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

MAXIMUM MEAN CONC= 2.9363E-05 DIRECTION= 27 DISTANCE= 1.0 KM

YEAR= 72

ANNUAL MEAN CONCENTRATION AT EACH RECEPTOR.

DIR \ RANGE	1.0 KM	1.5 KM	2.0 KM	2.5 KM	3.0 KM
1	7.96274E-06	4.95957E-06	3.47836E-06	2.61209E-06	2.05771E-06
2	1.07277E-05	6.80338E-06	4.33400E-06	3.66490E-06	2.90833E-06
3	8.87968E-06	5.56825E-06	3.93978E-06	2.98299E-06	2.36747E-06
4	7.05933E-06	4.46515E-06	3.20299E-06	2.45268E-06	1.96532E-06
5	7.31696E-06	4.60022E-06	3.29509E-06	2.52343E-06	2.02398E-06
6	8.57544E-06	5.27732E-06	3.70706E-06	2.79631E-06	2.21495E-06
7	9.25893E-06	5.62217E-06	3.89531E-06	2.99422E-06	2.27630E-06
8	1.05520E-05	6.27591E-06	4.23876E-06	3.09662E-06	2.38572E-06
9	2.03391E-05	1.25745E-05	8.75754E-06	6.54133E-06	5.12985E-06
10	1.35075E-05	8.24920E-06	5.70573E-06	4.24123E-06	3.31382E-06
11	9.71134E-06	6.26659E-06	4.49841E-06	3.43110E-06	2.73324E-06
12	8.10195E-06	5.47888E-06	4.07481E-06	3.18896E-06	2.59310E-06
13	8.70741E-06	5.98486E-06	4.49885E-06	3.54528E-06	2.89730E-06
14	1.03358E-05	7.53755E-06	5.71946E-06	4.81641E-06	4.03937E-06
15	8.55373E-06	5.90131E-06	4.43852E-06	3.49775E-06	2.85802E-06
16	7.71126E-06	5.32918E-06	4.04307E-06	3.21568E-06	2.65281E-06
17	6.75340E-06	4.51215E-06	3.34012E-06	2.60955E-06	2.12194E-06
18	8.51634E-06	5.84884E-06	4.41087E-06	3.49176E-06	2.86781E-06
19	7.03500E-06	4.86482E-06	3.70541E-06	2.95970E-06	2.45146E-06
20	5.81106E-06	3.87104E-06	2.85197E-06	2.21641E-06	1.79147E-06
21	9.96392E-06	7.13957E-06	5.59948E-06	4.56419E-06	3.83854E-06
22	1.15084E-05	7.73095E-06	5.74216E-06	4.49718E-06	3.66331E-06
23	1.79669E-05	1.27084E-05	9.79629E-06	7.87262E-06	6.54087E-06
24	2.11118E-05	1.51682E-05	1.18238E-05	9.57750E-06	8.00726E-06
25	2.13268E-05	1.53013E-05	1.19058E-05	9.61812E-06	8.01652E-06
26	2.26831E-05	1.62643E-05	1.26323E-05	1.01911E-05	8.48510E-06
27	2.93627E-05	2.13406E-05	1.67570E-05	1.36319E-05	1.14288E-05
28	2.04366E-05	1.43519E-05	1.10339E-05	8.85862E-06	7.35928E-06
29	1.52767E-05	1.06411E-05	8.13576E-06	6.50318E-06	5.38130E-06
30	1.54536E-05	1.09968E-05	8.59028E-06	6.98719E-06	5.87087E-06
31	1.24692E-05	9.34685E-06	6.18104E-06	4.82743E-06	3.92188E-06
32	9.46099E-06	6.14024E-06	4.43740E-06	3.40387E-06	2.72528E-06
33	1.13731E-05	7.71770E-06	5.78306E-06	4.56132E-06	3.73828E-06
34	8.64709E-06	5.62900E-06	4.08431E-06	3.14891E-06	2.53599E-06
35	6.49566E-06	4.31468E-06	3.19337E-06	2.49867E-06	2.03591E-06
36	8.70588E-06	5.73458E-06	4.19287E-06	3.24648E-06	2.62020E-06

72A/3

PLANT NAME: NEW WALES MODELING POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

YEARLY MAXIMUM 24-HOUR CONC= 2.3108E-04 DIRECTION= 9 DISTANCE= 1.0 KM DAY=174

YEAR= 72

HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

DIR	RANGE 1.0 KM	1.5 KM	2.0 KM	2.5 KM	3.0 KM
1	1.0940E-04 (65)	7.0945E-05 (65)	5.2778E-05 (357)	4.3354E-05 (10)	3.7655E-05 (10)
2	1.7853E-04 (89)	1.2553E-04 (89)	9.4680E-05 (89)	7.4542E-05 (89)	6.0698E-05 (89)
3	1.2435E-04 (76)	8.1273E-05 (89)	5.8678E-05 (89)	5.0671E-05 (258)	4.7093E-05 (258)
4	1.2080E-04 (125)	8.2229E-05 (125)	6.0166E-05 (125)	4.6239E-05 (125)	3.6883E-05 (125)
5	8.1326E-05 (104)	6.8005E-05 (104)	5.8782E-05 (104)	5.0853E-05 (104)	4.4607E-05 (104)
6	1.0802E-04 (239)	8.6278E-05 (239)	7.1456E-05 (239)	5.9895E-05 (239)	5.1151E-05 (239)
7	1.2639E-04 (180)	1.0559E-04 (180)	9.1961E-05 (180)	8.0207E-05 (180)	7.0873E-05 (180)
8	1.9634E-04 (177)	1.2602E-04 (177)	8.8199E-05 (177)	6.5616E-05 (177)	5.1019E-05 (177)
9	2.3108E-04 (174)	1.4680E-04 (174)	1.0256E-04 (178)	7.7023E-05 (178)	6.2014E-05 (334)
10	1.3653E-04 (182)	9.8035E-05 (182)	6.3080E-05 (182)	4.8204E-05 (182)	3.8534E-05 (182)
11	1.3760E-04 (183)	1.0046E-04 (183)	8.0758E-05 (183)	6.7187E-05 (183)	5.7501E-05 (183)
12	2.0941E-04 (25)	1.5023E-04 (25)	1.1241E-04 (25)	8.7683E-05 (25)	7.0819E-05 (25)
13	1.0901E-04 (358)	6.8746E-05 (358)	5.5675E-05 (291)	5.1277E-05 (291)	4.7184E-05 (291)
14	1.3228E-04 (184)	9.8939E-05 (184)	7.9396E-05 (325)	6.9619E-05 (325)	6.1800E-05 (325)
15	1.3741E-04 (6)	9.6949E-05 (6)	7.4264E-05 (6)	5.9461E-05 (6)	4.9287E-05 (6)
16	9.8190E-05 (239)	7.1786E-05 (239)	5.4798E-05 (239)	4.4405E-05 (281)	4.1195E-05 (281)
17	1.1371E-04 (6)	7.2399E-05 (6)	5.1550E-05 (327)	4.0542E-05 (327)	3.6633E-05 (81)
18	1.6932E-04 (326)	1.1509E-04 (320)	9.1368E-05 (320)	7.4919E-05 (320)	6.3221E-05 (320)
19	1.7991E-04 (236)	1.1215E-04 (236)	7.8441E-05 (236)	6.5750E-05 (78)	6.1087E-05 (78)
20	5.8591E-05 (92)	4.5030E-05 (300)	3.9815E-05 (300)	3.4606E-05 (300)	3.0292E-05 (300)
21	9.6303E-05 (338)	6.2333E-05 (338)	4.6427E-05 (279)	4.0913E-05 (279)	3.6267E-05 (279)
22	1.5827E-04 (329)	1.0090E-04 (329)	7.0949E-05 (278)	5.5832E-05 (278)	4.5352E-05 (278)
23	1.8882E-04 (342)	1.2056E-04 (342)	8.8318E-05 (70)	7.2047E-05 (289)	6.5162E-05 (289)
24	1.8084E-04 (42)	1.1520E-04 (42)	8.5532E-05 (244)	7.8590E-05 (244)	7.2055E-05 (244)
25	1.4453E-04 (246)	1.1910E-04 (246)	1.0354E-04 (246)	9.0253E-05 (246)	7.9748E-05 (246)
26	1.4683E-04 (338)	1.0825E-04 (338)	9.1524E-05 (364)	7.9838E-05 (364)	7.0563E-05 (364)
27	1.8304E-04 (306)	1.3404E-04 (306)	1.1077E-04 (1)	9.8450E-05 (1)	8.8161E-05 (1)
28	1.6674E-04 (133)	1.1639E-04 (165)	8.7409E-05 (165)	7.7122E-05 (242)	7.0302E-05 (242)
29	1.2431E-04 (133)	7.7175E-05 (47)	6.4046E-05 (260)	5.7855E-05 (260)	5.2301E-05 (260)
30	1.5944E-04 (137)	1.1272E-04 (137)	8.4402E-05 (137)	6.8895E-05 (365)	6.0085E-05 (365)
31	1.1091E-04 (195)	7.1649E-05 (195)	5.1411E-05 (308)	4.2267E-05 (308)	3.6819E-05 (61)
32	1.1352E-04 (331)	8.0390E-05 (301)	6.0627E-05 (301)	4.7648E-05 (348)	3.9943E-05 (348)
33	1.7429E-04 (335)	1.1690E-04 (335)	8.3883E-05 (335)	6.6906E-05 (68)	5.8910E-05 (68)
34	1.0365E-04 (237)	7.5972E-05 (237)	5.9468E-05 (237)	4.8275E-05 (237)	4.0367E-05 (237)
35	1.0507E-04 (324)	8.1606E-05 (324)	6.6288E-05 (324)	5.4984E-05 (324)	4.6914E-05 (359)
36	1.6640E-04 (14)	1.0770E-04 (14)	7.5889E-05 (14)	5.6738E-05 (14)	4.4271E-05 (14)

72A/4

PLANT NAME: NEW WALES MODELING POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 24-HOUR CONC= 2.2561E-04 DIRECTION= 9 DISTANCE= 1.0 KM DAY=173

YEAR= 72

SECOND HIGHEST 24-HOUR CONCENTRATION AT EACH RECEPTOR

RANGE DIR	1.0 KM	1.5 KM	2.0 KM	2.5 KM	3.0 KM
1	1.0139E-04 (350)	6.8615E-05 (357)	5.0875E-05 (10)	4.2364E-05 (357)	3.5191E-05 (357)
2	1.2519E-04 (21)	8.4950E-05 (55)	6.6226E-05 (55)	5.4360E-05 (55)	4.6299E-05 (55)
3	1.2200E-04 (89)	7.9722E-05 (76)	5.5748E-05 (76)	4.4701E-05 (89)	3.5434E-05 (89)
4	7.4090E-05 (104)	5.3464E-05 (104)	4.5623E-05 (274)	4.0655E-05 (274)	3.6324E-05 (274)
5	7.6794E-05 (98)	5.0508E-05 (24)	4.9551E-05 (24)	4.6689E-05 (24)	4.3800E-05 (24)
6	9.5015E-05 (107)	6.3952E-05 (107)	5.0219E-05 (334)	4.4666E-05 (334)	4.0196E-05 (334)
7	7.5111E-05 (99)	5.0341E-05 (99)	3.6928E-05 (99)	2.9728E-05 (219)	2.5311E-05 (219)
8	1.3494E-04 (180)	9.5753E-05 (181)	7.4306E-05 (181)	6.0065E-05 (181)	5.0140E-05 (181)
9	2.2561E-04 (173)	1.4463E-04 (178)	1.0207E-04 (174)	7.5569E-05 (174)	6.0339E-05 (178)
10	1.2491E-04 (178)	7.8419E-05 (178)	5.3991E-05 (178)	4.1049E-05 (24)	3.6997E-05 (24)
11	1.0394E-04 (64)	7.0418E-05 (64)	5.3525E-05 (144)	4.5387E-05 (144)	3.9314E-05 (144)
12	1.0330E-04 (142)	7.6684E-05 (142)	5.9603E-05 (142)	5.0124E-05 (138)	4.2975E-05 (138)
13	8.5746E-05 (91)	6.6299E-05 (281)	5.5094E-05 (281)	4.6559E-05 (281)	4.0172E-05 (281)
14	1.0769E-04 (325)	9.0628E-05 (325)	7.7590E-05 (184)	6.8346E-05 (142)	6.1070E-05 (142)
15	1.1228E-04 (50)	7.1561E-05 (50)	5.3695E-05 (45)	4.8461E-05 (45)	4.3832E-05 (45)
16	9.2016E-05 (148)	6.0482E-05 (148)	4.7779E-05 (322)	4.3404E-05 (239)	3.6904E-05 (78)
17	1.0958E-04 (326)	6.7793E-05 (327)	5.0358E-05 (6)	3.9599E-05 (81)	3.2850E-05 (327)
18	1.5562E-04 (320)	1.1086E-04 (326)	7.9928E-05 (326)	6.1043E-05 (326)	4.8598E-05 (326)
19	1.3200E-04 (35)	8.6486E-05 (35)	7.0353E-05 (78)	5.9097E-05 (236)	4.6839E-05 (236)
20	5.4267E-05 (83)	3.9947E-05 (282)	3.4587E-05 (282)	2.9874E-05 (282)	2.6133E-05 (282)
21	8.3590E-05 (15)	5.4586E-05 (15)	4.3785E-05 (338)	3.8552E-05 (337)	3.5514E-05 (337)
22	1.3070E-04 (278)	9.3662E-05 (278)	7.0529E-05 (329)	5.2452E-05 (329)	4.0764E-05 (329)
23	1.7209E-04 (70)	1.1873E-04 (70)	8.4445E-05 (342)	6.8815E-05 (70)	5.5586E-05 (70)
24	1.4648E-04 (286)	1.0815E-04 (286)	8.3530E-05 (286)	6.6605E-05 (286)	5.4642E-05 (286)
25	1.4079E-04 (311)	1.0190E-04 (295)	8.0342E-05 (295)	6.5255E-05 (227)	5.6166E-05 (227)
26	1.4100E-04 (132)	1.0692E-04 (132)	8.5808E-05 (132)	7.0631E-05 (132)	5.9616E-05 (132)
27	1.7532E-04 (254)	1.2677E-04 (254)	1.0461E-04 (275)	9.2546E-05 (275)	8.2744E-05 (275)
28	1.6607E-04 (165)	1.0672E-04 (121)	8.4438E-05 (242)	6.8662E-05 (165)	5.5853E-05 (165)
29	1.1859E-04 (47)	7.5251E-05 (133)	5.7220E-05 (224)	5.1064E-05 (224)	4.5672E-05 (224)
30	1.1669E-04 (365)	9.4736E-05 (365)	8.0396E-05 (363)	6.5953E-05 (137)	5.9389E-05 (355)
31	9.5661E-05 (134)	6.3500E-05 (308)	5.0947E-05 (195)	4.1097E-05 (61)	3.5467E-05 (308)
32	9.8208E-05 (348)	7.3385E-05 (348)	5.8318E-05 (348)	4.7647E-05 (301)	3.8711E-05 (301)
33	1.6858E-04 (12)	1.0642E-04 (12)	7.6370E-05 (68)	6.3584E-05 (335)	5.4622E-05 (158)
34	1.0120E-04 (236)	6.6015E-05 (212)	5.0463E-05 (212)	4.0174E-05 (212)	3.3021E-05 (212)
35	8.8621E-05 (316)	6.3668E-05 (316)	5.6422E-05 (359)	5.1471E-05 (359)	4.6682E-05 (324)
36	1.2066E-04 (82)	8.3573E-05 (82)	6.2663E-05 (82)	4.9431E-05 (82)	4.0505E-05 (82)

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PLANT NAME: NEW WALES MODELING POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

YEARLY MAXIMUM 3-HOUR CONC= 1.2651E-03 DIRECTION= 12 DISTANCE= 1.0 KM DAY= 25 TIME PERIOD= 2

YEAR= 72

DIR	HIGHEST 3-HOUR CONCENTRATION AT EACH RECEPTOR RANGE 1.0 KM	1.5 KM	2.0 KM	2.5 KM	3.0 KM
1	5.9226E-04 (350, 4)	3.8997E-04 (350, 4)	2.7830E-04 (350, 4)	2.1020E-04 (350, 4)	1.7291E-04 (9, 8)
2	7.1315E-04 (237, 6)	3.8405E-04 (237, 6)	2.3950E-04 (237, 6)	2.2522E-04 (55, 7)	2.1099E-04 (55, 7)
3	5.3530E-04 (240, 6)	4.4458E-04 (258, 7)	4.3380E-04 (258, 7)	4.0537E-04 (258, 7)	3.7674E-04 (258, 7)
4	4.0453E-04 (125, 1)	3.0809E-04 (113, 8)	2.8236E-04 (113, 8)	2.5247E-04 (113, 8)	2.2630E-04 (113, 8)
5	4.6559E-04 (302, 4)	3.7121E-04 (24, 1)	3.7754E-04 (24, 1)	3.6140E-04 (24, 1)	3.4202E-04 (24, 1)
6	4.5046E-04 (239, 7)	4.3807E-04 (239, 7)	3.9996E-04 (239, 7)	3.5359E-04 (239, 7)	3.1274E-04 (239, 7)
7	4.5453E-04 (97, 7)	3.3683E-04 (180, 1)	3.1545E-04 (180, 1)	2.8725E-04 (180, 1)	2.6160E-04 (180, 1)
8	3.8633E-04 (177, 5)	2.5306E-04 (180, 2)	1.9845E-04 (180, 2)	1.7064E-04 (219, 2)	1.5622E-04 (219, 2)
9	9.8864E-04 (334, 8)	8.1697E-04 (334, 8)	6.8412E-04 (334, 8)	5.7754E-04 (334, 8)	4.9611E-04 (334, 8)
10	4.7024E-04 (130, 6)	3.0683E-04 (130, 6)	2.6698E-04 (259, 8)	2.4862E-04 (259, 8)	2.3051E-04 (259, 8)
11	7.4353E-04 (64, 9)	5.1202E-04 (64, 8)	3.7366E-04 (64, 8)	2.8692E-04 (64, 8)	2.2908E-04 (64, 8)
12	1.2651E-03 (25, 2)	9.2737E-04 (25, 2)	7.0429E-04 (25, 2)	5.5532E-04 (25, 2)	4.5236E-04 (25, 2)
13	6.5393E-04 (226, 6)	4.2930E-04 (291, 7)	4.1559E-04 (291, 7)	3.8678E-04 (291, 7)	3.5863E-04 (291, 7)
14	6.2574E-04 (184, 3)	4.5412E-04 (64, 1)	4.3234E-04 (64, 1)	3.9345E-04 (64, 1)	3.5637E-04 (64, 1)
15	4.7118E-04 (259, 6)	3.4215E-04 (138, 1)	3.2556E-04 (138, 1)	2.9949E-04 (138, 1)	2.7492E-04 (138, 1)
16	7.8534E-04 (239, 3)	5.7424E-04 (239, 3)	4.3836E-04 (239, 3)	3.4722E-04 (239, 3)	2.8515E-04 (78, 8)
17	3.4938E-04 (81, 7)	3.5270E-04 (81, 7)	3.4115E-04 (81, 7)	3.1679E-04 (81, 7)	2.9306E-04 (81, 7)
18	4.9731E-04 (39, 6)	3.2993E-04 (39, 6)	2.7395E-04 (320, 7)	2.4964E-04 (320, 7)	2.2750E-04 (320, 7)
19	7.9771E-04 (342, 1)	6.0161E-04 (342, 1)	4.6824E-04 (342, 1)	3.7602E-04 (342, 1)	3.4196E-04 (25, 7)
20	3.9776E-04 (300, 7)	3.6024E-04 (300, 7)	3.1952E-04 (300, 7)	2.7684E-04 (300, 7)	2.4234E-04 (300, 7)
21	3.6299E-04 (339, 5)	2.5251E-04 (71, 3)	2.4713E-04 (71, 3)	2.2793E-04 (71, 3)	2.0745E-04 (71, 3)
22	4.2431E-04 (278, 3)	3.3718E-04 (345, 7)	3.2069E-04 (345, 7)	2.9518E-04 (345, 7)	2.7116E-04 (345, 7)
23	7.7505E-04 (322, 8)	5.8726E-04 (289, 3)	5.6113E-04 (289, 3)	5.1430E-04 (289, 3)	4.6961E-04 (289, 3)
24	5.5466E-04 (299, 3)	4.8911E-04 (244, 7)	4.6249E-04 (244, 7)	4.2266E-04 (244, 7)	3.8582E-04 (244, 7)
25	5.0865E-04 (19, 2)	4.1215E-04 (232, 3)	3.6901E-04 (232, 3)	3.2272E-04 (232, 3)	2.8338E-04 (232, 3)
26	1.0365E-03 (22, 2)	7.6460E-04 (22, 2)	5.8489E-04 (22, 2)	4.6281E-04 (22, 2)	3.7968E-04 (253, 3)
27	6.7713E-04 (1, 3)	5.6841E-04 (1, 3)	4.8902E-04 (1, 3)	4.2243E-04 (1, 3)	3.7028E-04 (1, 3)
28	7.1331E-04 (242, 3)	7.1329E-04 (242, 3)	6.7550E-04 (242, 3)	6.1698E-04 (242, 3)	5.6241E-04 (242, 3)
29	6.0280E-04 (47, 2)	5.0053E-04 (260, 3)	4.7317E-04 (260, 3)	4.3122E-04 (260, 3)	3.9243E-04 (260, 3)
30	9.7958E-04 (137, 3)	6.3166E-04 (137, 3)	4.4466E-04 (137, 3)	4.1600E-04 (48, 8)	3.8899E-04 (48, 8)
31	7.6146E-04 (29, 3)	4.7865E-04 (29, 3)	3.3312E-04 (29, 3)	2.8756E-04 (61, 2)	2.6510E-04 (61, 2)
32	6.6973E-04 (348, 6)	5.2875E-04 (348, 6)	4.3185E-04 (348, 6)	3.9827E-04 (348, 6)	3.0330E-04 (348, 6)
33	7.8710E-04 (335, 2)	5.6442E-04 (68, 3)	5.0394E-04 (68, 3)	4.3781E-04 (68, 3)	3.8271E-04 (68, 3)
34	5.8477E-04 (308, 3)	3.8904E-04 (303, 3)	3.0149E-04 (135, 2)	2.4886E-04 (135, 2)	2.1115E-04 (135, 2)
35	7.0890E-04 (316, 2)	5.0932E-04 (316, 2)	3.8769E-04 (316, 2)	3.0677E-04 (316, 2)	2.5544E-04 (324, 8)
36	4.6573E-04 (335, 4)	3.4625E-04 (143, 2)	2.7752E-04 (143, 2)	2.2943E-04 (143, 2)	1.9491E-04 (143, 2)

PLANT NAME: NEW WALES MODELING POLLUTANT: PART EMISSION UNITS: GM/SEC AIR QUALITY UNITS: GM/M**3

YEARLY SECOND MAXIMUM 3-HOUR CONC= 7.6184E-04 DIRECTION= 19 DISTANCE= 1.0 KM DAY=236 TIME PERIOD= 6

YEAR= 72

SECOND HIGHEST 3-HOUR CONCENTRATION AT EACH RECEPTOR

RANGE DIR	1.0 KM	1.5 KM	2.0 KM	2.5 KM	3.0 KM
1	4.3229E-04 (340, 8)	2.9123E-04 (340, 8)	2.1165E-04 (340, 8)	1.8648E-04 (9, 8)	1.6543E-04 (350, 4)
2	4.4346E-04 (5, 6)	2.9741E-04 (8), 2)	2.3866E-04 (55, 7)	1.9407E-04 (195, 8)	1.7919E-04 (195, 8)
3	4.4095E-04 (258, 7)	3.1777E-04 (240, 6)	2.1425E-04 (243, 3)	1.7346E-04 (243, 3)	1.5422E-04 (210, 7)
4	3.7160E-04 (125, 2)	2.9107E-04 (125, 1)	2.2136E-04 (125, 1)	1.8628E-04 (130, 1)	1.6627E-04 (274, 8)
5	3.8274E-04 (55, 4)	3.0778E-04 (302, 4)	2.3086E-04 (177, 1)	2.0291E-04 (177, 1)	1.7965E-04 (177, 1)
6	4.4676E-04 (210, 7)	3.5123E-04 (334, 7)	3.3997E-04 (334, 7)	3.1550E-04 (334, 7)	2.9142E-04 (334, 7)
7	3.9018E-04 (274, 6)	3.3590E-04 (180, 8)	3.0235E-04 (180, 8)	2.6788E-04 (180, 8)	2.3877E-04 (180, 8)
8	3.8425E-04 (177, 6)	2.4993E-04 (177, 5)	1.9421E-04 (179, 1)	1.6278E-04 (179, 1)	1.3963E-04 (181, 8)
9	6.9577E-04 (208, 7)	5.5396E-04 (208, 7)	4.5102E-04 (209, 7)	3.7195E-04 (208, 7)	3.1280E-04 (208, 7)
10	4.1155E-04 (64, 7)	2.8811E-04 (64, 7)	2.2424E-04 (273, 7)	2.0331E-04 (273, 7)	1.8674E-04 (24, 7)
11	5.3797E-04 (23, 3)	3.5869E-04 (23, 3)	2.5837E-04 (23, 3)	2.0771E-04 (349, 7)	1.8109E-04 (349, 7)
12	5.9729E-04 (237, 7)	4.7766E-04 (237, 7)	3.8990E-04 (237, 7)	3.2235E-04 (237, 7)	2.7166E-04 (237, 7)
13	4.8196E-04 (358, 3)	3.5741E-04 (226, 6)	3.0978E-04 (281, 7)	2.7633E-04 (281, 7)	2.4745E-04 (281, 7)
14	4.4027E-04 (64, 1)	4.5061E-04 (184, 3)	3.4086E-04 (184, 3)	2.9321E-04 (93, 3)	2.7989E-04 (93, 3)
15	4.2041E-04 (6, 3)	3.2248E-04 (299, 7)	2.9438E-04 (299, 7)	2.6292E-04 (299, 7)	2.3567E-04 (299, 7)
16	3.5353E-04 (26, 5)	3.3650E-04 (78, 8)	3.2878E-04 (78, 8)	3.0599E-04 (79, 8)	2.8372E-04 (239, 3)
17	3.2552E-04 (6, 4)	2.3146E-04 (293, 7)	2.1488E-04 (293, 7)	1.9426E-04 (293, 7)	1.7582E-04 (293, 7)
18	4.6391E-04 (15, 4)	3.0841E-04 (15, 4)	2.3710E-04 (39, 6)	1.8736E-04 (341, 8)	1.7364E-04 (341, 8)
19	7.6184E-04 (236, 6)	4.8218E-04 (236, 7)	3.9143E-04 (25, 7)	3.6681E-04 (25, 7)	3.1073E-04 (342, 1)
20	3.8841E-04 (31, 4)	2.7589E-04 (282, 2)	2.5018E-04 (282, 2)	2.2123E-04 (282, 2)	1.9634E-04 (282, 2)
21	3.3901E-04 (329, 1)	2.4565E-04 (329, 1)	2.2324E-04 (234, 1)	2.0728E-04 (234, 1)	1.9163E-04 (234, 1)
22	3.6104E-04 (329, 7)	2.8035E-04 (278, 3)	2.5768E-04 (204, 7)	2.4099E-04 (204, 7)	2.2418E-04 (204, 7)
23	5.8195E-04 (342, 2)	5.1667E-04 (322, 8)	3.7279E-04 (322, 8)	3.1954E-04 (323, 2)	2.9783E-04 (323, 2)
24	4.9528E-04 (244, 7)	4.2663E-04 (299, 3)	3.3817E-04 (299, 3)	2.7631E-04 (299, 3)	2.4702E-04 (336, 7)
25	4.8009E-04 (277, 5)	3.7263E-04 (1), 2)	2.9780E-04 (266, 3)	2.6628E-04 (284, 1)	2.4443E-04 (284, 1)
26	5.3992E-04 (342, 3)	4.7520E-04 (253, 3)	4.5341E-04 (253, 3)	4.1550E-04 (253, 3)	3.7764E-04 (22, 2)
27	6.0477E-04 (333, 5)	4.0109E-04 (333, 5)	3.4214E-04 (347, 2)	3.1217E-04 (347, 2)	2.8462E-04 (347, 2)
28	5.9439E-04 (24, 3)	3.9620E-04 (24, 3)	3.7563E-04 (111, 1)	3.4840E-04 (111, 1)	3.2366E-04 (54, 2)
29	5.0386E-04 (260, 3)	3.9830E-04 (47, 2)	3.2477E-04 (316, 1)	2.9921E-04 (316, 1)	2.7505E-04 (316, 1)
30	5.5022E-04 (21, 3)	4.4761E-04 (48, 8)	4.4169E-04 (48, 8)	3.6712E-04 (79, 1)	3.3832E-04 (79, 1)
31	7.4714E-04 (195, 3)	4.5701E-04 (195, 3)	3.1088E-04 (61, 2)	2.6047E-04 (262, 8)	2.3278E-04 (262, 8)
32	4.3060E-04 (135, 1)	2.9759E-04 (135, 1)	2.1943E-04 (135, 1)	1.6927E-04 (135, 1)	1.5549E-04 (15, 2)
33	6.6891E-04 (25, 3)	5.3530E-04 (335, 2)	3.8534E-04 (335, 2)	3.2231E-04 (46, 1)	2.9927E-04 (46, 1)
34	4.8466E-04 (135, 2)	3.7659E-04 (135, 2)	2.8566E-04 (308, 3)	2.2459E-04 (308, 3)	1.9376E-04 (241, 8)
35	5.2272E-04 (309, 3)	3.7230E-04 (324, 8)	3.3083E-04 (324, 8)	2.8962E-04 (324, 8)	2.5043E-04 (316, 2)
36	4.5219E-04 (143, 2)	3.0118E-04 (335, 4)	2.2641E-04 (302, 2)	1.9209E-04 (30, 8)	1.7220E-04 (2, 1)

TEAR HERE NW173WB NW173WB NW173WB NW173WB NW173WB NW173WB NW173WB NW173WB NW173WB NW173WB NW173WB NW173WB ***TEAR HERE***
TEAR HERE NW173WB NW173WB NW173WB NW173WB NW173WB NW173WB NW173WB NW173WB NW173WB NW173WB NW173WB NW173WB ***TEAR HERE***

DISPERSION MODEL: PTMTPW   EMISSION UNITS: GM/SEC   AIR QUALITY UNITS: UGM/M3

RUN: NEW WALES
LOCATION: POLK COUNTY
POLLUTANT: SO2

LIMITING CASE: 24-HOUR AVERAGE, DAY 173/72 (WITH NW BOILER)

FDER
AIR QUALITY
MODELING
24-HR SO_2
w/ DAY 173, 1972

METEOROLOGICAL DATA FROM CRSTER PREPROCESSOR
SURFACE STATION=12842   YEAR=72
MIX.HT. STATION=12842   YEAR=72
24-HOUR DATA FOR DAY NUMBER: 173

OPTIONS:
ANEMOMETER HEIGHT= 7.0 M
BRIGGS BUOYANT PLUME RISE
NO DOWNWASH ADJUSTMENT
PASQUILL-GIFFORD DISPERSION COEFFICIENTS

S O U R C E   D A T A

STACK NO.	STACK IDENTIFICATION	EMISSION RATE (GM/SEC)	STACK HT. (M)	EXIT TEMP. (DEG K)	EXIT VEL. (M/SEC)	STACK DIAM. (M)	VOLUME FLOW (M3/SEC)	BLDG. HT. (M)	BLDG. WD. (M)	STACK ADJ. (M)	STACK LOCATION UTM E. (KM)	STACK LOCATION UTM N. (KM)
1	59 03 NW H2SO4 2	51.91	61.00	350.20	9.98	2.50	49.00	*******	*******	-0.00	396.53	3078.75
2	59 04 NW H2SO4 3	53.93	61.00	350.20	9.98	2.50	49.00	*******	*******	-0.00	396.45	3078.75
3	59 09 NW DAP 1	9.07	36.60	319.10	15.59	2.10	54.00	*******	*******	-0.00	396.54	3079.03
4	59 10 NW GTS*	12.60	36.60	325.20	20.43	1.80	52.00	*******	*******	-0.00	396.55	3079.15
5	59 13 NW BOILER	71.73	10.70	564.10	17.18	1.70	39.00	*******	*******	-0.00	396.56	3078.81
6	59 27 NW AFI	36.75	52.40	321.90	13.04	2.40	59.00	*******	*******	-0.00	396.75	3079.35
7	59 94 NW H2SO4 4	42.00	60.70	349.70	10.74	2.60	57.00	*******	*******	-0.00	396.49	3078.64
8	59 95 NW H2SO4 5	42.00	60.70	349.70	10.74	2.60	57.00	*******	*******	-0.00	396.56	3078.64
9	59 96 NW DAP 2	5.54	36.60	319.10	20.15	1.83	53.00	*******	*******	-0.00	396.45	3079.15
10	40 01 TECO GANNON	174.20	93.30	427.10	24.10	3.05	176.10	*******	*******	-0.00	360.00	3087.50
11	40 02 TECO GANNON	174.20	93.30	399.80	26.80	3.05	195.80	*******	*******	-0.00	360.00	3087.50
12	40 03 TECO GANNON	221.60	93.30	403.20	30.00	3.23	245.80	*******	*******	-0.00	360.00	3087.50
13	40 04 TECO GANNON	260.00	93.30	438.20	30.60	2.93	206.30	*******	*******	-0.00	360.00	3087.50
14	40 05 TECO GANNON	690.70	93.30	415.40	20.70	4.45	321.90	*******	*******	-0.00	360.00	3087.50
15	40 06 TECO GANNON	1148.50	93.30	417.10	23.40	5.36	528.00	*******	*******	-0.00	360.00	3087.50
16	08 01 GARDINIER	78.70	45.70	355.00	9.41	2.30	39.10	*******	*******	-0.00	363.20	3082.00
17	08 02 GARDINIER	84.00	45.70	355.00	9.70	2.40	43.90	*******	*******	-0.00	363.30	3082.30
18	08 03 GARDINIER	54.60	45.70	355.00	10.20	2.70	58.40	*******	*******	-0.00	363.20	3082.40
19	39 01-02 TECO BG BND	5284.90	149.30	422.00	28.70	7.30	1201.20	*******	*******	-0.00	361.90	3075.00
20	39 03 TECO BG BND	2653.10	149.30	422.00	14.30	7.30	598.50	*******	*******	-0.00	361.90	3075.00

2269.8   93.3   417   25.9   3.79

R E C E P T O R S

NO.	X(KM)	Y(KM)	Z(M)	RD(KM)	AZM.
ORG.	397.800	3078.400			
1	397.800	3078.400	0.000	******	*****
2	397.800	3078.500	0.000	******	*****
3	397.800	3078.600	0.000	******	*****
4	397.800	3078.700	0.000	******	*****
5	397.800	3078.800	0.000	******	*****
6	397.800	3078.900	0.000	******	*****
7	397.800	3079.000	0.000	******	*****
8	397.800	3079.100	0.000	******	*****
9	397.800	3079.200	0.000	******	*****
10	397.800	3079.300	0.000	******	*****
11	397.800	3079.400	0.000	******	*****
12	397.800	3079.500	0.000	******	*****
13	397.900	3078.400	0.000	******	*****
14	397.900	3078.500	0.000	******	*****
15	397.900	3078.600	0.000	******	*****
16	397.900	3078.700	0.000	******	*****
17	397.900	3078.800	0.000	******	*****
18	397.900	3078.900	0.000	******	*****
19	397.900	3079.000	0.000	******	*****
20	397.900	3079.100	0.000	******	*****
21	397.900	3079.200	0.000	******	*****
22	397.900	3079.300	0.000	******	*****
23	397.900	3079.400	0.000	******	*****
24	397.900	3079.500	0.000	******	*****
25	398.000	3078.400	0.000	******	*****
26	398.000	3078.500	0.000	******	*****
27	398.000	3078.500	0.000	******	*****

27	398.000	3078.500	0.000	******	*****
28	398.000	3078.700	0.000	******	*****
29	398.000	3078.800	0.000	******	*****
30	398.000	3078.900	0.000	******	*****
31	398.000	3079.000	0.000	******	*****
32	398.000	3079.100	0.000	******	*****
33	398.000	3079.200	0.000	******	*****
34	398.000	3079.300	0.000	******	*****
35	398.000	3079.400	0.000	******	*****
36	398.000	3079.500	0.000	******	*****
37	398.100	3078.400	0.000	******	*****
38	398.100	3078.500	0.000	******	*****
39	398.100	3078.600	0.000	******	*****
40	398.100	3078.700	0.000	******	*****
41	398.100	3078.800	0.000	******	*****
42	398.100	3078.900	0.000	******	*****
43	398.100	3079.000	0.000	******	*****
44	398.100	3079.100	0.000	******	*****
45	398.100	3079.200	0.000	******	*****
46	398.100	3079.300	0.000	******	*****
47	398.100	3079.400	0.000	******	*****
48	398.100	3079.500	0.000	******	*****
49	398.200	3078.400	0.000	******	*****
50	398.200	3078.500	0.000	******	*****
51	398.200	3078.600	0.000	******	*****
52	398.200	3078.700	0.000	******	*****
53	398.200	3078.800	0.000	******	*****
54	398.200	3078.900	0.000	******	*****
55	398.200	3079.000	0.000	******	*****
56	398.200	3079.100	0.000	******	*****
57	398.200	3079.200	0.000	******	*****
58	398.200	3079.300	0.000	******	*****
59	398.200	3079.400	0.000	******	*****
60	398.200	3079.500	0.000	******	*****
61	398.300	3078.400	0.000	******	*****
62	398.300	3078.500	0.000	******	*****
63	398.300	3078.600	0.000	******	*****
64	398.300	3078.700	0.000	******	*****
65	398.300	3078.800	0.000	******	*****
66	398.300	3078.900	0.000	******	*****
67	398.300	3079.000	0.000	******	*****
68	398.300	3079.100	0.000	******	*****
69	398.300	3079.200	0.000	******	*****
70	398.300	3079.300	0.000	******	*****
71	398.300	3079.400	0.000	******	*****
72	398.300	3079.500	0.000	******	*****
73	398.400	3078.400	0.000	******	*****
74	398.400	3078.500	0.000	******	*****
75	398.400	3078.600	0.000	******	*****
76	398.400	3078.700	0.000	******	*****
77	398.400	3078.800	0.000	******	*****
78	398.400	3078.900	0.000	******	*****
79	398.400	3079.000	0.000	******	*****
80	398.400	3079.100	0.000	******	*****
81	398.400	3079.200	0.000	******	*****
82	398.400	3079.300	0.000	******	*****
83	398.400	3079.400	0.000	******	*****
84	398.400	3079.500	0.000	******	*****
85	398.500	3078.400	0.000	******	*****
86	398.500	3078.500	0.000	******	*****
87	398.500	3078.600	0.000	******	*****
88	398.500	3078.700	0.000	******	*****
89	398.500	3078.800	0.000	******	*****
90	398.500	3078.900	0.000	******	*****
91	398.500	3079.000	0.000	******	*****
92	398.500	3079.100	0.000	******	*****
93	398.500	3079.200	0.000	******	*****
94	398.500	3079.300	0.000	******	*****
95	398.500	3079.400	0.000	******	*****
96	398.500	3079.500	0.000	******	*****
97	398.600	3078.400	0.000	******	*****
98	398.600	3078.500	0.000	******	*****
99	398.600	3078.600	0.000	******	*****
100	398.600	3078.700	0.000	******	*****
101	398.600	3078.800	0.000	******	*****
102	398.600	3078.900	0.000	******	*****
103	398.600	3079.000	0.000	******	*****
104	398.600	3079.100	0.000	******	*****
105	398.600	3079.200	0.000	******	*****
106	398.600	3079.300	0.000	******	*****
107	398.600	3079.400	0.000	******	*****
108	398.600	3079.500	0.000	******	*****
109	398.700	3078.400	0.000	******	*****
110	398.700	3078.500	0.000	******	*****
111	398.700	3078.600	0.000	******	*****
112	398.700	3078.700	0.000	******	*****

113	398.700	3078.800	0.000	******	*****
114	398.700	3078.900	0.000	******	*****
115	398.700	3079.000	0.000	******	*****
116	398.700	3079.100	0.000	******	*****
117	398.700	3079.200	0.000	******	*****
118	398.700	3079.300	0.000	******	*****
119	398.700	3079.400	0.000	******	*****
120	398.700	3079.500	0.000	******	*****
121	398.800	3078.600	0.000	******	*****
122	398.800	3078.500	0.000	******	*****
123	398.800	3078.500	0.000	******	*****
124	398.800	3078.700	0.000	******	*****
125	398.800	3078.800	0.000	******	*****
126	398.800	3078.900	0.000	******	*****
127	398.800	3079.000	0.000	******	*****
128	398.800	3079.100	0.000	******	*****
129	398.800	3079.200	0.000	******	*****
130	398.800	3079.300	0.000	******	*****
131	398.800	3079.400	0.000	******	*****
132	398.800	3079.500	0.000	******	*****
133	398.900	3078.400	0.000	******	*****
134	398.900	3078.500	0.000	******	*****
135	398.900	3078.600	0.000	******	*****
136	398.900	3078.700	0.000	******	*****
137	398.900	3078.800	0.000	******	*****
138	398.900	3078.900	0.000	******	*****
139	398.900	3079.000	0.000	******	*****
140	398.900	3079.100	0.000	******	*****
141	398.900	3079.200	0.000	******	*****
142	398.900	3079.300	0.000	******	*****
143	398.900	3079.400	0.000	******	*****
144	398.900	3079.500	0.000	******	*****

METEOROLOGY

	WIND DIR. (DEG)	WIND VEL. (M/SEC)	STABILITY CLASS	MIX.HT. (M)	AMB.TEMP. (DEG K)	PRESS. (MB)
1.	247.	5.14	5	980.	299.	960.00
2.	242.	6.17	4	948.	299.	960.00
3.	255.	6.17	4	916.	299.	960.00
4.	251.	6.69	4	885.	299.	960.00
5.	268.	7.20	4	853.	299.	960.00
6.	264.	7.20	4	822.	299.	960.00
7.	263.	6.69	4	790.	300.	960.00
8.	274.	7.72	4	759.	300.	960.00
9.	263.	8.23	4	727.	301.	960.00
10.	259.	7.20	4	695.	301.	960.00
11.	273.	8.75	4	664.	301.	960.00
12.	270.	8.23	4	632.	302.	960.00
13.	273.	8.23	4	601.	303.	960.00
14.	271.	8.23	4	569.	303.	960.00
15.	275.	7.72	4	569.	303.	960.00
16.	274.	7.20	4	569.	303.	960.00
17.	270.	7.20	4	569.	302.	960.00
18.	267.	7.20	4	569.	301.	960.00
19.	273.	5.14	4	569.	301.	960.00
20.	267.	5.14	4	591.	300.	960.00
21.	269.	5.14	4	630.	300.	960.00
22.	272.	4.12	4	669.	300.	960.00
23.	274.	5.14	4	707.	300.	960.00
24.	268.	6.69	4	746.	300.	960.00

AVERAGE CONCENTRATIONS FOR 24 HOURS

STACK NO.	RECEPTOR NUMBER 1	2	3	4	5	6	7	8	9	10	11	12
1	.14	2.36	12.75	24.57	23.36	14.81	6.45	2.83	2.41	2.15	2.37	1.82
2	.29	3.57	15.66	27.71	26.36	17.45	8.23	3.48	2.73	2.43	2.52	2.44
3	.00	.00	.00	.20	2.90	13.19	21.89	18.72	10.51	4.07	2.04	1.95
4	.00	.00	.00	.00	.12	2.30	13.46	27.01	25.66	15.59	6.36	2.79
5	.04	1.53	18.47	68.03	94.38	74.03	41.42	16.25	9.57	9.73	8.76	6.79
6	0.00	.00	.00	.00	.00	.00	.01	.95	12.21	33.91	32.11	16.57
7	2.59	11.28	19.08	17.30	10.89	4.81	2.16	1.84	1.63	1.78	1.48	.65
8	1.85	9.07	17.56	15.82	9.53	3.92	1.89	1.66	1.53	1.67	1.07	.33
9	.00	.00	.00	.00	.12	1.57	7.02	12.60	11.96	7.69	3.47	1.43
10	.00	.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02
11	.00	.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02
12	.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03
13	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03

13	.00	.00	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03
14	.01	.01	.02	.02	.02	.03	.04	.04	.05	.06	.07	.08
15	.02	.02	.03	.03	.04	.05	.06	.07	.08	.09	.11	.13
16	1.23	1.30	1.37	1.44	1.52	1.58	1.65	1.72	1.78	1.85	1.91	1.96
17	1.09	1.16	1.23	1.31	1.39	1.46	1.54	1.61	1.69	1.76	1.83	1.90
18	.86	.71	.75	.80	.85	.90	.95	1.00	1.04	1.09	1.14	1.19
19	33.91	33.19	32.46	31.72	30.98	30.23	29.48	28.73	27.97	27.21	26.44	25.68
20	21.63	21.14	20.86	20.17	19.68	19.19	18.69	18.20	17.70	17.20	16.70	16.20
TOTAL	53.46	85.97	140.07	209.17	222.17	185.55	154.99	136.76	128.59	128.35	108.48	82.03

STACK NO.	RECEPTOR NUMBER 13	14	15	16	17	18	19	20	21	22	23	24
1	.33	3.74	15.03	27.14	25.83	17.27	8.30	3.50	2.68	2.39	2.43	2.44
2	.60	5.22	18.46	29.97	28.54	19.77	10.18	4.35	2.96	2.72	2.55	2.77
3	.00	.00	.01	.39	3.83	13.77	21.05	18.27	11.03	4.73	2.12	1.89
4	.00	.00	.00	.01	.26	3.29	14.70	26.36	25.05	16.18	7.35	3.04
5	.12	2.39	24.69	73.89	97.12	78.53	47.30	20.42	10.33	10.29	10.18	8.47
6	0.00	.00	.00	.00	.00	.00	.06	1.95	16.05	36.92	34.97	19.84
7	3.85	13.44	20.96	19.15	12.70	6.17	2.67	2.04	1.83	1.82	1.89	1.23
8	2.95	11.94	19.68	17.89	11.45	5.21	2.30	1.91	1.68	1.80	1.63	.81
9	.40	.00	.00	.01	.23	2.05	7.38	12.13	11.52	7.79	3.86	1.61
10	.00	.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02
11	.00	.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02
12	.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03
13	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03
14	.01	.01	.02	.02	.03	.03	.04	.04	.05	.06	.07	.09
15	.02	.02	.03	.03	.04	.05	.06	.07	.08	.10	.11	.13
16	1.23	1.30	1.37	1.45	1.52	1.58	1.65	1.72	1.78	1.84	1.90	1.96
17	1.09	1.16	1.24	1.31	1.39	1.46	1.54	1.61	1.69	1.76	1.83	1.90
18	.86	.71	.75	.80	.85	.90	.95	1.00	1.04	1.09	1.14	1.18
19	33.91	33.19	32.46	31.73	30.99	30.25	29.50	28.75	28.00	27.24	26.48	25.72
20	21.61	21.13	20.65	20.17	19.68	19.19	18.70	18.20	17.71	17.21	16.71	16.22
TOTAL	66.40	94.88	155.99	223.98	234.48	199.58	166.42	142.37	133.54	134.03	115.32	89.41

STACK NO.	RECEPTOR NUMBER 25	26	27	28	29	30	31	32	33	34	35	36
1	.66	5.36	18.28	29.23	27.84	19.44	10.17	4.37	2.89	2.68	2.47	2.69
2	1.08	7.05	20.97	31.76	30.27	21.78	12.06	5.39	3.19	2.97	2.68	2.81
3	.00	.00	.04	.66	4.71	14.08	20.15	17.71	11.33	5.34	2.30	1.79
4	.00	.00	.00	.02	.49	4.33	15.58	25.55	24.30	16.49	8.22	3.43
5	.32	5.05	30.83	78.32	98.65	81.74	52.26	24.74	11.52	10.31	11.19	9.90
6	.00	.00	.00	.00	.00	.00	.17	5.36	19.57	39.01	36.96	22.59
7	5.26	15.33	22.48	20.67	14.32	7.54	3.32	2.20	2.05	1.87	2.03	1.76
8	4.26	14.05	21.45	19.63	13.21	6.58	2.85	2.09	1.90	1.83	1.95	1.41
9	.00	.00	.00	.02	.38	2.52	7.60	11.63	11.05	7.79	4.18	1.82
10	.00	.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02
11	.00	.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02
12	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.02	.03
13	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03
14	.01	.02	.02	.02	.03	.03	.04	.05	.05	.06	.08	.09
15	.02	.02	.03	.03	.04	.05	.06	.07	.08	.10	.12	.14
16	1.24	1.31	1.38	1.45	1.52	1.58	1.65	1.72	1.78	1.84	1.90	1.95
17	1.09	1.17	1.24	1.31	1.39	1.47	1.54	1.61	1.69	1.76	1.83	1.90
18	.86	.71	.76	.80	.85	.90	.95	1.00	1.04	1.09	1.14	1.18
19	33.30	33.19	32.47	31.74	31.01	30.27	29.52	28.78	28.02	27.27	26.51	25.76
20	21.59	21.12	20.64	20.16	19.67	19.19	18.70	18.21	17.71	17.22	16.72	16.23
TOTAL	70.11	104.46	170.61	235.85	244.41	211.54	176.66	148.52	138.25	137.71	120.37	95.56

STACK NO.	RECEPTOR NUMBER 37	38	39	40	41	42	43	44	45	46	47	48
1	1.15	7.15	20.63	30.86	29.42	21.31	11.96	5.41	3.13	2.89	2.62	2.70
2	1.73	8.96	23.14	33.12	31.60	23.46	13.83	6.56	3.52	3.12	2.89	2.80
3	.00	.00	.08	1.00	5.51	14.17	19.24	17.08	11.47	5.87	2.56	1.71
4	.00	.00	.00	.05	.80	5.35	16.13	26.64	23.45	16.59	8.94	3.90
5	.70	7.66	36.60	81.51	99.24	83.87	56.29	28.94	13.21	10.16	11.48	11.26
6	.00	.00	.00	.00	.00	.01	.41	5.09	22.61	40.33	38.24	24.81
7	8.74	17.10	23.69	21.89	15.73	8.87	4.08	2.39	2.21	2.00	2.03	2.08
8	5.70	15.93	22.88	21.07	14.77	7.95	3.53	2.25	2.10	1.90	2.04	1.89
9	.00	.00	.00	.05	.56	2.95	7.71	11.12	10.58	7.72	4.42	2.04
10	.00	.00	.01	.01	.01	.01	.01	.01	.01	.02	.02	.02
11	.00	.00	.01	.01	.01	.01	.01	.01	.01	.02	.02	.02
12	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03
13	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03	.04
14	.01	.02	.02	.02	.03	.03	.04	.05	.06	.07	.08	.09
15	.02	.02	.03	.04	.04	.05	.06	.07	.09	.10	.12	.14
16	1.24	1.31	1.38	1.45	1.52	1.58	1.65	1.71	1.78	1.84	1.90	1.95
17	1.10	1.17	1.24	1.32	1.39	1.47	1.54	1.61	1.69	1.76	1.83	1.90

18	.67	.71	.76	.81	.85	.90	.95	1.00	1.04	1.09	1.14	1.18
19	33.90	33.19	32.47	31.75	31.02	30.28	29.54	28.80	28.05	27.30	26.55	25.79
20	21.58	21.11	20.63	20.15	19.67	19.19	18.70	18.21	17.72	17.23	16.74	16.25
TOTAL	74.55	114.35	183.57	245.10	252.19	221.48	185.72	154.99	142.76	140.04	123.65	100.60

STACK NO.	RECEPTOR NUMBER 49	50	51	52	53	54	55	56	57	58	59	60
1	1.81	8.94	22.65	32.09	30.63	22.87	13.63	6.55	3.46	3.02	2.82	2.70
2	2.55	10.87	24.96	34.10	32.57	24.84	15.43	7.78	3.97	3.20	3.08	2.86
3	.00	.01	.15	1.39	6.21	14.10	16.34	16.43	11.48	6.30	2.88	1.68
4	.00	.00	.00	.11	1.20	6.29	16.43	23.69	22.56	16.51	9.50	4.40
5	1.32	10.69	41.80	83.66	99.07	85.11	59.48	32.84	15.32	10.15	11.18	12.19
6	.00	.00	.00	.00	.00	.04	.80	7.02	25.11	41.03	38.94	26.53
7	8.23	18.55	24.61	22.84	16.93	10.12	4.93	2.64	2.30	2.16	2.04	2.17
8	7.19	17.56	23.99	22.20	16.11	9.26	4.33	2.45	2.24	2.04	2.03	2.13
9	.00	.00	.01	.09	.77	3.32	7.72	10.61	10.11	7.59	4.60	2.27
10	.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.02
11	.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.02
12	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03
13	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03	.04
14	.01	.02	.02	.02	.03	.03	.04	.05	.06	.07	.08	.09
15	.02	.03	.03	.04	.04	.05	.06	.07	.09	.10	.12	.14
16	1.24	1.31	1.38	1.45	1.52	1.58	1.65	1.71	1.77	1.83	1.89	1.95
17	1.10	1.17	1.24	1.32	1.39	1.47	1.54	1.61	1.69	1.76	1.83	1.89
18	.67	.71	.76	.81	.85	.90	.95	1.00	1.04	1.09	1.14	1.18
19	33.90	33.19	32.48	31.76	31.03	30.30	29.56	28.82	28.08	27.33	26.58	25.83
20	21.56	21.09	20.62	20.14	19.67	19.18	18.70	18.21	17.73	17.24	16.75	16.26
TOTAL	79.62	124.23	194.73	252.06	258.06	229.51	193.65	161.56	147.08	141.52	125.56	104.39

STACK NO.	RECEPTOR NUMBER 61	62	63	64	65	66	67	68	69	70	71	72
1	2.63	10.82	24.34	32.98	31.50	24.14	15.14	7.73	3.92	3.09	2.99	2.77
2	3.52	12.71	26.46	34.77	33.24	25.94	16.85	9.02	4.54	3.27	3.20	2.99
3	.00	.02	.26	1.82	6.78	13.91	17.47	15.76	11.39	6.64	3.20	1.72
4	.00	.00	.01	.20	1.65	7.13	16.53	22.72	21.66	16.32	9.93	4.90
5	2.20	14.00	46.35	84.96	98.34	85.63	61.91	36.33	17.70	10.44	10.60	12.40
6	.00	.00	.00	.00	.00	.09	1.36	9.02	27.09	41.24	39.19	27.79
7	9.66	19.76	25.27	23.55	17.92	11.26	5.81	2.99	2.36	2.29	2.12	2.16
8	8.67	18.94	24.83	23.08	17.25	10.47	5.19	2.74	2.32	2.20	2.06	2.18
9	.00	.00	.01	.15	1.00	3.64	7.66	10.12	9.65	7.44	4.73	2.47
10	.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03
11	.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03
12	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03
13	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03	.04
14	.01	.02	.02	.02	.03	.04	.04	.05	.06	.07	.08	.10
15	.02	.03	.03	.04	.05	.05	.07	.08	.09	.11	.13	.15
16	1.24	1.31	1.38	1.45	1.52	1.58	1.65	1.71	1.77	1.83	1.89	1.94
17	1.10	1.17	1.25	1.32	1.39	1.47	1.54	1.61	1.69	1.76	1.83	1.89
18	.67	.72	.76	.81	.86	.90	.95	1.00	1.04	1.09	1.14	1.18
19	33.89	33.19	32.48	31.76	31.04	30.31	29.58	28.84	28.10	27.36	26.61	25.87
20	21.55	21.08	20.61	20.14	19.66	19.18	18.70	18.22	17.73	17.25	16.76	16.27
TOTAL	85.19	133.79	204.09	257.07	262.26	235.79	200.51	168.01	151.20	142.49	126.54	106.90

STACK NO.	RECEPTOR NUMBER 73	74	75	76	77	78	79	80	81	82	83	84
1	8.59	12.58	25.72	33.56	32.09	25.15	16.47	8.91	4.49	3.17	3.09	2.90
2	9.59	14.43	27.65	35.17	33.65	26.79	18.08	10.21	5.22	3.40	3.23	3.12
3	.00	.04	.39	2.25	7.24	13.63	16.63	15.11	11.24	6.90	3.52	1.81
4	.00	.00	.03	.33	2.15	7.85	16.48	21.76	20.77	16.03	10.23	5.37
5	3.36	17.44	50.22	85.55	97.16	85.58	63.68	39.36	20.19	11.09	10.02	11.97
6	.00	.00	.00	.00	.01	.19	2.10	10.98	28.59	41.09	39.09	28.67
7	11.01	20.73	25.72	24.06	18.72	12.27	6.70	3.43	2.42	2.36	2.22	2.15
8	10.08	20.07	25.43	23.73	18.18	11.57	6.08	3.11	2.38	2.32	2.15	2.16
9	.00	.00	.02	.23	1.23	3.91	7.56	9.65	9.21	7.25	4.80	2.66
10	.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03
11	.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03
12	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03
13	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03	.04
14	.01	.02	.02	.03	.03	.04	.04	.05	.06	.07	.08	.10
15	.02	.03	.03	.04	.05	.06	.07	.08	.09	.11	.13	.15
16	1.24	1.31	1.38	1.45	1.52	1.58	1.65	1.71	1.77	1.83	1.88	1.94
17	1.11	1.18	1.25	1.32	1.40	1.47	1.54	1.61	1.69	1.76	1.82	1.89
18	.67	.72	.76	.81	.86	.90	.95	1.00	1.04	1.09	1.13	1.18
19	33.89	33.19	32.48	31.77	31.05	30.33	29.60	28.86	28.13	27.39	26.65	25.90
20	21.53	21.07	20.60	20.13	19.65	19.18	18.70	18.22	17.74	17.25	16.77	16.29

--	21.93	21.07	20.68	20.13	19.69	19.18	18.70	18.22	17.74	17.25	16.77	16.29
TOTAL	91.14	142.81	211.74	260.45	265.02	240.53	206.37	174.13	155.11	143.20	126.94	108.38

STACK NO.	RECEPTOR NUMBER 85	86	87	88	89	90	91	92	93	94	95	96
1	4.64	14.20	26.81	33.90	32.45	25.92	17.62	10.85	5.16	3.30	3.11	3.03
2	5.74	15.99	28.57	35.34	33.85	27.41	19.13	11.34	5.97	3.60	3.22	3.21
3	.00	.07	.56	2.68	7.59	13.30	15.83	14.46	11.03	7.08	3.81	1.95
4	.00	.00	.05	.49	2.66	8.44	16.31	20.83	19.89	15.69	10.42	5.78
5	4.82	20.87	53.42	85.58	95.05	85.07	64.89	41.93	22.67	12.08	9.62	11.16
6	.00	.00	.00	.00	.02	.36	2.99	12.83	29.66	40.66	38.72	29.22
7	12.24	21.48	25.99	24.38	19.35	13.15	7.55	3.93	2.53	2.38	2.32	2.19
8	11.39	20.97	25.82	24.17	18.93	12.55	6.96	3.57	2.45	2.37	2.26	2.16
9	.00	.00	.04	.32	1.46	4.12	7.41	9.21	8.80	7.05	4.84	2.82
10	.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03
11	.00	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03
12	.01	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03
13	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03	.04
14	.02	.02	.02	.03	.03	.04	.04	.05	.06	.07	.09	.10
15	.02	.03	.03	.04	.05	.06	.07	.08	.10	.11	.13	.16
16	1.24	1.31	1.38	1.45	1.51	1.58	1.64	1.71	1.77	1.83	1.88	1.93
17	1.11	1.18	1.25	1.32	1.40	1.47	1.54	1.61	1.69	1.75	1.82	1.89
18	.67	.72	.77	.81	.86	.90	.95	1.00	1.04	1.09	1.13	1.18
19	33.88	33.19	32.48	31.77	31.06	30.34	29.61	28.89	28.15	27.42	26.68	25.94
20	21.51	21.05	20.59	20.12	19.65	19.18	18.70	18.22	17.74	17.26	16.78	16.30
TOTAL	97.31	151.12	217.82	262.46	266.55	243.94	211.30	179.77	158.80	143.84	126.94	109.13

STACK NO.	RECEPTOR NUMBER 97	98	99	100	101	102	103	104	105	106	107	108
1	5.75	15.68	27.65	34.03	32.60	26.48	18.59	11.12	5.89	3.52	3.09	3.10
2	6.91	17.39	29.25	35.34	33.87	27.85	20.00	12.37	6.75	3.90	3.20	3.23
3	.01	.11	.76	3.09	7.84	12.93	15.07	13.84	10.79	7.19	4.08	2.12
4	.00	.01	.09	.70	3.17	8.92	16.05	19.92	19.05	15.30	10.53	6.14
5	5.49	24.18	56.00	85.17	93.89	84.22	65.62	44.86	25.04	13.32	9.46	10.29
6	.00	.00	.00	.00	.05	.61	3.98	14.50	30.37	40.03	38.16	29.50
7	13.34	22.06	26.11	24.56	19.82	13.91	8.36	4.48	2.70	2.37	2.38	2.26
8	12.58	21.67	26.04	24.45	19.51	13.39	7.80	4.09	2.57	2.38	2.34	2.21
9	.00	.01	.07	.43	1.69	4.28	7.24	8.78	8.40	6.84	4.84	2.95
10	.00	.01	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03
11	.00	.01	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03
12	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03	.03
13	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03	.03	.04
14	.02	.02	.02	.03	.03	.04	.05	.05	.06	.08	.09	.10
15	.02	.03	.04	.04	.05	.06	.07	.08	.10	.12	.14	.16
16	1.25	1.31	1.38	1.45	1.51	1.58	1.64	1.71	1.77	1.82	1.88	1.93
17	1.11	1.18	1.25	1.33	1.40	1.47	1.54	1.61	1.68	1.75	1.82	1.88
18	.68	.72	.77	.81	.86	.91	.95	1.00	1.04	1.09	1.13	1.18
19	33.88	33.18	32.48	31.78	31.07	30.35	29.63	28.91	28.18	27.44	26.71	25.97
20	21.50	21.04	20.58	20.11	19.64	19.17	18.70	18.22	17.75	17.27	16.79	16.31
TOTAL	103.65	158.63	222.51	263.34	267.06	246.22	215.37	184.83	162.23	144.51	126.74	109.46

STACK NO.	RECEPTOR NUMBER 109	110	111	112	113	114	115	116	117	118	119	120
1	6.68	16.33	28.26	33.99	32.59	26.87	19.40	12.10	6.65	3.82	3.08	3.11
2	8.09	18.61	29.71	35.18	33.75	28.12	20.71	13.31	7.55	4.27	3.21	3.19
3	.02	.17	.97	3.47	8.02	12.54	14.36	13.25	10.52	7.25	4.30	2.30
4	.00	.02	.15	.93	3.67	9.30	15.73	19.06	18.24	14.89	10.56	6.44
5	8.35	27.30	58.01	84.40	91.96	83.09	65.97	45.78	27.24	14.75	9.58	9.52
6	.00	.00	.00	.01	.10	.94	5.05	15.98	38.78	39.24	37.46	29.57
7	14.30	22.45	26.10	24.61	20.17	14.54	9.11	5.09	2.93	2.36	2.38	2.33
8	13.64	22.19	26.12	24.59	19.94	14.11	8.59	4.65	2.76	2.37	2.38	2.28
9	.00	.01	.10	.55	1.90	4.40	7.06	8.38	8.02	6.63	4.82	3.05
10	.00	.01	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03
11	.00	.01	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03
12	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03	.04
13	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03	.04	.04
14	.02	.02	.02	.03	.03	.04	.05	.06	.07	.08	.09	.11
15	.03	.03	.04	.04	.05	.06	.07	.09	.10	.12	.14	.17
16	1.25	1.32	1.38	1.45	1.51	1.58	1.64	1.70	1.76	1.82	1.87	1.93
17	1.11	1.19	1.26	1.33	1.40	1.47	1.54	1.61	1.68	1.75	1.82	1.88
18	.68	.72	.77	.81	.86	.91	.95	1.00	1.04	1.09	1.13	1.17
19	33.87	33.18	32.49	31.78	31.08	30.36	29.65	28.92	28.20	27.47	26.74	26.00
20	21.48	21.02	20.56	20.10	19.64	19.17	18.70	18.23	17.75	17.28	16.80	16.32
TOTAL	109.73	165.27	225.97	263.30	266.71	247.55	218.63	189.24	165.38	145.28	126.48	109.50

STACK	RECEPTOR NUMBER

NO.	121	122	123	124	125	126	127	128	129	130	131	132
1	8.01	18.13	28.67	33.81	32.45	27.10	20.05	12.98	7.42	4.20	3.10	3.06
2	9.23	19.66	30.00	34.90	33.51	28.25	21.27	14.14	8.33	4.72	3.28	3.12
3	.03	.25	1.21	3.81	8.12	12.14	13.69	12.68	10.23	7.26	4.49	2.48
4	.00	.03	.23	1.19	4.13	9.57	15.36	18.23	17.46	14.46	10.53	6.68
5	10.33	30.18	59.53	83.36	89.92	81.75	65.98	47.13	29.22	16.27	9.96	8.94
6	.00	.00	.00	.01	.18	1.35	6.15	17.25	30.95	38.36	36.65	29.46
7	15.12	22.73	25.98	24.56	20.39	15.07	9.78	5.63	3.22	2.39	2.35	2.37
8	14.56	22.56	26.07	24.60	20.25	14.71	9.32	5.23	3.01	2.37	2.37	2.34
9	.00	.02	.15	.67	2.09	4.47	6.86	8.00	7.66	6.42	4.78	3.13
10	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.02	.03
11	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03
12	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03	.04
13	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03	.04	.04
14	.02	.02	.02	.03	.03	.04	.05	.06	.07	.08	.09	.11
15	.03	.03	.04	.05	.05	.06	.08	.09	.11	.12	.15	.17
16	1.25	1.32	1.38	1.45	1.51	1.58	1.64	1.70	1.76	1.82	1.87	1.92
17	1.12	1.19	1.26	1.33	1.40	1.47	1.54	1.61	1.68	1.75	1.82	1.88
18	.68	.73	.77	.82	.86	.91	.95	1.00	1.04	1.09	1.13	1.17
19	33.87	33.18	32.49	31.79	31.08	30.38	29.66	28.94	28.22	27.50	26.77	26.04
20	21.46	21.01	20.55	20.09	19.63	19.17	18.70	18.23	17.76	17.28	16.81	16.34
TOTAL	115.73	171.06	228.38	262.51	265.65	248.09	221.15	192.98	168.23	146.17	126.26	109.35

STACK NO.	RECEPTOR NUMBER 133	134	135	136	137	138	139	140	141	142	143	144
1	9.10	19.11	28.92	33.52	32.19	27.20	20.57	13.76	8.16	4.63	3.18	2.99
2	10.32	20.55	30.14	34.52	33.17	28.26	21.70	14.87	9.07	5.21	3.41	3.05
3	.06	.35	1.44	4.11	8.16	11.74	13.06	12.14	9.94	7.24	4.64	2.66
4	.00	.03	.32	1.47	4.56	9.76	14.97	17.45	16.73	14.02	10.45	6.87
5	12.37	32.77	60.60	82.11	87.79	80.27	65.73	48.15	30.98	17.81	10.57	8.58
6	.00	.00	.00	.03	.30	1.84	7.24	18.31	30.91	37.41	35.78	29.22
7	15.82	22.83	25.78	24.42	20.52	15.49	10.39	6.20	3.55	2.45	2.30	2.37
8	15.35	22.79	25.93	24.52	20.44	15.21	9.97	5.80	3.32	2.40	2.34	2.37
9	.00	.03	.20	.80	2.26	4.52	6.66	7.64	7.33	6.20	4.72	3.19
10	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03
11	.00	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03
12	.01	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03	.04
13	.01	.01	.01	.01	.01	.02	.02	.02	.03	.03	.04	.04
14	.02	.02	.03	.03	.04	.04	.05	.06	.07	.08	.10	.11
15	.03	.03	.04	.05	.06	.07	.08	.09	.11	.13	.15	.17
16	1.25	1.32	1.38	1.45	1.51	1.58	1.64	1.70	1.76	1.81	1.87	1.92
17	1.12	1.19	1.26	1.33	1.40	1.47	1.54	1.61	1.68	1.75	1.81	1.88
18	.68	.73	.77	.82	.86	.91	.95	1.00	1.04	1.09	1.13	1.17
19	33.86	33.18	32.49	31.79	31.09	30.39	29.68	28.96	28.24	27.52	26.80	26.07
20	21.44	20.99	20.54	20.08	19.62	19.16	18.70	18.23	17.76	17.29	16.82	16.35
TOTAL	121.46	176.00	229.88	261.10	264.02	247.97	222.98	196.05	170.74	147.15	126.18	109.11

STACK HEIGHT ADJUSTMENT = 0.0

* * * S O U R C E D A T A * * *

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)
3 59 03	51.90	61.0	350.2	0.0	2.50	49.	396.530	3078.750
3 59 04	53.90	61.0	350.2	0.0	2.50	49.	396.450	3078.750
3 59 09	9.07	36.6	319.1	0.0	2.10	54.	396.540	3079.030
3 59 10	12.60	36.6	325.2	0.0	1.80	52.	396.550	3079.150
3 59 13	71.73	10.7	564.1	0.0	1.70	39.	396.560	3078.810
1 59 27	36.75	52.4	321.9	0.0	2.40	59.	396.750	3079.350
1 59 33	5.36	52.4	319.1	0.0	2.40	32.	396.830	3079.430
1 59 94	42.00	60.7	349.7	0.0	2.60	57.	396.490	3078.640
1 59 95	42.00	60.7	349.7	0.0	2.60	57.	396.560	3078.640
1 59 96	5.54	36.6	319.1	0.0	1.83	53.	396.450	3079.150
TECO GANNON	2669.20	93.3	417.0	25.90	3.79	0.	360.000	3087.500
GARDINIER	217.30	45.7	350.0	9.70	2.50	0.	363.250	3082.300
TECO BIG BEND	7938.00	149.5	422.0	22.00	7.30	0.	361.900	3075.000

SKEC Modeling of 24-Hr SO_2 Impact with 173, 1972 meteorology (using different randomized wind directions than FDER) indicates no violation of 24-Hr AAQS

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

NO.	X(KM)	Y(KM)	Z(KM)
1.	397.000	3079.500	0.0
2.	397.000	3079.400	0.0
3.	397.000	3079.300	0.0
4.	397.000	3079.200	0.0
5.	397.000	3079.100	0.0
6.	397.000	3079.000	0.0
7.	397.000	3078.900	0.0
8.	397.000	3078.800	0.0
9.	397.000	3078.700	0.0
10.	397.000	3078.600	0.0
11.	397.500	3079.500	0.0
12.	397.500	3079.400	0.0
13.	397.500	3079.300	0.0
14.	397.500	3079.200	0.0
15.	397.500	3079.100	0.0
16.	397.500	3079.000	0.0
17.	397.500	3078.900	0.0
18.	397.500	3078.800	0.0
19.	397.500	3078.700	0.0
20.	397.500	3078.600	0.0
21.	398.000	3079.500	0.0
22.	398.000	3079.400	0.0
23.	398.000	3079.300	0.0
24.	398.000	3079.200	0.0
25.	398.000	3079.100	0.0
26.	398.000	3079.000	0.0
27.	398.000	3078.900	0.0
28.	398.000	3078.800	0.0
29.	398.000	3078.700	0.0
30.	398.000	3078.600	0.0
31.	398.500	3079.500	0.0
32.	398.500	3079.400	0.0
33.	398.500	3079.300	0.0
34.	398.500	3079.200	0.0
35.	398.500	3079.100	0.0
36.	398.500	3079.000	0.0
37.	398.500	3078.900	0.0
38.	398.500	3078.800	0.0
39.	398.500	3078.700	0.0
40.	398.500	3078.600	0.0
41.	399.000	3079.500	0.0
42.	399.000	3079.400	0.0
43.	399.000	3079.300	0.0
44.	399.000	3079.200	0.0
45.	399.000	3079.100	0.0
46.	399.000	3079.000	0.0
47.	399.000	3078.900	0.0
48.	399.000	3078.800	0.0
49.	399.000	3078.700	0.0
50.	399.000	3078.600	0.0

* * * M E T E O R O L O G Y * * *

	WIND DIR. (DEG)	WIND VEL. (M/SEC)	STABILITY CLASS	MIX.HT. (M)	AMB.TEMP. (DEG-K)	PRESS. (MB)
1.	242.	6.20	4	1306.	300.	1000.00
2.	244.	6.20	4	1314.	300.	1000.00
3.	247.	5.10	4	1321.	300.	1000.00
4.	275.	5.10	4	1329.	300.	1000.00
5.	270.	6.20	4	1336.	300.	1000.00
6.	275.	5.10	4	1344.	300.	1000.00
7.	275.	6.70	4	1351.	300.	1000.00
8.	272.	6.70	4	1356.	301.	1000.00
9.	270.	6.20	4	1366.	302.	1000.00
10.	283.	6.20	4	1373.	303.	1000.00
11.	266.	7.20	4	1381.	303.	1000.00
12.	272.	6.70	4	1388.	304.	1000.00
13.	270.	6.20	4	1396.	304.	1000.00
14.	279.	6.70	4	1403.	304.	1000.00
15.	284.	6.70	4	1403.	304.	1000.00
16.	272.	7.20	4	1403.	304.	1000.00
17.	276.	6.70	4	1403.	303.	1000.00
18.	271.	6.70	4	1403.	303.	1000.00
19.	276.	6.20	4	1403.	301.	1000.00
20.	276.	5.10	5	1381.	301.	1000.00
21.	282.	5.10	4	1388.	300.	1000.00
22.	272.	4.10	4	1378.	300.	1000.00
23.	272.	3.60	4	1369.	300.	1000.00
24.	268.	4.10	5	1225.	300.	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.
3 59 03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.06
3 59 04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.08	0.21	0.11	0.27
3 59 09	0.00	0.00	0.03	0.09	0.99	3.09	0.54	1.56	0.50	1.21	4.72	12.03
3 59 10	0.05	0.17	1.09	3.30	0.23	0.71	0.96	2.78	3.30	8.03	0.03	1.01
3 59 13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.14	0.05	0.12
1 59 27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
1 59 33	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0
1 59 94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.01	0.02
1 59 95	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 59 96	0.61	1.96	1.44	4.35	0.10	0.31	1.92	5.54	5.54	13.51	1.79	4.56
TECO GANNON	17.25	55.79	17.12	51.68	16.97	52.70	16.80	48.52	16.01	40.49	16.40	41.91
GARDINIER	7.93	25.65	7.85	23.69	7.75	24.08	7.64	22.08	7.52	18.34	7.39	18.64
TECO BIG BEND	5.08	16.42	5.59	16.89	6.15	19.11	6.75	19.51	7.41	18.06	8.11	20.67
TOTAL CONCENTRATION (UG/M**3)	30.93		33.12		32.19		34.62		41.02		39.23	

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.
3 59 03	0.00	0.00	0.01	0.03	0.03	0.08	0.01	0.03	0.08	0.21	0.75	1.48
3 59 04	0.00	0.01	0.09	0.27	0.23	0.69	0.10	0.29	0.37	0.91	1.90	3.73
3 59 09	1.41	4.17	0.01	0.03	0.00	0.00	0.00	0.00	4.72	11.71	2.84	5.59
3 59 10	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	2.50	6.98	0.32	0.63
3 59 13	0.02	0.07	0.34	1.01	0.12	0.35	0.00	0.01	0.67	1.65	4.52	8.88
1 59 27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.37	0.92	6.92	13.59
1 59 33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.56	1.40	2.85	5.60
1 59 94	0.03	0.10	0.00	0.01	0.01	0.04	0.05	0.14	0.01	0.01	0.10	0.20
1 59 95	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.02	0.04
1 59 96	0.04	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.79	1.95	0.12	0.24
TECO GANNON	16.17	47.84	15.92	48.03	15.64	46.67	15.34	45.44	17.09	42.01	16.98	33.35
GARDINIER	7.24	21.43	7.09	21.39	6.92	20.64	6.74	19.96	7.80	19.19	7.72	15.18
TECO BIG BEND	8.87	26.24	9.69	29.24	10.67	31.83	11.51	34.12	5.32	13.07	5.84	11.48
TOTAL CONCENTRATION (UG/M**3)	33.80		33.14		33.51		33.75		40.69		50.90	

RECEPTORS	13.		14.		15.		16.		17.		18.	
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
3 59 03	2.72	3.92	3.43	4.32	1.29	1.38	0.14	0.16	1.30	1.28	7.05	6.77
3 59 04	4.17	6.01	3.53	4.44	0.98	1.05	0.16	0.18	1.67	2.15	9.58	9.19
3 59 09	0.41	0.59	0.84	1.06	8.80	9.46	32.92	27.07	16.16	20.61	7.74	7.43
3 59 10	1.76	2.53	14.39	18.09	27.97	30.08	10.65	19.66	7.68	9.79	1.35	1.30
3 59 13	10.33	14.90	6.59	8.29	0.93	1.00	1.26	1.49	14.42	18.39	42.94	41.23
1 59 27	15.38	22.16	7.67	9.65	2.03	2.18	0.06	0.07	0.00	0.00	0.00	0.00
1 59 33	1.43	2.06	0.30	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 59 94	0.75	1.08	2.26	2.84	2.52	2.71	0.90	1.06	0.10	0.13	0.72	0.69
1 59 95	0.28	0.40	1.37	1.73	2.29	2.47	1.10	1.30	0.12	0.15	0.42	0.41
1 59 96	1.25	1.80	7.86	9.88	14.51	15.61	9.42	11.13	4.74	6.05	1.39	1.32
TECO GANNON	16.85	24.29	16.70	21.01	16.54	17.79	16.36	19.32	16.16	20.62	15.94	15.31
GARDINIER	7.64	11.01	7.54	9.48	7.43	7.99	7.30	8.63	7.17	9.15	7.02	6.74
TECO BIG BEND	6.41	9.25	7.03	8.84	7.69	8.27	8.41	9.93	9.18	11.71	10.01	9.61
TOTAL CONCENTRATION (UG/M**3)	69.37		79.50		92.98		84.68		78.40		104.16	

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.
3 59 03	13.15	11.91	8.32	9.22	6.25	8.23	5.84	6.15	3.08	2.96	0.82	0.82
3 59 04	17.18	15.56	11.51	12.76	6.96	9.16	5.44	5.73	2.47	2.37	0.59	0.58
3 59 09	1.90	1.72	0.10	0.11	0.85	1.12	0.16	0.17	0.48	0.46	3.09	3.09
3 59 10	0.05	0.04	0.00	0.00	0.18	0.24	0.91	0.96	5.36	5.15	16.86	16.82
3 59 13	35.90	32.51	18.06	20.03	16.51	21.72	10.99	11.59	3.81	3.66	0.70	0.70
1 59 27	0.00	0.00	0.00	0.00	5.81	7.65	23.84	25.13	40.24	38.63	30.62	30.55
1 59 33	0.00	0.00	0.0	0.0	3.48	4.58	7.56	7.96	6.25	6.00	3.38	3.38
1 59 94	5.01	4.54	10.33	11.45	5.31	4.35	4.79	5.05	4.26	4.09	2.19	2.19
1 59 95	3.64	3.29	7.88	8.74	2.41	3.17	4.27	4.50	4.49	4.31	2.67	2.66
1 59 96	0.11	0.10	0.00	0.00	0.09	0.12	0.56	0.59	2.81	2.70	7.99	7.97
TECO GANNON	15.70	14.22	15.44	17.12	16.92	22.27	16.82	17.73	16.71	16.04	16.58	16.54
GARDINIER	6.87	6.22	6.70	7.43	7.67	10.10	7.60	8.01	7.52	7.22	7.43	7.41
TECO BIG BEND	10.90	9.87	11.86	13.15	5.55	7.31	6.09	6.42	6.67	6.41	7.30	7.28
TOTAL CONCENTRATION (UG/M**3)	110.41		90.19		75.99		94.87		104.16		100.25	

RECEPTORS	25.		26.		27.		28.		29.		30.	
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
3 59 03	0.20	0.20	1.14	1.06	6.05	4.77	18.08	10.31	28.18	13.74	24.14	13.26
3 59 04	0.25	0.24	1.54	1.43	7.24	5.71	20.03	11.42	30.63	14.93	27.33	14.94
3 59 09	11.10	10.67	19.94	18.46	18.94	14.94	11.76	6.71	7.12	3.47	3.50	1.92
3 59 10	26.51	25.48	22.48	20.80	15.51	10.96	8.17	4.66	3.56	1.73	0.77	0.42
3 59 13	1.53	1.47	10.33	9.56	37.96	29.95	71.82	40.97	75.27	36.69	51.08	28.05
1 59 27	17.47	16.79	8.98	8.31	2.19	1.73	0.20	0.11	0.01	0.00	0.00	0.00
1 59 33	1.63	1.57	0.34	0.32	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00
1 59 94	0.59	0.56	0.15	0.14	0.81	0.64	4.21	2.40	12.66	6.18	20.79	11.42
1 59 95	0.80	0.77	0.15	0.14	0.62	0.49	3.64	2.07	11.80	5.75	19.79	10.87
1 59 96	12.21	11.74	10.77	9.97	6.71	5.30	4.17	2.38	2.17	1.06	0.64	0.35
TECO GANNON	16.45	15.81	16.29	15.08	16.12	12.72	15.93	9.09	15.72	7.66	15.49	8.51
GARDINIER	7.33	7.04	7.22	6.68	7.09	5.60	6.96	3.97	6.81	3.32	6.65	3.65
TECO BIG BEND	7.98	7.67	8.70	8.06	9.49	7.48	10.33	5.89	11.23	5.47	12.20	6.70
TOTAL CONCENTRATION (UG/M**3)	104.05		108.03		126.76		175.28		205.17		182.08	

RECEPTORS	31.		32.		33.		34.		35.		36.	
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
3 59 03	3.80	5.50	1.59	1.98	0.43	0.45	0.21	0.20	0.92	0.82	3.75	2.91
3 59 04	3.20	4.62	1.23	1.53	0.32	0.34	0.26	0.25	1.16	1.04	4.37	3.39
3 59 09	0.09	0.13	0.29	0.36	1.35	1.42	4.59	4.30	10.46	9.38	15.76	12.24
3 59 10	0.52	0.76	2.31	2.88	7.31	7.65	15.36	14.71	21.48	19.26	21.05	16.35
3 59 13	5.69	8.23	1.81	2.26	0.51	0.53	1.31	1.25	6.25	5.61	21.49	16.69
1 59 27	11.67	16.87	28.09	35.00	41.33	43.27	38.67	37.03	29.39	23.67	17.30	13.44
1 59 33	4.33	6.26	7.23	9.01	7.24	7.58	4.96	4.75	3.13	2.81	1.97	1.53
1 59 94	4.55	6.58	2.77	3.45	1.15	1.20	0.31	0.30	0.19	0.14	0.66	0.52
1 59 95	4.94	7.14	3.27	4.07	1.47	1.53	0.42	0.40	0.15	0.13	0.55	0.43
1 59 96	0.30	0.43	1.20	1.49	3.51	3.68	7.00	6.70	9.60	8.61	9.56	7.42
TECO GANNON	16.74	24.20	16.65	20.74	16.55	17.35	16.44	15.75	16.33	14.64	16.20	12.58
GARDINIER	7.55	10.91	7.48	9.32	7.41	7.76	7.33	7.01	7.23	6.48	7.13	5.54
TECO BIG BEND	5.79	8.37	6.34	7.90	6.93	7.26	7.57	7.25	8.26	7.40	9.00	6.99
TOTAL CONCENTRATION (UG/M**3)	69.17		80.25		95.51		104.43		111.53		128.77	

RECEPTORS	37.		38.		39.		40.		41.		42.	
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
3 59 03	11.16	6.86	23.25	11.25	32.81	13.71	32.17	13.80	0.79	1.39	0.24	0.34
3 59 04	12.25	7.53	24.55	11.87	34.22	14.30	33.97	14.58	0.62	1.09	0.20	0.28

3 59 09	16.52	10.16	12.80	6.19	8.42	3.52	5.75	2.47	0.19	0.34	0.76	0.98
3 59 10	15.48	9.52	10.17	4.92	7.00	2.93	4.19	1.80	1.18	2.09	3.45	4.80
3 59 13	50.00	30.73	76.86	37.18	84.85	35.46	71.43	30.65	0.92	1.62	0.40	0.55
1 59 27	11.20	6.89	5.19	2.51	1.45	0.60	0.23	0.10	14.74	26.05	27.24	37.93
1 59 33	0.87	0.53	0.22	0.11	0.03	0.01	0.00	0.00	4.25	7.51	6.19	8.61
1 59 94	2.68	1.65	7.95	3.84	16.74	7.00	24.34	10.44	1.49	2.63	0.58	0.81
1 59 95	2.39	1.47	7.49	3.63	16.38	6.85	24.14	10.36	1.41	2.49	0.74	1.03
1 59 96	7.27	4.47	4.83	2.34	3.36	1.40	2.18	0.94	0.60	1.07	1.67	2.32
TECO GANNON	16.05	9.87	15.89	7.69	15.71	6.56	15.50	6.65	16.56	29.26	16.47	22.93
GARDINIER	7.01	4.31	6.89	3.33	6.75	2.82	6.60	2.83	7.42	13.11	7.36	10.25
TECO BIG BEND	9.79	6.02	10.64	5.15	11.56	4.83	12.53	5.38	6.03	10.66	6.59	9.17

TOTAL CONCENTRATION (UG/M**3)

162.68	206.72	239.26	233.05	56.58	71.83

RECEPTORS	43.		44.		45.		46.		47.		48.	
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
3 59 03	0.20	0.22	0.73	0.67	2.35	1.99	6.45	4.59	14.22	8.83	24.37	11.24
3 59 04	0.24	0.27	0.85	0.81	2.70	2.29	7.09	5.04	15.09	9.52	25.27	11.65
3 59 05	2.15	2.39	5.12	4.91	9.19	7.79	12.51	8.90	13.54	7.55	11.97	5.52
3 59 10	7.81	8.70	13.25	12.69	17.23	14.62	17.87	12.71	15.16	8.56	11.02	5.08
3 59 13	1.05	1.16	3.92	3.76	12.10	10.26	29.32	20.85	53.20	30.03	72.09	33.26
1 59 27	36.86	41.04	37.54	35.97	30.16	25.57	21.13	15.03	15.11	8.52	10.95	5.05
1 59 33	6.61	7.36	5.43	5.20	3.76	3.19	2.62	1.86	1.86	1.05	1.10	0.51
1 59 94	0.18	0.20	0.15	0.14	0.52	0.44	1.72	1.22	4.69	2.64	10.34	4.77
1 59 95	0.23	0.26	0.14	0.13	0.44	0.38	1.55	1.11	4.42	2.50	10.09	4.65
1 59 96	3.61	4.02	5.93	5.68	7.62	6.40	7.84	5.55	6.68	3.88	5.11	2.36
TECO GANNON	16.38	18.24	16.29	15.61	16.19	13.73	16.07	11.43	15.95	9.00	15.81	7.29
GARDINIER	7.29	8.12	7.22	6.92	7.13	6.05	7.04	5.01	6.96	3.91	6.92	3.14
TECO BIG BEND	7.19	8.01	7.84	7.51	8.54	7.24	9.29	6.60	10.09	5.70	10.96	5.05

TOTAL CONCENTRATION (UG/M**3)

89.80	104.36	117.91	140.61	177.14	216.88

RECEPTORS	49.		50.									
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
3 59 03	32.21	13.20	33.47	13.64								
3 59 04	33.12	13.57	34.60	14.10								
3 59 05	8.93	3.66	9.25	3.77								
3 59 10	7.79	3.19	9.79	2.36								
3 59 13	81.28	33.31	76.10	31.01								
1 59 27	6.67	2.73	3.00	1.22								
1 59 33	0.47	0.19	0.14	0.06								
1 59 94	17.89	7.33	24.14	9.84								
1 59 95	17.85	7.31	24.29	9.90								
1 59 96	3.62	1.48	2.69	1.10								
TECO GANNON	15.66	6.42	15.48	6.31								
GARDINIER	6.69	2.74	6.55	2.67								
TECO BIG BEND	11.88	4.87	12.87	5.24								

TOTAL CONCENTRATION (UG/M**3)

244.05	245.36

TCP OUTPUT CHARGE: $ .14

STACK HEIGHT ADJUSTMENT = 0.0
* * * S O U R C E D A T A * * *

SOURCE NAME	EMI.-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)
3 59 03	51.90	61.0	350.2	0.0	2.50	49.	396.530	3073.750
3 59 04	53.90	61.0	350.2	0.0	2.50	49.	396.850	3073.750
3 59 09	9.07	36.6	319.1	0.0	2.10	54.	396.540	3079.030
3 59 10	12.60	36.6	325.2	0.0	1.30	52.	396.550	3079.180
3 59 13	71.73	10.7	564.1	0.0	1.70	39.	396.560	3079.910
1 59 27	36.75	52.4	321.9	0.0	2.40	59.	396.750	3073.350
1 59 35	5.36	52.4	319.1	0.0	2.40	32.	396.830	3073.480
1 59 94	42.00	60.7	349.7	0.0	2.60	57.	396.490	3073.640
1 59 95	42.00	60.7	349.7	0.0	2.60	57.	396.560	3073.640
1 59 96	5.58	36.6	319.1	0.0	1.35	55.	396.450	3079.150
TEJO GANNON	2669.20	93.3	417.0	25.90	3.79	0.	360.000	3037.500
GARDINIER	217.30	45.7	350.0	9.70	2.50	0.	363.250	3032.300
TEJO BIG BEND	7939.00	149.5	422.0	22.00	7.30	0.	361.900	3075.300

Additional Receptors
SKEC Modeling
24-Hr SO_2
173, 1972 Met.

RECEPTORS

NO.	X(KM)	Y(KM)	Z(KM)
1.	398.800	3078.800	0.0
2.	398.800	3078.700	0.0
3.	398.800	3078.600	0.0
4.	398.800	3078.500	0.0
5.	398.800	3078.400	0.0
6.	398.800	3078.300	0.0
7.	399.000	3078.800	0.0
8.	399.000	3078.700	0.0
9.	399.000	3078.600	0.0
10.	399.000	3078.500	0.0
11.	399.000	3078.400	0.0
12.	399.000	3078.300	0.0
13.	399.200	3078.800	0.0
14.	399.200	3078.700	0.0
15.	399.200	3078.600	0.0
16.	399.200	3078.500	0.0
17.	399.200	3078.400	0.0
18.	399.200	3078.300	0.0
19.	399.400	3078.800	0.0
20.	399.400	3078.700	0.0
21.	399.400	3078.600	0.0
22.	399.400	3078.500	0.0
23.	399.400	3078.400	0.0
24.	399.400	3078.300	0.0
25.	399.600	3078.800	0.0
26.	399.600	3078.700	0.0
27.	399.600	3078.600	0.0
28.	399.600	3078.500	0.0
29.	399.600	3078.400	0.0
30.	399.600	3078.300	0.0
31.	399.800	3078.800	0.0
32.	399.800	3078.700	0.0
33.	399.800	3078.600	0.0
34.	399.800	3078.500	0.0
35.	399.800	3078.400	0.0
36.	399.800	3078.300	0.0
37.	400.000	3078.800	0.0
38.	400.000	3078.700	0.0
39.	400.000	3078.600	0.0
40.	400.000	3078.500	0.0
41.	400.000	3078.400	0.0
42.	400.000	3078.300	0.0

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

NO.	X(KM)	Y(KM)	Z(KM)
1.	398.800	3078.800	0.0
2.	398.800	3078.700	0.0
3.	398.800	3078.600	0.0
4.	398.800	3078.500	0.0
5.	398.800	3078.400	0.0
6.	398.800	3078.300	0.0
7.	399.000	3078.800	0.0
8.	399.000	3078.700	0.0
9.	399.000	3078.600	0.0
10.	399.000	3078.500	0.0
11.	399.000	3078.400	0.0
12.	399.000	3078.300	0.0
13.	399.200	3078.800	0.0
14.	399.200	3078.700	0.0
15.	399.200	3078.600	0.0
16.	399.200	3078.500	0.0
17.	399.200	3078.400	0.0
18.	399.200	3078.300	0.0
19.	399.400	3078.800	0.0
20.	399.400	3078.700	0.0
21.	399.400	3078.600	0.0
22.	399.400	3078.500	0.0
23.	399.400	3078.400	0.0
24.	399.400	3078.300	0.0
25.	399.600	3078.800	0.0
26.	399.600	3078.700	0.0
27.	399.600	3078.600	0.0
28.	399.600	3078.500	0.0
29.	399.600	3078.400	0.0
30.	399.600	3078.300	0.0
31.	399.800	3078.800	0.0
32.	399.800	3078.700	0.0
33.	399.800	3078.600	0.0
34.	399.800	3078.500	0.0
35.	399.800	3078.400	0.0
36.	399.800	3078.300	0.0
37.	400.000	3078.800	0.0
38.	400.000	3078.700	0.0
39.	400.000	3078.600	0.0
40.	400.000	3078.500	0.0
41.	400.000	3078.400	0.0
42.	400.000	3078.300	0.0

* * * M E T E O R O L O G Y * * *

	WIND DIR. (DEG)	WIND VEL. (M/SEC)	STABILITY CLASS	MIX.HT. (M)	AMB.TEMP. (DEG-K)	PRESS. (MB)
1.	242.	6.20	4	1306.	300.	1000.00
2.	244.	6.20	4	1314.	300.	1000.00
3.	247.	5.10	4	1321.	300.	1000.00
4.	275.	5.10	4	1329.	300.	1000.00
5.	270.	6.20	4	1336.	300.	1000.00
6.	275.	5.10	4	1344.	300.	1000.00
7.	275.	6.70	4	1351.	300.	1000.00
8.	272.	6.70	4	1359.	301.	1000.00
9.	270.	6.20	4	1366.	302.	1000.00
10.	283.	6.20	4	1373.	303.	1000.00
11.	266.	7.20	4	1381.	303.	1000.00
12.	272.	6.70	4	1388.	304.	1000.00
13.	270.	6.20	4	1396.	304.	1000.00
14.	279.	6.70	4	1403.	304.	1000.00
15.	284.	6.70	4	1403.	304.	1000.00
16.	272.	7.20	4	1403.	304.	1000.00
17.	276.	6.70	4	1403.	303.	1000.00
18.	271.	6.70	4	1403.	303.	1000.00
19.	276.	6.20	4	1403.	301.	1000.00
20.	276.	5.10	5	1391.	301.	1000.00
21.	282.	5.10	4	1377.	300.	1000.00
22.	272.	4.10	4	1373.	300.	1000.00
23.	272.	3.60	4	1362.	300.	1000.00
24.	263.	4.10	5	1225.	300.	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.
3 59 03	24.24	11.27	32.80	13.44	33.48	13.76	27.07	12.95	19.25	11.80	14.00	11.02
3 59 04	25.27	11.75	33.97	13.87	34.84	14.31	29.70	13.73	20.71	12.69	15.07	11.83
3 59 09	12.43	5.73	8.81	3.61	6.09	2.50	4.40	2.11	2.81	1.72	1.86	1.07
3 59 10	10.77	5.00	7.57	3.10	5.42	2.23	3.23	1.57	1.47	0.90	0.47	0.37
3 59 13	76.14	34.23	83.51	33.20	75.62	31.07	56.65	27.12	39.38	25.11	23.57	22.44
1 59 27	9.22	4.29	4.49	1.84	1.47	0.61	0.32	0.15	0.06	0.03	0.00	0.00
1 59 33	0.73	0.34	0.22	0.09	0.04	0.02	0.01	0.00	0.00	0.00	0.00	0.00
1 59 34	9.55	4.44	17.67	7.24	24.49	10.06	25.74	12.32	21.45	13.14	15.60	12.14
1 59 35	9.22	4.29	17.53	7.19	24.53	10.08	25.65	12.27	21.02	12.88	15.02	11.73
1 59 36	5.04	2.34	8.54	1.46	2.59	1.06	1.69	0.81	0.86	0.52	0.32	0.25
TEXO GANNON	15.84	7.36	15.69	6.42	15.50	6.37	15.29	7.32	15.07	9.23	14.35	11.16
GARDINIER	6.35	3.13	6.71	2.76	6.57	2.70	6.42	3.07	6.26	3.84	6.09	4.79
TEXO BIG BEND	10.33	5.03	11.76	4.81	12.73	5.23	13.73	6.59	14.90	9.13	16.12	12.69
TOTAL CONCENTRATION (UG/M**3)	215.15		244.14		243.36		209.02		163.20		127.32	

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.
3 59 03	24.37	11.24	32.21	13.20	33.47	13.64	23.29	13.05	20.87	12.02	15.22	11.14
3 59 04	25.27	11.66	33.12	13.57	34.60	14.10	29.71	13.72	22.25	12.32	16.26	11.90
3 59 09	11.97	5.52	8.33	3.66	6.25	2.55	4.00	2.12	3.10	1.90	1.96	1.41
3 59 10	11.02	5.09	7.75	3.19	5.79	2.36	4.03	1.86	2.26	1.30	0.96	0.70
3 59 13	73.09	33.72	81.23	33.31	76.10	31.01	50.11	27.73	42.75	24.62	31.33	22.91
1 59 27	10.96	5.05	6.67	2.73	3.00	1.22	0.96	0.44	0.22	0.13	0.04	0.03
1 59 33	1.10	0.51	0.47	0.19	0.14	0.06	0.03	0.01	0.00	0.00	0.00	0.00
1 59 34	10.34	4.77	17.39	7.13	24.14	9.84	25.72	11.86	22.32	12.86	16.73	12.23
1 59 35	10.09	4.65	17.95	7.31	24.29	9.90	25.77	11.89	22.07	12.71	16.37	11.97
1 59 36	5.11	2.36	8.62	1.43	2.69	1.10	1.96	0.90	1.20	0.69	0.57	0.42
TEXO GANNON	15.21	7.29	15.06	6.42	15.43	6.31	15.29	7.05	15.03	8.69	14.35	10.37
GARDINIER	6.82	3.14	6.69	2.74	6.55	2.67	6.41	2.95	6.25	3.60	6.03	4.45
TEXO BIG BEND	10.96	5.05	11.93	4.87	12.87	5.24	13.92	6.42	15.04	8.66	16.24	11.93
TOTAL CONCENTRATION (UG/M**3)	216.33		244.05		245.36		216.79		173.62		136.03	

RECEPTORS	13.		14.		15.		16.		17.		18.	
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.

PROCEED

3 59 03	24.20	11.19	31.36	12.96	32.99	13.47	28.93	13.07	22.16	12.18	16.29	11.26
3 59 04	25.00	11.56	32.15	13.29	33.96	13.87	30.16	13.63	23.45	12.89	17.34	11.99
3 59 09	11.40	5.27	8.92	3.69	6.39	2.61	4.71	2.13	3.57	1.96	2.45	1.69
3 59 10	11.14	5.15	7.98	3.30	5.97	2.44	4.48	2.03	2.95	1.62	1.56	1.07
3 59 13	70.67	32.69	73.51	32.46	75.35	30.78	62.28	28.14	45.75	25.15	33.50	23.16
1 59 27	11.93	5.54	8.39	3.47	4.73	1.93	2.02	0.91	0.64	0.35	0.15	0.10
1 59 33	1.40	0.65	0.77	0.32	0.81	0.13	0.09	0.04	0.02	0.01	0.00	0.00
1 59 94	10.92	5.05	17.89	7.40	23.59	9.64	25.35	11.45	22.75	12.51	17.77	12.29
1 59 95	10.74	4.97	17.91	7.41	23.30	9.72	25.51	11.52	22.65	12.45	17.45	12.07
1 59 96	5.12	2.37	3.69	1.53	2.75	1.12	2.11	0.95	1.47	0.81	0.84	0.58
TEJO GANNON	15.77	7.30	15.63	6.46	15.47	6.32	15.23	6.91	15.03	8.29	14.97	10.23
GARDINIER	6.79	3.14	6.66	2.76	6.53	2.67	6.39	2.89	6.24	3.43	6.07	4.20
TEJO BIG BEND	11.03	5.12	12.00	4.96	13.00	5.31	14.05	6.35	15.19	8.34	16.33	11.32

TOTAL CONCENTRATION (UG/M**3)

216.21	241.95	248.31	221.35	181.90	144.66

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.
3 59 03	23.33	11.14	30.33	12.74	32.20	13.29	29.09	13.02	23.13	12.23	17.26	11.33
3 59 04	24.56	11.42	31.05	13.05	33.05	13.68	30.19	13.51	24.29	12.91	18.29	12.06
3 59 09	10.90	5.05	8.91	3.70	6.89	2.63	4.78	2.14	3.70	1.97	2.77	1.83
3 59 10	11.13	5.20	8.15	3.42	6.09	2.51	4.72	2.11	3.45	1.93	2.14	1.41
3 59 13	67.05	31.32	75.45	31.70	73.77	30.44	63.33	29.35	48.23	25.68	35.43	23.59
1 59 27	12.89	6.39	9.54	4.01	6.30	2.60	3.34	1.49	1.37	0.73	0.44	0.29
1 59 33	1.53	0.74	1.03	0.43	0.53	0.22	0.21	0.09	0.06	0.03	0.01	0.01
1 59 94	11.33	5.30	17.72	7.45	22.91	9.45	24.77	11.09	22.83	12.14	17.47	12.13
1 59 95	11.21	5.24	17.90	7.49	23.16	9.56	24.99	11.19	22.84	12.14	17.26	12.04
1 59 96	5.07	2.37	3.75	1.53	2.79	1.15	2.13	0.97	1.65	0.89	1.09	0.72
TEJO GANNON	15.73	7.36	15.60	6.55	15.44	6.37	15.27	6.84	15.03	8.02	14.89	9.31
GARDINIER	6.76	3.16	6.64	2.79	6.51	2.69	6.37	2.85	6.22	3.31	6.06	4.00
TEJO BIG BEND	11.20	5.24	12.13	5.10	13.13	5.42	14.13	6.35	15.31	8.14	16.51	10.89

TOTAL CONCENTRATION (UG/M**3)

213.95	237.97	242.34	223.40	188.14	151.65

RECEPTORS	25.		26.		27.		28.		29.		30.	
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
3 59 03	23.32	11.09	29.21	12.54	31.21	13.09	23.80	12.94	23.71	12.32	18.09	11.49
3 59 04	23.97	11.39	29.85	12.92	31.95	13.41	29.33	13.36	24.79	12.93	19.09	12.11
3 59 09	10.19	4.85	8.61	3.70	6.56	2.75	4.96	2.18	3.76	1.96	2.96	1.88
3 59 10	11.02	5.23	8.29	3.55	6.17	2.59	4.34	2.17	3.76	1.96	2.63	1.67
3 59 13	65.38	31.06	72.25	31.03	71.64	30.06	63.44	29.40	50.09	26.03	37.31	23.69
1 59 27	13.02	6.19	10.23	4.39	7.51	3.15	4.69	2.09	2.36	1.22	0.95	0.60
1 59 33	1.69	0.80	1.23	0.53	0.75	0.31	0.37	0.16	0.14	0.07	0.04	0.03
1 59 94	11.59	5.51	17.42	7.49	22.13	9.29	24.02	10.75	22.63	11.76	19.90	11.99

SOURCE NAME												
1 59 95	11.52	5.48	17.54	7.53	22.41	9.40	24.30	10.88	22.73	11.81	18.73	11.92
1 59 96	4.98	2.37	3.78	1.63	2.33	1.19	2.21	0.99	1.75	0.91	1.28	0.81
TECO GANNON	15.69	7.46	15.56	6.69	15.42	6.47	15.26	6.83	15.09	7.84	14.89	9.44
GARDINIER	6.73	3.20	6.61	2.84	6.49	2.72	6.35	2.84	6.21	3.22	6.05	3.84
TECO BIG BEND	11.38	5.39	12.26	5.26	13.26	5.56	14.32	6.41	15.45	8.03	16.65	10.56
TOTAL CONCENTRATION (UG/M**3)	210.36		232.33		238.30		223.34		192.44		157.59	

RECEPTORS	31.		32.		33.		34.		35.		36.	
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
3 59 03	22.70	11.01	28.04	12.36	30.09	12.91	28.42	12.82	24.01	12.31	18.76	11.54
3 59 04	23.31	11.30	28.64	12.62	30.77	13.20	29.26	13.21	24.99	12.82	19.72	12.13
3 59 09	9.60	4.66	8.36	3.68	6.58	2.82	4.93	2.23	3.80	1.95	3.05	1.88
3 59 10	10.78	5.23	8.36	3.68	6.28	2.69	4.90	2.21	3.94	2.02	2.93	1.84
3 59 13	62.60	30.36	69.01	30.42	69.16	29.67	62.91	28.34	51.30	26.30	38.97	23.98
1 59 27	13.38	6.49	10.62	4.68	8.31	3.56	5.83	2.63	3.44	1.77	1.67	1.03
1 59 33	1.75	0.85	1.36	0.60	0.94	0.40	0.54	0.25	0.26	0.13	0.10	0.06
1 59 94	11.74	5.69	17.04	7.51	21.31	9.14	23.18	10.46	22.24	11.40	19.09	11.75
1 59 95	11.70	5.67	17.18	7.57	21.60	9.26	23.48	10.59	22.39	11.48	19.05	11.72
1 59 96	4.85	2.35	3.81	1.68	2.87	1.23	2.23	1.01	1.80	0.92	1.41	0.87
TECO GANNON	15.64	7.58	15.52	6.84	15.39	6.60	15.23	6.87	15.07	7.73	14.88	9.16
GARDINIER	6.70	3.25	6.58	2.90	6.46	2.77	6.33	2.86	6.19	3.17	6.04	3.72
TECO BIG BEND	11.45	5.55	12.38	5.46	13.38	5.74	14.45	6.52	15.58	7.99	16.78	10.33
TOTAL CONCENTRATION (UG/M**3)	206.20		226.89		233.12		221.61		195.01		162.50	

RECEPTORS	37.		38.		39.		40.		41.		42.	
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
3 59 03	22.04	10.93	26.38	12.13	28.93	12.73	27.73	12.70	24.09	12.28	19.23	11.58
3 59 04	22.61	11.21	27.45	12.44	29.56	13.01	28.55	13.05	24.97	12.73	20.19	12.13
3 59 09	9.04	4.48	8.07	3.66	6.55	2.88	5.00	2.29	3.84	1.96	3.09	1.86
3 59 10	10.50	5.20	8.38	3.80	6.37	2.80	4.96	2.27	4.02	2.05	3.21	1.93
3 59 13	59.94	29.71	65.87	29.85	66.55	29.28	61.70	28.21	51.93	26.48	40.39	24.27
1 59 27	13.73	6.81	10.87	4.93	8.79	3.87	6.70	3.06	4.47	2.28	2.53	1.52
1 59 33	1.79	0.89	1.43	0.65	1.08	0.47	0.71	0.33	0.39	0.20	0.18	0.11
1 59 94	11.79	5.84	16.62	7.53	20.49	9.01	22.32	10.21	21.73	11.08	19.11	11.48
1 59 95	11.78	5.84	16.77	7.60	20.78	9.14	22.62	10.35	21.92	11.18	19.12	11.49
1 59 96	4.70	2.33	3.80	1.72	2.91	1.28	2.25	1.03	1.83	0.93	1.48	0.89
TECO GANNON	15.59	7.73	15.48	7.01	15.35	6.75	15.21	6.96	15.05	7.67	14.88	8.94
GARDINIER	6.67	3.30	6.56	2.97	6.44	2.83	6.31	2.89	6.17	3.15	6.03	3.62
TECO BIG BEND	11.57	5.74	12.51	5.67	13.51	5.94	14.58	6.67	15.71	8.01	16.92	10.17
TOTAL CONCENTRATION (UG/M**3)	201.73		220.66		227.30		218.68		196.12		166.41	

FIGURE B

MAX. PREDICTED NEW SOURCE
TSP IMPACT WITH DAY 173,
1972 METEOROLOGY

NEW WALES CHEMICALS, INC.
POLK COUNTY, FLORIDA

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 24	0.45	16.8	319.1	0.0	0.60	4.	396.600	3079.490
1 59 25	0.45	34.4	319.1	0.0	0.30	1.	396.640	3079.360
1 59 26	0.20	5.5	319.1	0.0	0.30	1.	396.700	3079.480
1 59 27	4.64	52.4	321.9	0.0	2.40	59.	396.750	3079.350
1 59 28	1.20	35.4	319.1	0.0	0.50	3.	396.640	3079.350
2 59 29	2.52	36.6	319.1	0.0	0.90	8.	396.450	3079.270
1 59 30	0.45	36.0	319.1	0.0	0.60	4.	396.680	3079.360
1 59 31	0.45	23.5	319.1	0.0	0.30	1.	396.600	3079.330
1 59 32	0.45	32.3	319.1	0.0	0.60	3.	396.600	3079.490
1 59 33	2.32	52.4	319.1	0.0	2.40	32.	396.830	3079.420
1 59 34	0.45	18.3	319.1	0.0	0.30	1.	396.840	3079.480
1 59 35	0.45	13.7	319.1	0.0	0.30	1.	396.840	3079.470
1 59 36	0.60	26.5	319.1	0.0	0.50	2.	396.740	3079.430
1 59 37	0.60	26.5	319.1	0.0	0.50	2.	396.740	3079.410
1 59 38	0.20	5.2	319.1	0.0	0.40	1.	396.730	3079.440
1 59 39	0.45	17.4	319.1	0.0	0.40	1.	396.730	3079.430
1 59 40	0.90	30.5	319.1	0.0	0.71	5.	396.310	3079.230
1 59 90	0.13	22.9	319.1	0.0	0.30	2.	396.830	3078.130
1 59 91	0.21	30.5	319.1	0.0	0.71	5.	396.310	3079.130
1 59 92	2.16	36.6	319.0	0.0	1.83	52.	396.540	3079.090
1 59 93	2.16	36.6	319.0	0.0	1.83	52.	396.540	3079.220
1 59 94	0.54	24.4	319.0	0.0	1.83	26.	396.440	3079.150

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

NO.	X(KM)	Y(KM)	Z(KM)
1.	397.000	3079.500	0.0
2.	397.000	3079.400	0.0
3.	397.000	3079.300	0.0
4.	397.000	3079.200	0.0
5.	397.000	3079.100	0.0
6.	397.000	3079.000	0.0
7.	397.000	3078.900	0.0
8.	397.000	3078.800	0.0
9.	397.000	3078.700	0.0
10.	397.000	3078.600	0.0
11.	397.500	3079.500	0.0
12.	397.500	3079.400	0.0
13.	397.500	3079.300	0.0
14.	397.500	3079.200	0.0
15.	397.500	3079.100	0.0
16.	397.500	3079.000	0.0
17.	397.500	3078.900	0.0
18.	397.500	3078.800	0.0
19.	397.500	3078.700	0.0
20.	397.500	3078.600	0.0
21.	398.000	3079.500	0.0
22.	398.000	3079.400	0.0
23.	398.000	3079.300	0.0
24.	398.000	3079.200	0.0
25.	398.000	3079.100	0.0
26.	398.000	3079.000	0.0
27.	398.000	3078.900	0.0
28.	398.000	3078.800	0.0
29.	398.000	3078.700	0.0
30.	398.000	3078.600	0.0
31.	398.500	3079.500	0.0
32.	398.500	3079.400	0.0
33.	398.500	3079.300	0.0
34.	398.500	3079.200	0.0
35.	398.500	3079.100	0.0
36.	398.500	3079.000	0.0
37.	398.500	3078.900	0.0
38.	398.500	3078.800	0.0
39.	398.500	3078.700	0.0
40.	398.500	3078.600	0.0
41.	399.000	3079.500	0.0
42.	399.000	3079.400	0.0
43.	399.000	3079.300	0.0
44.	399.000	3079.200	0.0
45.	399.000	3079.100	0.0
46.	399.000	3079.000	0.0
47.	399.000	3078.900	0.0
48.	399.000	3078.800	0.0
49.	399.000	3078.700	0.0
50.	399.000	3078.600	0.0

* * * M E T E O R O L O G Y * * *

	WIND DIR. (DEG)	WIND VEL. (M/SEC)	STABILITY CLASS	MIX.HT. (M)	AMB.TEMP. (DEG-K)	PRESS. (MB)
1.	242.	6.20	4	1306.	300.	1000.00
2.	244.	6.20	4	1314.	300.	1000.00
3.	247.	5.10	4	1321.	300.	1000.00
4.	275.	5.10	4	1329.	300.	1000.00
5.	270.	6.20	4	1336.	300.	1000.00
6.	275.	5.10	4	1344.	300.	1000.00
7.	275.	6.70	4	1351.	300.	1000.00
8.	272.	6.70	4	1358.	301.	1000.00
9.	270.	6.20	4	1366.	302.	1000.00
10.	283.	6.20	4	1373.	303.	1000.00
11.	266.	7.20	4	1381.	303.	1000.00
12.	272.	6.70	4	1388.	304.	1000.00
13.	270.	6.20	4	1396.	304.	1000.00
14.	279.	6.70	4	1403.	304.	1000.00
15.	284.	6.70	4	1403.	304.	1000.00
16.	272.	7.20	4	1403.	304.	1000.00
17.	276.	6.70	4	1403.	303.	1000.00
18.	271.	6.70	4	1403.	303.	1000.00
19.	276.	6.20	4	1403.	301.	1000.00
20.	276.	5.10	5	1381.	301.	1000.00
21.	282.	5.10	4	1388.	300.	1000.00
22.	272.	4.10	4	1378.	300.	1000.00
23.	272.	3.60	4	1369.	300.	1000.00
24.	268.	4.10	5	1225.	300.	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 24	7.97	30.24	4.05	9.32	0.03	0.19	0.00	0.00	0.00	0.00	0.0	0.0
1 59 25	0.18	0.68	0.22	0.50	0.63	4.24	0.01	0.06	0.00	0.00	0.00	0.00
1 59 26	9.88	37.48	5.01	11.51	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
1 59 27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
1 59 28	0.44	1.67	0.23	0.54	1.44	9.65	0.05	0.28	0.00	0.00	0.00	0.00
2 59 29	1.65	6.27	0.11	0.24	4.49	30.06	6.70	40.80	1.42	13.42	0.01	0.43
1 59 30	0.10	0.38	0.06	0.13	0.19	1.29	0.00	0.00	0.00	0.00	0.00	0.00
1 59 31	1.13	4.28	0.29	0.67	6.17	41.29	0.76	4.66	0.00	0.00	0.00	0.00
1 59 32	1.25	4.73	0.68	1.57	0.01	0.04	0.00	0.00	0.00	0.00	0.0	0.0
1 59 33	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0
1 59 34	0.55	2.08	0.01	0.02	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0
1 59 35	0.71	2.71	0.24	0.55	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0
1 59 36	0.05	0.19	1.78	4.10	0.00	0.03	0.00	0.00	0.0	0.0	0.0	0.0
1 59 37	0.22	0.82	2.11	4.84	0.05	0.31	0.00	0.00	0.00	0.00	0.0	0.0
1 59 38	0.45	1.71	16.97	39.02	0.02	0.11	0.00	0.00	0.0	0.0	0.0	0.0
1 59 39	0.23	0.89	10.48	24.09	0.04	0.24	0.00	0.00	0.00	0.00	0.0	0.0
1 59 40	0.81	3.08	0.07	0.15	1.41	9.44	6.20	37.77	2.88	27.26	0.59	20.07
1 59 90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1 59 91	0.24	0.89	0.19	0.44	0.02	0.10	0.33	1.99	1.45	13.70	0.67	22.99
1 59 92	0.00	0.00	0.09	0.21	0.32	2.11	0.02	0.10	0.93	8.78	0.65	22.25
1 59 93	0.21	0.79	0.18	0.42	0.08	0.51	1.21	7.38	0.43	4.07	0.01	0.17
1 59 94	0.29	1.12	0.73	1.68	0.06	0.40	1.14	6.96	3.40	32.76	1.00	34.09
TOTAL CONCENTRATION (UG/M**3)	26.36		43.49		14.95		16.42		10.56		2.93	

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 24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.08	14.20	4.37	7.66
1 59 25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.43	1.42	2.49
1 59 26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.50	12.20	4.06	7.12
1 59 27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.16	0.87	1.53
1 59 28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.78	2.87	5.04
2 59 29	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.10	0.35	1.35	2.36
1 59 30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.31	1.17	2.06
1 59 31	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.31	1.48	2.59
1 59 32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.10	7.30	2.27	3.98
1 59 33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.73	1.21	2.12
1 59 34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.09	17.72	5.66	9.93
1 59 35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.57	19.41	7.90	13.84
1 59 36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.47	5.12	5.35	9.39
1 59 37	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.85	2.94	4.99	8.75
1 59 38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.98	6.90	4.97	8.71
1 59 39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.87	6.52	6.32	11.09
1 59 40	0.01	4.80	0.00	0.50	0.00	0.05	0.00	0.01	0.03	0.12	0.34	0.59
1 59 90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1 59 91	0.14	66.30	0.00	98.70	0.00	99.94	0.00	99.99	0.03	0.12	0.01	0.01
1 59 92	0.04	17.11	0.00	0.32	0.00	0.00	0.00	0.00	0.99	3.44	0.26	0.46
1 59 93	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.13	0.45	0.15	0.27
1 59 94	0.02	11.79	0.00	0.48	0.00	0.01	0.00	0.00	0.15	0.53	0.02	0.04
TOTAL CONCENTRATION (UG/M**3)	0.21		0.00		0.00		0.00		28.72		57.04	

RECEPTORS	13.		14.		15.		16.		17.		18.	
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 24	1.81	3.74	0.50	1.36	0.03	0.11	0.00	0.00	0.00	0.00	0.00	0.00
1 59 25	2.48	5.11	1.16	3.17	0.37	1.48	0.03	0.18	0.00	0.00	0.00	0.00
1 59 26	1.42	2.92	0.25	0.69	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00
1 59 27	1.94	4.00	0.97	2.65	0.26	1.01	0.01	0.05	0.00	0.00	0.00	0.00

1 59 28	6.08	12.54	3.08	8.43	1.08	4.28	0.09	0.63	0.00	0.02	0.00	0.00
2 59 29	7.10	14.65	10.28	28.14	5.73	22.73	2.67	18.20	0.60	10.19	0.04	2.17
1 59 30	2.12	4.37	0.95	2.61	0.27	1.06	0.01	0.09	0.00	0.00	0.00	0.00
1 59 31	4.00	8.26	2.60	7.11	1.00	3.95	0.16	1.10	0.00	0.08	0.00	0.00
1 59 32	0.98	2.03	0.28	0.76	0.02	0.06	0.00	0.00	0.00	0.00	0.00	0.00
1 59 33	0.68	1.40	0.17	0.47	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
1 59 34	1.53	3.16	0.07	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 59 35	2.23	4.60	0.13	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 59 36	2.79	5.75	0.79	2.16	0.04	0.14	0.00	0.00	0.00	0.00	0.00	0.00
1 59 37	3.45	7.12	1.11	3.05	0.08	0.31	0.00	0.00	0.00	0.00	0.00	0.00
1 59 38	2.29	4.72	0.56	1.53	0.02	0.09	0.00	0.00	0.00	0.00	0.00	0.00
1 59 39	3.33	6.87	0.93	2.54	0.05	0.18	0.00	0.00	0.00	0.00	0.00	0.00
1 59 40	2.05	4.22	4.20	11.49	3.54	14.02	1.81	12.33	0.85	14.37	0.19	11.12
1 59 90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 59 91	0.08	0.16	0.48	1.30	0.98	3.88	0.83	5.64	0.42	7.14	0.20	11.77
1 59 92	0.07	0.13	0.97	2.66	4.55	18.04	5.07	34.60	2.53	42.84	0.95	56.52
1 59 93	1.80	3.71	5.42	14.85	4.22	16.71	2.03	13.88	0.56	9.54	0.04	2.11
1 59 94	0.26	0.53	1.64	4.50	3.00	11.90	1.95	13.30	0.93	15.81	0.27	16.30
TOTAL CONCENTRATION (UG/M**3)	48.48		36.53		25.23		14.65		5.90		1.68	

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 24	0.00	0.00	0.00	0.00	2.33	10.57	2.71	6.50	1.86	3.65	0.98	2.33
1 59 25	0.00	0.00	0.00	0.00	0.37	1.67	1.22	2.92	1.76	3.64	1.36	3.23
1 59 26	0.00	0.00	0.00	0.00	1.73	7.87	2.08	4.99	1.41	2.92	0.68	1.61
1 59 27	0.00	0.00	0.00	0.00	0.73	3.33	3.01	7.21	5.08	10.53	3.87	9.17
1 59 28	0.00	0.00	0.00	0.00	0.76	3.45	2.77	6.65	4.37	9.06	3.56	8.45
2 59 29	0.00	0.35	0.00	0.01	0.47	2.13	2.27	5.44	5.69	11.78	7.60	18.02
1 59 30	0.00	0.00	0.00	0.00	0.31	1.42	1.11	2.65	1.64	3.41	1.23	2.92
1 59 31	0.00	0.00	0.00	0.00	0.32	1.47	1.33	3.19	2.27	4.70	2.13	5.06
1 59 32	0.00	0.00	0.00	0.00	1.47	6.68	1.74	4.18	1.18	2.45	0.65	1.53
1 59 33	0.00	0.00	0.0	0.0	1.31	5.97	3.17	7.60	2.85	5.90	1.55	3.68
1 59 34	0.0	0.0	0.0	0.0	2.81	12.75	3.46	8.30	2.03	4.21	0.95	2.25
1 59 35	0.0	0.0	0.0	0.0	3.07	13.93	4.07	9.74	2.55	5.29	1.17	2.78
1 59 36	0.00	0.00	0.00	0.00	1.65	7.47	3.12	7.47	2.75	5.70	1.45	3.43
1 59 37	0.00	0.00	0.00	0.00	1.28	5.83	2.94	7.05	2.98	6.16	1.66	3.94
1 59 38	0.00	0.00	0.00	0.00	1.37	6.23	2.18	5.22	1.85	3.82	0.91	2.17
1 59 39	0.00	0.00	0.00	0.00	1.72	7.83	3.11	7.45	2.77	5.75	1.44	3.42
1 59 40	0.01	7.97	0.00	1.21	0.13	0.58	0.63	1.52	1.79	3.70	2.80	6.63
1 59 90	0.00	0.35	0.03	80.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 59 91	0.04	24.36	0.00	10.25	0.00	0.02	0.03	0.07	0.15	0.31	0.42	0.99
1 59 92	0.10	53.67	0.00	6.34	0.07	0.34	0.05	0.12	0.38	0.78	1.74	4.13
1 59 93	0.00	0.27	0.00	0.01	0.09	0.42	0.64	1.52	2.44	5.05	4.68	11.11
1 59 94	0.02	13.03	0.00	1.70	0.01	0.06	0.09	0.21	0.47	0.98	1.33	3.16
TOTAL CONCENTRATION (UG/M**3)	0.18		0.03		22.03		41.74		48.27		42.16	

RECEPTORS	25.		26.		27.		28.		29.		30.	
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 24	0.49	1.52	0.14	0.67	0.02	0.16	0.00	0.02	0.00	0.00	0.00	0.00
1 59 25	0.73	2.25	0.39	1.85	0.12	1.06	0.02	0.29	0.00	0.04	0.00	0.00
1 59 26	0.30	0.92	0.06	0.31	0.01	0.05	0.00	0.00	0.00	0.00	0.00	0.00
1 59 27	2.21	6.78	1.13	5.40	0.28	2.40	0.03	0.43	0.00	0.03	0.00	0.00
1 59 28	1.95	6.01	1.06	5.07	0.36	3.14	0.05	0.92	0.00	0.13	0.00	0.01
2 59 29	6.14	18.87	3.62	17.26	2.17	18.85	1.01	17.13	0.26	9.69	0.03	4.04
1 59 30	0.66	2.03	0.34	1.62	0.09	0.82	0.01	0.18	0.00	0.02	0.00	0.00
1 59 31	1.23	3.78	0.66	3.16	0.28	2.44	0.06	0.99	0.01	0.20	0.00	0.03
1 59 32	0.33	1.02	0.09	0.45	0.01	0.11	0.00	0.01	0.00	0.00	0.00	0.00
1 59 33	0.78	2.40	0.18	0.87	0.01	0.12	0.00	0.01	0.00	0.00	0.00	0.00
1 59 34	0.30	0.91	0.03	0.16	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
1 59 35	0.40	1.22	0.05	0.23	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
1 59 36	0.73	2.23	0.21	1.00	0.02	0.21	0.00	0.02	0.00	0.00	0.00	0.00
1 59 37	0.85	2.61	0.29	1.38	0.04	0.34	0.00	0.04	0.00	0.00	0.00	0.00
1 59 38	0.43	1.33	0.12	0.56	0.01	0.11	0.00	0.01	0.00	0.00	0.00	0.00
1 59 39	0.71	2.18	0.21	1.01	0.02	0.22	0.00	0.02	0.00	0.00	0.00	0.00
1 59 40	2.82	8.66	1.95	9.31	1.16	10.08	0.71	11.99	0.32	11.83	0.08	9.81
1 59 90	0.00	0.00	0.00	0.02	0.03	0.22	0.09	1.45	0.14	5.29	0.11	12.68

1 59 91	0.65	2.01	0.66	3.13	0.46	3.96	0.27	4.58	0.17	6.17	0.07	8.78
1 59 92	4.14	12.72	5.00	23.82	3.52	30.59	2.08	35.25	1.19	44.36	0.41	48.59
1 59 93	4.71	14.47	3.00	14.28	1.80	15.64	0.93	15.66	0.26	9.66	0.03	4.08
1 59 94	1.99	6.10	1.77	8.45	1.09	9.46	0.65	11.01	0.34	12.57	0.10	11.98
TOTAL CONCENTRATION (UG/M**3)	32.54		20.98		11.51		5.91		2.68		0.84	

RECEPTORS	31.		32.		33.		34.		35.		36.	
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 24	1.53	8.00	1.77	5.51	1.55	3.87	1.02	2.63	0.62	1.93	0.39	1.61
1 59 25	0.45	2.37	0.94	2.91	1.23	3.06	1.15	2.98	0.80	2.47	0.49	1.99
1 59 26	1.07	5.60	1.26	3.90	1.11	2.78	0.71	1.83	0.41	1.28	0.25	1.00
1 59 27	1.47	7.69	3.55	11.01	5.22	13.05	4.88	12.65	3.33	10.33	2.18	8.92
1 59 28	1.02	5.33	2.24	6.95	3.08	7.70	2.98	7.72	2.11	6.56	1.31	5.33
2 59 29	0.87	4.57	2.44	7.59	4.42	11.06	5.56	14.41	5.25	16.27	3.83	15.62
1 59 30	0.41	2.13	0.88	2.72	1.17	2.93	1.08	2.81	0.74	2.28	0.46	1.86
1 59 31	0.45	2.32	1.04	3.22	1.48	3.69	1.53	3.96	1.18	3.66	0.73	2.96
1 59 32	1.06	5.52	1.24	3.87	1.07	2.68	0.71	1.83	0.45	1.38	0.28	1.16
1 59 33	1.73	9.01	3.05	9.46	3.20	8.00	2.25	5.84	1.41	4.38	0.90	3.69
1 59 34	1.78	9.27	2.14	6.63	1.78	4.45	1.06	2.73	0.62	1.93	0.32	1.32
1 59 35	1.94	10.10	2.40	7.46	2.09	5.23	1.26	3.27	0.73	2.26	0.39	1.60
1 59 36	1.34	7.02	2.02	6.26	2.05	5.13	1.48	3.84	0.88	2.73	0.55	2.24
1 59 37	1.16	6.08	1.93	5.96	2.10	5.26	1.62	4.20	0.97	3.02	0.61	2.47
1 59 38	0.94	4.91	1.27	3.95	1.26	3.15	0.90	2.32	0.51	1.59	0.31	1.26
1 59 39	1.31	6.82	1.90	5.89	1.93	4.83	1.41	3.66	0.82	2.56	0.51	2.07
1 59 40	0.25	1.31	0.74	2.29	1.45	3.63	2.00	5.17	2.12	6.57	1.78	7.29
1 59 90	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.05	0.05	0.15	0.08	0.32
1 59 91	0.01	0.08	0.06	0.18	0.17	0.43	0.34	0.88	0.47	1.46	0.49	2.02
1 59 92	0.04	0.19	0.18	0.56	0.71	1.77	1.90	4.93	3.37	10.46	4.06	16.56
1 59 93	0.28	1.47	0.99	3.09	2.37	5.92	3.70	9.59	4.01	12.44	3.19	13.03
1 59 94	0.04	0.22	0.18	0.56	0.54	1.34	1.04	2.70	1.39	4.33	1.39	5.69
TOTAL CONCENTRATION (UG/M**3)	19.16		32.20		39.98		38.60		32.24		24.50	

RECEPTORS	37.		38.		39.		40.		41.		42.	
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 24	0.19	1.17	0.06	0.61	0.01	0.21	0.00	0.05	1.10	6.45	1.25	4.82
1 59 25	0.31	1.92	0.16	1.67	0.05	0.98	0.01	0.38	0.44	2.61	0.73	2.81
1 59 26	0.10	0.64	0.03	0.28	0.00	0.08	0.00	0.01	0.74	4.35	0.85	3.27
1 59 27	1.41	8.67	0.66	6.79	0.18	3.35	0.03	1.03	1.86	10.94	3.44	13.28
1 59 28	0.85	5.20	0.45	4.69	0.16	2.89	0.03	1.18	1.05	6.15	1.78	6.89
2 59 29	2.47	15.13	1.68	17.39	1.03	18.91	0.46	15.97	1.11	6.55	2.29	8.84
1 59 30	0.29	1.78	0.14	1.46	0.04	0.79	0.01	0.28	0.41	2.42	0.69	2.67
1 59 31	0.46	2.82	0.27	2.80	0.11	2.04	0.03	1.00	0.46	2.69	0.81	3.12
1 59 32	0.14	0.85	0.04	0.45	0.01	0.16	0.00	0.04	0.79	4.67	0.92	3.54
1 59 33	0.42	2.55	0.11	1.15	0.02	0.30	0.00	0.05	1.74	10.22	2.62	10.10
1 59 34	0.10	0.64	0.02	0.19	0.00	0.03	0.00	0.00	1.23	7.25	1.44	5.57
1 59 35	0.13	0.82	0.03	0.26	0.00	0.05	0.00	0.01	1.34	7.89	1.60	6.16
1 59 36	0.27	1.68	0.08	0.85	0.02	0.28	0.00	0.06	1.06	6.24	1.42	5.48
1 59 37	0.33	2.00	0.11	1.16	0.02	0.41	0.00	0.09	0.96	5.67	1.37	5.29
1 59 38	0.15	0.92	0.04	0.46	0.01	0.15	0.00	0.03	0.68	4.00	0.85	3.28
1 59 39	0.26	1.57	0.08	0.84	0.02	0.28	0.00	0.06	0.99	5.83	1.30	5.01
1 59 40	1.22	7.50	0.81	8.37	0.56	10.27	0.33	11.63	0.34	1.98	0.73	2.81
1 59 90	0.09	0.54	0.06	0.67	0.03	0.53	0.01	0.25	0.02	0.09	0.03	0.12
1 59 91	0.42	2.55	0.29	2.96	0.19	3.46	0.13	4.55	0.03	0.16	0.08	0.30
1 59 92	3.52	21.56	2.40	24.88	1.60	29.27	1.08	37.50	0.10	0.60	0.34	1.31
1 59 93	2.11	12.93	1.43	14.82	0.93	16.95	0.44	15.29	0.47	2.74	1.14	4.42
1 59 94	1.07	6.57	0.70	7.22	0.47	8.61	0.30	10.54	0.08	0.49	0.24	0.92
TOTAL CONCENTRATION (UG/M**3)	16.30		9.65		5.46		2.88		17.00		25.90	

RECEPTORS	43.	44.	45.	46.	47.	48.

SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 24	1.20	3.74	0.95	2.87	0.64	2.18	0.44	1.83	0.31	1.71	0.19	1.50
1 59 25	0.90	2.79	0.90	2.73	0.75	2.54	0.52	2.18	0.35	1.94	0.25	1.96
1 59 26	0.82	2.56	0.65	1.97	0.43	1.45	0.28	1.18	0.19	1.06	0.11	0.87
1 59 27	4.65	14.49	4.74	14.30	3.81	12.95	2.67	11.22	1.91	10.58	1.38	10.90
1 59 28	2.27	7.08	2.34	7.05	1.96	6.68	1.38	5.80	0.93	5.18	0.67	5.27
2 59 29	3.49	10.88	4.21	12.71	4.23	14.40	3.57	15.02	2.58	14.29	1.79	14.12
1 59 30	0.86	2.69	0.87	2.62	0.71	2.40	0.49	2.04	0.33	1.83	0.24	1.86
1 59 31	1.05	3.26	1.11	3.36	1.00	3.38	0.73	3.07	0.48	2.68	0.34	2.67
1 59 32	0.88	2.73	0.69	2.08	0.47	1.60	0.33	1.37	0.23	1.29	0.14	1.13
1 59 33	2.88	8.96	2.42	7.30	1.69	5.75	1.17	4.92	0.84	4.64	0.51	4.02
1 59 34	1.37	4.26	1.03	3.10	0.65	2.22	0.44	1.83	0.28	1.56	0.14	1.10
1 59 35	1.55	4.83	1.19	3.60	0.76	2.59	0.50	2.10	0.33	1.81	0.17	1.32
1 59 36	1.51	4.69	1.30	3.92	0.91	3.09	0.60	2.51	0.42	2.31	0.26	2.07
1 59 37	1.51	4.71	1.36	4.11	0.99	3.36	0.65	2.72	0.45	2.48	0.29	2.31
1 59 38	0.88	2.74	0.76	2.29	0.52	1.77	0.33	1.40	0.23	1.26	0.14	1.11
1 59 39	1.37	4.27	1.20	3.61	0.84	2.85	0.54	2.28	0.37	2.07	0.24	1.87
1 59 40	1.18	3.67	1.51	4.54	1.62	5.51	1.50	6.32	1.19	6.60	0.84	6.61
1 59 90	0.05	0.15	0.06	0.18	0.06	0.20	0.04	0.18	0.02	0.14	0.01	0.07
1 59 91	0.17	0.53	0.28	0.83	0.35	1.19	0.38	1.59	0.35	1.95	0.28	2.19
1 59 92	0.90	2.80	1.81	5.45	2.73	9.30	3.23	13.58	3.09	17.12	2.45	19.29
1 59 93	2.11	6.57	2.94	8.88	3.25	11.07	2.93	12.33	2.22	12.28	1.55	12.22
1 59 94	0.52	1.61	0.83	2.49	1.04	3.53	1.08	4.54	0.85	5.28	0.70	5.55
TOTAL CONCENTRATION (UG/M**3)												
	32.12		33.14		29.41		23.78		18.04		12.68	

RECEPTORS	49.		50.									
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
1 59 24	0.09	1.08	0.03	0.61								
1 59 25	0.16	1.92	0.08	1.53								
1 59 26	0.05	0.58	0.01	0.25								
1 59 27	0.84	10.18	0.38	7.37								
1 59 28	0.44	5.27	0.22	4.32								
2 59 29	1.32	15.92	0.93	18.04								
1 59 30	0.15	1.77	0.07	1.34								
1 59 31	0.23	2.80	0.13	2.52								
1 59 32	0.07	0.82	0.02	0.46								
1 59 33	0.23	2.75	0.07	1.37								
1 59 34	0.05	0.59	0.01	0.23								
1 59 35	0.06	0.73	0.02	0.29								
1 59 36	0.13	1.52	0.04	0.84								
1 59 37	0.15	1.81	0.05	1.07								
1 59 38	0.07	0.80	0.02	0.43								
1 59 39	0.11	1.39	0.04	0.78								
1 59 40	0.60	7.23	0.45	8.70								
1 59 90	0.00	0.03	0.00	0.05								
1 59 91	0.20	2.37	0.14	2.72								
1 59 92	1.72	20.84	1.24	24.13								
1 59 93	1.13	13.72	0.82	16.00								
1 59 94	0.49	5.89	0.35	6.91								
TOTAL CONCENTRATION (UG/M**3)												
	8.27		5.13									

TCP OUTPUT CHARGE: $ .16

FIGURE C

MAX. PREDICTED 24-HR TSP
LEVEL WITH DAY 173, 1972
METEOROLOGY

NEW WALES CHEMICALS, INC.
POLK COUNTY, FLORIDA

STACK HEIGHT ADJUSTMENT = 0.0

* * * S O U R C E D A T A * * *

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)
3 59 06	1.26	21.0	315.0	10.00	0.30	0.	396.730	3078.800
3 59 15	1.26	30.5	344.0	15.80	0.80	0.	396.730	3078.850
3 59 18	1.26	5.5	314.0	15.20	0.50	0.	396.720	3078.870
3 59 19	3.23	32.9	327.0	14.80	2.30	0.	396.740	3078.750
3 59 20	0.63	30.5	315.0	12.70	0.60	0.	396.710	3078.920
3 59 22	0.63	30.5	315.0	12.70	0.60	0.	396.720	3078.920
3 59 05	0.60	12.2	319.1	0.0	0.90	15.	396.760	3078.660
3 59 09	3.99	36.6	319.1	0.0	2.10	54.	396.540	3079.030
3 59 10	3.84	36.6	325.2	0.0	1.80	52.	396.550	3079.150
3 59 11	2.51	41.1	335.8	0.0	1.20	12.	396.530	3079.010
3 59 13	3.53	10.7	564.1	0.0	1.73	59.	396.560	3078.810
3 59 21	0.60	13.7	319.1	0.0	0.50	3.	396.530	3079.170
1 59 24	0.45	16.8	319.1	0.0	0.60	4.	396.600	3079.490
1 59 25	0.45	34.4	319.1	0.0	0.30	1.	396.640	3079.360
1 59 26	0.20	5.5	319.1	0.0	0.30	1.	396.700	3079.480
1 59 27	4.64	52.4	321.5	0.0	2.40	59.	396.750	3079.350
1 59 28	1.20	35.4	319.1	0.0	0.50	3.	396.640	3079.350
2 59 29	2.52	36.6	319.1	0.0	0.90	6.	396.450	3079.270
1 59 30	0.45	36.0	319.1	0.0	0.60	4.	396.680	3079.360
1 59 31	0.45	23.5	319.1	0.0	0.30	1.	396.600	3079.330
1 59 32	0.45	32.3	319.1	0.0	0.60	3.	396.600	3079.490
1 59 33	2.32	52.4	319.1	0.0	2.40	38.	396.830	3079.420
1 59 34	0.45	18.3	319.1	0.0	0.30	1.	396.840	3079.480
1 59 35	0.45	13.7	319.1	0.0	0.30	1.	396.840	3079.470
1 59 36	0.60	26.5	319.1	0.0	0.50	2.	396.740	3079.450
1 59 37	0.60	26.5	319.1	0.0	0.50	2.	396.740	3079.410
1 59 38	0.20	5.2	319.1	0.0	0.40	1.	396.730	3079.440
1 59 39	0.45	17.4	319.1	0.0	0.40	1.	396.730	3079.430
1 59 40	0.90	30.5	317.1	0.0	0.71	5.	396.310	3079.230
1 59 90	0.13	22.9	319.1	0.0	0.30	2.	396.830	3078.130
1 59 91	0.21	30.5	319.1	0.0	0.71	5.	396.310	3079.130
1 59 92	2.16	36.6	319.0	0.0	1.83	52.	396.540	3079.090
1 59 93	2.16	36.6	319.0	0.0	1.83	52.	396.540	3079.220
1 59 94	0.54	24.4	319.0	0.0	1.83	2[illegible].	396.440	3079.150

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

NO.	X(KM)	Y(KM)	Z(KM)
1.	397.000	3079.500	0.0
2.	397.000	3079.400	0.0
3.	397.000	3079.300	0.0
4.	397.000	3079.200	0.0
5.	397.000	3079.100	0.0
6.	397.000	3079.000	0.0
7.	397.000	3078.900	0.0
8.	397.000	3078.800	0.0
9.	397.000	3078.700	0.0
10.	397.000	3078.600	0.0
11.	397.500	3079.500	0.0
12.	397.500	3079.400	0.0
13.	397.500	3079.300	0.0
14.	397.500	3079.200	0.0
15.	397.500	3079.100	0.0
16.	397.500	3079.000	0.0
17.	397.500	3078.900	0.0
18.	397.500	3078.800	0.0
19.	397.500	3078.700	0.0
20.	397.500	3078.600	0.0
21.	398.000	3079.500	0.0
22.	398.000	3079.400	0.0
23.	398.000	3079.300	0.0
24.	398.000	3079.200	0.0
25.	398.000	3079.100	0.0
26.	398.000	3079.000	0.0
27.	398.000	3078.900	0.0
28.	398.000	3078.800	0.0
29.	398.000	3078.700	0.0
30.	398.000	3078.600	0.0
31.	398.500	3079.500	0.0
32.	398.500	3079.400	0.0
33.	398.500	3079.300	0.0
34.	398.500	3079.200	0.0
35.	398.500	3079.100	0.0
36.	398.500	3079.000	0.0
37.	398.500	3078.900	0.0
38.	398.500	3078.800	0.0
39.	398.500	3078.700	0.0
40.	398.500	3078.600	0.0
41.	399.000	3079.500	0.0
42.	399.000	3079.400	0.0
43.	399.000	3079.300	0.0
44.	399.000	3079.200	0.0
45.	399.000	3079.100	0.0
46.	399.000	3079.000	0.0
47.	399.000	3078.900	0.0
48.	399.000	3078.800	0.0
49.	399.000	3078.700	0.0
50.	399.000	3078.600	0.0

* * * M E T E O R O L O G Y * * *

	WIND DIR. (DEG)	WIND VEL. (M/SEC)	STABILITY CLASS	MIX.HT. (M)	AMB.TEMP. (DEG-K)	PRESS. (MB)
1.	242.	6.20	4	1306.	300.	1000.00
2.	244.	6.20	4	1314.	300.	1000.00
3.	247.	5.10	4	1321.	300.	1000.00
4.	275.	5.10	4	1329.	300.	1000.00
5.	270.	6.20	4	1336.	300.	1000.00
6.	275.	5.10	4	1344.	300.	1000.00
7.	275.	6.70	4	1351.	300.	1000.00
8.	272.	6.70	4	1358.	301.	1000.00
9.	270.	6.20	4	1366.	302.	1000.00
10.	283.	6.20	4	1373.	303.	1000.00
11.	266.	7.20	4	1381.	303.	1000.00
12.	272.	6.70	4	1388.	304.	1000.00
13.	270.	6.20	4	1396.	304.	1000.00
14.	279.	6.70	4	1403.	304.	1000.00
15.	284.	6.70	4	1403.	304.	1000.00
16.	272.	7.20	4	1403.	304.	1000.00
17.	276.	6.70	4	1403.	303.	1000.00
18.	271.	6.70	4	1403.	303.	1000.00
19.	276.	6.20	4	1403.	301.	1000.00
20.	276.	5.10	5	1381.	301.	1000.00
21.	282.	5.10	4	1388.	300.	1000.00
22.	272.	4.10	4	1378.	300.	1000.00
23.	272.	3.60	4	1369.	300.	1000.00
24.	268.	4.10	5	1225.	300.	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.
3 59 06	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.94
3 59 15	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.58
3 59 18	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.91	23.54	73.47
3 59 19	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00
3 59 20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.80	0.03	0.10
3 59 22	0.0	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.13	0.56	0.03	0.11
3 59 05	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0.00	0.00	0.00
3 59 09	0.00	0.00	0.01	0.03	0.44	2.72	0.24	0.94	0.22	0.93	2.08	6.48
3 59 10	0.02	0.06	0.33	0.71	0.27	1.45	0.29	1.16	1.00	4.26	0.19	0.60
3 59 11	0.00	0.00	0.01	0.01	0.29	1.81	0.37	1.48	0.66	2.26	1.79	5.58
3 59 13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
3 59 21	0.31	1.16	3.03	6.47	0.35	2.15	8.00	31.59	11.19	47.45	0.96	2.98
1 59 24	7.97	29.87	4.05	8.65	0.03	0.18	0.00	0.00	0.00	0.00	0.0	0.0
1 59 25	0.18	0.67	0.22	0.47	0.63	3.94	0.01	0.04	0.00	0.00	0.00	0.00
1 59 26	9.88	37.03	5.01	10.68	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
1 59 27	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0
1 59 28	0.44	1.65	0.23	0.50	1.44	8.96	0.05	0.18	0.00	0.00	0.00	0.00
2 59 29	1.66	6.19	0.11	0.25	4.49	27.92	6.70	26.45	1.48	6.21	0.01	0.04
1 59 30	0.10	0.37	0.06	0.12	0.19	1.20	0.00	0.00	0.00	0.00	0.00	0.00
1 59 31	1.13	4.23	0.29	0.62	6.17	38.36	0.76	3.02	0.00	0.00	0.00	0.00
1 59 32	1.25	4.68	0.68	1.45	0.01	0.04	0.00	0.00	0.00	0.00	0.0	0.0
1 59 33	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0
1 59 34	0.55	2.05	0.01	0.02	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0
1 59 35	0.71	2.68	0.24	0.51	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0
1 59 36	0.05	0.19	1.78	3.80	0.00	0.00	0.00	0.00	0.0	0.0	0.0	0.0
1 59 37	0.22	0.81	2.11	4.49	0.05	0.28	0.00	0.00	0.00	0.00	0.0	0.0
1 59 38	0.45	1.69	16.97	36.20	0.02	0.10	0.00	0.00	0.0	0.0	0.0	0.0
1 59 39	0.23	0.88	10.48	22.35	0.04	0.22	0.00	0.00	0.00	0.00	0.0	0.0
1 59 40	0.81	3.05	0.07	0.14	1.41	8.77	6.20	24.49	2.88	12.32	0.59	1.84
1 59 90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1 59 91	0.24	0.88	0.19	0.40	0.02	0.09	0.33	1.29	1.45	6.14	0.67	2.10
1 59 92	0.00	0.00	0.09	0.20	0.32	1.96	0.93	3.67	0.93	3.93	0.65	2.03
1 59 93	0.21	0.78	0.18	0.39	0.08	0.47	1.21	4.79	0.40	1.68	0.01	0.02
1 59 94	0.29	1.10	0.73	1.56	0.06	0.37	1.14	4.51	3.49	14.68	1.00	3.12
TOTAL CONCENTRATION (UG/M**3)	26.69		46.87		16.09		25.33		23.57		32.03	

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.
3 59 06	2.39	6.17	16.81	28.25	1.17	48.47	0.00	0.00	0.00	0.00	0.04	0.06
3 59 15	0.03	0.07	0.30	0.50	0.00	0.01	0.00	0.00	0.00	0.01	0.10	0.16
3 59 18	32.57	85.86	40.01	67.23	0.00	0.10	0.00	0.00	0.03	0.08	0.59	0.96
3 59 19	0.00	0.01	0.00	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.00	0.01
3 59 20	1.23	3.17	0.03	0.06	0.00	0.00	0.00	0.00	0.04	0.11	0.34	0.56
3 59 22	1.03	2.66	0.02	0.03	0.00	0.00	0.00	0.00	0.03	0.09	0.31	0.51
3 59 05	0.00	0.00	2.29	3.86	1.25	51.04	5.56	100.00	0.00	0.00	0.00	0.00
3 59 09	0.62	1.60	0.00	0.01	0.00	0.00	0.00	0.00	2.08	8.20	1.25	2.05
3 59 10	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.85	2.54	0.10	0.16
3 59 11	0.75	1.93	0.02	0.03	0.00	0.00	0.00	0.00	1.37	4.10	1.04	1.70
3 59 13	0.00	0.00	0.02	0.03	0.01	0.24	0.00	0.00	0.03	0.10	0.22	0.36
3 59 21	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.39	1.16	0.05	0.09
1 59 24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.08	12.16	4.37	7.15
1 59 25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.12	0.37	1.42	2.32
1 59 26	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.50	10.45	4.06	6.65
1 59 27	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.05	0.14	0.87	1.43
1 59 28	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.22	0.64	2.87	4.70
2 59 29	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.10	0.30	1.35	2.21
1 59 30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.26	1.17	1.92
1 59 31	0.00	0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.09	0.27	1.48	2.42
1 59 32	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.10	6.25	2.27	3.71
1 59 33	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.21	0.63	1.21	1.98
1 59 34	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.09	15.17	5.66	9.27
1 59 35	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.57	16.61	7.90	12.93
1 59 36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.47	4.38	5.35	8.77
1 59 37	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.85	2.52	4.99	8.17
1 59 38	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.99	5.91	4.97	8.13

1 59 39	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.87	5.58	0.32	10.35
1 59 40	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.10	0.34	0.55
1 59 90	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1 59 91	0.14	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.10	0.01	0.01
1 59 92	0.04	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.99	2.95	0.26	0.43
1 59 93	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.13	0.38	0.15	0.25
1 59 94	0.02	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.15	0.45	0.02	0.04
TOTAL CONCENTRATION (UG/M**3)												
	38.83		59.50		2.42		5.56		33.55		61.08	

RECEPTORS	13.		14.		15.		16.		17.		18.	
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
3 59 06	0.58	1.02	2.31	4.15	1.77	3.46	0.17	0.39	1.89	3.78	13.46	20.38
3 59 15	0.77	1.35	1.32	2.37	0.34	0.67	0.15	0.33	2.92	5.17	6.75	10.21
3 59 18	3.32	5.82	4.04	7.24	0.69	1.35	1.34	2.97	19.61	34.74	27.22	41.22
3 59 19	0.10	0.17	0.79	1.42	1.30	2.55	0.31	0.68	0.15	0.27	2.67	4.04
3 59 20	0.81	1.42	0.35	0.63	0.04	0.08	0.97	2.16	4.22	7.47	2.63	3.99
3 59 22	0.81	1.42	0.38	0.68	0.04	0.08	0.96	2.12	4.25	7.52	2.61	3.96
3 59 05	0.00	0.00	0.08	0.14	0.78	1.53	1.59	3.53	0.44	0.79	0.23	0.36
3 59 09	0.18	0.31	0.37	0.66	3.87	7.67	10.08	22.34	7.11	12.59	3.40	5.15
3 59 10	0.54	0.94	4.38	7.85	8.52	16.88	5.27	11.64	2.34	4.14	0.41	0.62
3 59 11	0.20	0.35	0.14	0.24	1.82	3.56	0.45	14.30	3.66	10.02	2.68	4.05
3 59 13	0.51	0.89	0.32	0.58	0.05	0.09	0.06	0.14	0.71	1.26	2.11	3.20
3 59 21	0.73	1.29	4.80	8.60	8.66	15.92	3.53	7.37	1.27	2.24	0.18	0.27
1 59 24	1.81	3.18	0.50	0.89	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00
1 59 25	2.48	4.34	1.16	2.08	0.37	0.73	0.03	0.06	0.00	0.00	0.00	0.00
1 59 26	1.42	2.48	0.25	0.45	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
1 59 27	1.94	3.40	0.97	1.74	0.26	0.50	0.01	0.02	0.00	0.00	0.00	0.00
1 59 28	6.08	10.66	3.03	5.52	1.08	2.11	0.09	0.20	0.00	0.00	0.00	0.00
2 59 29	7.10	12.45	10.29	18.42	5.73	11.22	2.67	5.91	0.46	1.07	0.54	0.06
1 59 30	2.12	3.72	0.95	1.71	0.27	0.52	0.01	0.03	0.00	0.00	0.00	0.00
1 59 31	4.00	7.02	2.60	4.65	1.30	1.95	0.16	0.35	0.00	0.01	0.00	0.00
1 59 32	0.98	1.72	0.28	0.50	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00
1 59 33	0.68	1.19	0.17	0.30	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
1 59 34	1.53	2.69	0.07	0.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 59 35	2.23	3.91	0.13	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 59 36	2.79	4.89	0.79	1.41	0.04	0.07	0.00	0.00	0.00	0.00	0.00	0.00
1 59 37	3.45	6.05	1.11	1.99	0.09	0.16	0.00	0.00	0.00	0.00	0.00	0.00
1 59 38	2.29	4.02	0.56	1.00	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00
1 59 39	3.33	5.84	0.93	1.66	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00
1 59 40	2.05	3.59	4.20	7.52	3.54	6.92	1.81	4.00	0.85	1.50	0.19	0.28
1 59 90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 59 91	0.08	0.14	0.48	0.85	0.98	1.92	0.82	1.83	0.42	0.75	0.20	0.30
1 59 92	0.07	0.11	0.97	1.74	4.55	8.91	5.07	11.23	2.55	4.48	0.95	1.44
1 59 93	1.90	3.16	5.42	9.72	4.22	8.25	2.03	4.51	0.56	1.00	0.04	0.05
1 59 94	0.26	0.45	1.64	2.95	2.00	3.88	1.98	4.32	0.93	1.66	0.27	0.42
TOTAL CONCENTRATION (UG/M**3)												
	57.03		55.82		51.11		45.15		56.45		66.04	

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.
3 59 06	11.13	27.76	3.64	19.09	0.95	3.26	1.32	2.75	0.92	1.65	0.27	0.50
3 59 15	3.05	7.61	0.76	4.00	0.85	2.90	0.83	1.70	0.38	0.68	0.07	0.13
3 59 18	9.85	24.57	1.79	9.37	2.03	6.95	1.71	3.49	0.65	1.17	0.11	0.20
3 59 19	5.83	14.54	2.84	14.92	0.72	2.47	1.36	2.78	1.32	2.37	0.59	1.09
3 59 20	0.89	2.23	0.07	0.37	0.48	1.64	0.27	0.55	0.96	0.11	0.02	0.05
3 59 22	0.86	2.15	0.06	0.32	0.49	1.67	0.28	0.57	0.07	0.12	0.02	0.04
3 59 05	4.82	12.03	8.86	46.50	0.09	0.32	0.35	0.71	0.70	1.26	0.72	1.33
3 59 09	0.84	2.09	0.05	0.24	0.37	1.28	0.07	0.14	0.21	0.38	1.36	2.52
3 59 10	0.02	0.04	0.00	0.00	0.06	0.19	0.28	0.57	1.63	2.94	5.14	9.50
3 59 11	0.85	2.12	0.07	0.35	0.31	1.07	0.06	0.12	0.09	0.15	0.64	1.18
3 59 13	1.77	4.41	0.89	4.67	0.81	2.78	0.54	1.10	0.19	0.34	0.03	0.06
3 59 21	0.01	0.01	0.00	0.00	0.02	0.09	0.19	0.39	1.14	2.05	2.94	5.44
1 59 24	0.00	0.00	0.00	0.00	2.33	7.97	2.71	5.54	1.86	3.34	0.98	1.81
1 59 25	0.00	0.00	0.00	0.00	0.37	1.26	1.22	2.49	1.76	3.16	1.36	2.52
1 59 26	0.00	0.00	0.00	0.00	1.73	5.93	2.08	4.25	1.41	2.53	0.68	1.26
1 59 27	0.00	0.00	0.00	0.00	0.73	2.51	3.01	6.14	5.08	9.13	3.87	7.15
1 59 28	0.00	0.00	0.00	0.00	0.76	2.60	2.77	5.66	4.37	7.86	3.56	6.59

2 59 25	0.00	0.00	0.00	0.00	0.47	1.60	2.27	4.63	5.69	10.22	7.60	14.05
1 59 30	0.00	0.00	0.00	0.00	0.31	1.07	1.11	2.26	1.64	2.95	1.23	2.28
1 59 31	0.00	0.00	0.00	0.00	0.32	1.11	1.33	2.72	2.27	4.08	2.13	3.94
1 59 32	0.00	0.00	0.00	0.00	1.47	5.04	1.74	3.56	1.18	2.13	0.65	1.20
1 59 33	0.00	0.00	0.0	0.0	1.31	4.50	3.17	6.47	2.85	5.12	1.55	2.87
1 59 34	0.0	0.0	0.0	0.0	2.81	9.61	3.46	7.07	2.03	3.66	0.95	1.75
1 59 35	0.0	0.0	0.0	0.0	2.97	10.20	4.07	8.30	2.55	4.59	1.17	2.17
1 59 36	0.00	0.00	0.00	0.00	1.65	5.63	3.12	6.37	2.75	4.94	1.45	2.67
1 59 37	0.00	0.00	0.00	0.00	1.28	4.39	2.94	6.00	2.98	5.35	1.66	3.07
1 59 38	0.00	0.00	0.00	0.00	1.37	4.70	2.18	4.44	1.85	3.32	0.91	1.69
1 59 39	0.00	0.00	0.00	0.00	1.72	5.90	3.11	6.34	2.77	4.99	1.44	2.66
1 59 40	0.01	0.04	0.00	0.00	0.13	0.44	0.63	1.29	1.79	3.21	2.80	5.17
1 59 90	0.00	0.00	0.03	0.14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 59 91	0.04	0.11	0.00	0.02	0.00	0.02	0.03	0.06	0.15	0.27	0.42	0.77
1 59 92	0.10	0.24	0.00	0.01	0.07	0.25	0.05	0.10	0.38	0.68	1.74	3.22
1 59 93	0.00	0.00	0.00	0.00	0.09	0.32	0.64	1.30	2.44	4.38	4.68	8.66
1 59 94	0.02	0.06	0.00	0.00	0.01	0.05	0.09	0.18	0.47	0.85	1.33	2.47
TOTAL CONCENTRATION (UG/M**3)												
	40.10		19.05		29.23		49.30		55.63		54.08	

RECEPTORS	25.		26.		27.		28.		29.		30.	
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
3 59 06	0.05	0.10	0.42	0.79	2.98	5.30	7.22	12.98	7.79	16.31	4.57	15.51
3 59 15	0.08	0.15	0.73	1.39	3.85	6.43	5.06	8.75	3.89	8.14	2.08	7.04
3 59 18	0.34	0.64	3.18	6.05	10.36	18.42	13.33	23.05	9.44	19.75	4.53	15.39
3 59 19	0.11	0.20	0.13	0.24	1.11	1.97	4.46	7.72	7.43	15.54	5.70	19.33
3 59 20	0.24	0.45	1.30	2.47	2.70	4.79	2.57	4.45	1.45	2.99	0.75	2.55
3 59 22	0.24	0.44	1.30	2.48	2.72	4.83	2.58	4.47	1.42	2.98	0.74	2.53
3 59 05	0.33	0.62	0.05	0.11	0.08	0.14	0.81	1.40	3.20	6.69	4.69	15.93
3 59 09	4.88	9.15	3.77	10.66	8.33	14.81	5.18	8.95	3.13	6.56	1.54	5.23
3 59 10	8.08	15.14	6.85	13.01	4.12	7.32	2.49	4.30	1.08	2.27	0.24	0.80
3 59 11	2.63	4.92	5.41	10.28	5.80	10.31	3.79	6.55	2.23	4.67	1.20	4.08
3 59 13	0.08	0.14	0.51	0.97	1.87	3.32	3.53	6.11	3.79	7.75	2.51	8.53
3 59 21	3.77	7.07	3.00	5.70	1.63	2.91	0.90	1.55	0.35	0.74	0.07	0.23
1 59 24	0.49	0.93	0.14	0.27	0.02	0.03	0.00	0.00	0.00	0.00	0.00	0.00
1 59 25	0.73	1.37	0.39	0.74	0.12	0.22	0.03	0.05	0.00	0.00	0.00	0.00
1 59 26	0.30	0.56	0.06	0.12	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
1 59 27	2.21	4.13	1.13	2.15	0.28	0.49	0.03	0.04	0.00	0.00	0.00	0.00
1 59 28	1.95	3.66	1.06	2.02	0.36	0.64	0.05	0.09	0.00	0.01	0.00	0.00
2 59 29	6.14	11.51	3.62	6.88	2.17	3.86	1.01	1.75	0.26	0.54	0.03	0.12
1 59 30	0.66	1.24	0.34	0.64	0.09	0.17	0.01	0.02	0.00	0.00	0.00	0.00
1 59 31	1.23	2.31	0.66	1.26	0.28	0.50	0.06	0.10	0.01	0.01	0.00	0.00
1 59 32	0.33	0.62	0.09	0.18	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00
1 59 33	0.78	1.46	0.18	0.35	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00
1 59 34	0.30	0.56	0.03	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 59 35	0.40	0.74	0.05	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1 59 36	0.73	1.36	0.21	0.40	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00
1 59 37	0.85	1.59	0.29	0.55	0.04	0.07	0.00	0.00	0.00	0.00	0.00	0.00
1 59 38	0.43	0.81	0.12	0.22	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00
1 59 39	0.71	1.33	0.21	0.40	0.02	0.04	0.00	0.00	0.00	0.00	0.00	0.00
1 59 40	2.82	5.28	1.95	3.71	1.16	2.06	0.71	1.22	0.32	0.66	0.08	0.28
1 59 90	0.00	0.00	0.00	0.01	0.03	0.05	0.09	0.15	0.14	0.30	0.11	0.36
1 59 91	0.65	1.22	0.66	1.25	0.46	0.81	0.27	0.47	0.17	0.35	0.07	0.25
1 59 92	4.14	7.76	5.00	9.48	3.52	6.26	2.08	3.60	1.19	2.49	0.41	1.39
1 59 93	4.71	8.82	3.00	5.69	1.89	3.20	0.93	1.60	0.26	0.54	0.03	0.12
1 59 94	1.99	3.72	1.77	3.37	1.09	1.93	0.65	1.12	0.34	0.71	0.10	0.34
TOTAL CONCENTRATION (UG/M**3)												
	53.36		52.65		56.26		57.83		47.79		29.46	

RECEPTORS	31.		32.		33.		34.		35.		36.	
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
3 59 06	0.57	2.52	0.26	0.74	0.07	0.15	0.03	0.06	0.16	0.31	0.86	1.61
3 59 15	0.31	1.35	0.11	0.30	0.02	0.05	0.05	0.09	0.17	0.32	1.06	1.97
3 59 18	0.51	2.23	0.16	0.45	0.04	0.09	0.15	0.30	0.88	1.73	3.34	6.24
3 59 19	1.01	4.43	0.57	1.62	0.19	0.43	0.04	0.09	0.09	0.17	0.48	0.89
3 59 20	0.08	0.33	0.02	0.05	0.02	0.03	0.09	0.19	0.42	0.83	1.15	2.15
3 59 22	0.08	0.35	0.02	0.05	0.02	0.03	0.09	0.18	0.42	0.83	1.16	2.16
3 59 05	0.47	2.06	0.41	1.18	0.24	0.53	0.08	0.17	0.02	0.04	0.04	0.07

3 59 09	0.04	0.18	0.13	0.36	0.60	1.33	2.02	4.12	4.00	9.03	5.93	12.96
3 59 10	0.16	0.70	0.70	2.01	2.23	4.97	4.68	9.57	6.55	12.84	6.41	11.99
3 59 11	0.03	0.12	0.06	0.17	0.29	0.64	1.05	2.15	2.62	5.13	4.24	7.93
3 59 13	0.28	1.23	0.09	0.25	0.02	0.06	0.06	0.13	0.31	0.60	1.06	1.98
3 59 21	0.08	0.34	0.37	1.04	1.11	2.48	1.99	4.07	2.48	4.78	2.28	4.26
1 59 24	1.55	6.73	1.77	5.06	1.55	3.46	1.02	2.08	0.62	1.22	0.39	0.74
1 59 25	0.45	2.00	0.94	2.67	1.23	2.73	1.15	2.35	0.80	1.56	0.49	0.91
1 59 26	1.07	4.71	1.26	3.58	1.11	2.48	0.71	1.44	0.41	0.81	0.25	0.46
1 59 27	1.47	6.47	3.55	10.11	5.22	11.64	4.58	9.38	3.33	6.53	2.18	4.08
1 59 28	1.02	4.49	2.24	6.38	3.08	6.87	2.98	6.09	2.11	4.14	1.31	2.44
2 59 29	0.57	3.84	2.44	6.96	4.42	9.87	5.56	11.36	5.25	10.29	3.83	7.15
1 59 30	0.41	1.79	0.88	2.50	1.17	2.61	1.08	2.21	0.74	1.44	0.46	0.85
1 59 31	0.45	1.96	1.04	2.96	1.48	3.29	1.55	3.12	1.18	2.31	0.73	1.36
1 59 32	1.06	4.64	1.24	3.55	1.07	2.39	0.71	1.44	0.45	0.87	0.28	0.53
1 59 33	1.73	7.58	3.05	8.68	3.20	7.14	2.25	4.60	1.41	2.77	0.90	1.69
1 59 34	1.78	7.80	2.14	6.09	1.78	3.97	1.06	2.16	0.62	1.21	0.32	0.60
1 59 35	1.94	8.50	2.40	6.85	2.09	4.66	1.26	2.56	0.73	1.43	0.39	0.73
1 59 36	1.34	5.90	2.02	5.74	2.05	4.58	1.48	3.00	0.88	1.73	0.55	1.02
1 59 37	1.16	5.12	1.93	5.49	2.10	4.69	1.62	3.30	0.97	1.91	0.61	1.15
1 59 38	0.94	4.13	1.27	3.63	1.26	2.81	0.90	1.83	0.51	1.00	0.31	0.58
1 59 39	1.31	5.74	1.90	5.41	1.93	4.31	1.41	2.89	0.82	1.62	0.51	0.95
1 59 40	0.25	1.10	0.74	2.10	1.45	3.24	2.00	4.08	2.12	4.18	1.28	2.34
1 59 90	0.00	0.00	0.00	0.00	0.01	0.01	0.02	0.04	0.05	0.09	0.08	0.14
1 59 91	0.01	0.06	0.06	0.17	0.17	0.38	0.34	0.69	0.47	0.91	0.49	0.92
1 59 92	0.04	0.16	0.18	0.52	0.71	1.58	1.90	3.84	3.37	6.61	4.06	7.58
1 59 93	0.28	1.24	0.99	2.83	2.37	5.28	3.70	7.57	4.01	7.87	3.19	5.96
1 59 94	0.04	0.19	0.18	0.51	0.54	1.19	1.04	2.13	1.39	2.73	1.39	2.60
TOTAL CONCENTRATION (UG/M**3)												
	22.77		35.09		44.22		48.94		51.00		57.50	

RECEPTORS	37.		38.		39.		40.		41.		42.	
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
3 59 06	2.71	4.96	4.58	8.77	5.13	11.23	4.15	12.28	0.04	0.45	0.03	0.09
3 59 15	2.49	4.56	3.53	6.75	3.34	7.32	2.27	6.73	0.04	0.21	0.01	0.05
3 59 18	6.54	11.99	7.96	15.23	7.22	15.83	4.67	13.81	0.05	0.29	0.02	0.09
3 59 19	1.80	3.30	4.26	8.15	6.15	13.48	5.80	17.14	0.23	1.26	0.08	0.27
3 59 20	1.82	3.33	1.93	3.69	1.45	3.18	0.88	2.60	0.01	0.04	0.01	0.04
3 59 22	1.83	3.36	1.94	3.71	1.45	3.18	0.88	2.60	0.01	0.04	0.01	0.04
3 59 05	0.24	0.45	1.00	1.91	2.19	4.80	2.88	8.51	0.18	0.98	0.08	0.29
3 59 09	7.27	13.32	5.63	10.78	3.70	8.11	2.53	7.48	0.08	0.46	0.31	1.10
3 59 10	4.72	8.65	3.10	5.93	2.13	4.68	1.28	3.78	0.30	1.97	1.05	3.73
3 59 11	4.76	8.73	3.90	7.47	2.59	5.67	1.73	5.11	0.04	0.23	0.15	0.54
3 59 13	2.46	4.51	3.75	7.24	4.18	9.15	3.52	10.39	0.05	0.28	0.02	0.07
3 59 21	1.62	2.97	0.99	1.90	0.64	1.41	0.36	1.07	0.15	0.80	0.46	1.62
1 59 24	0.19	0.35	0.06	0.11	0.01	0.03	0.00	0.00	1.10	6.01	1.25	4.44
1 59 25	0.31	0.58	0.16	0.31	0.05	0.12	0.01	0.03	0.44	2.40	0.73	2.59
1 59 26	0.10	0.19	0.03	0.05	0.00	0.01	0.00	0.00	0.74	4.06	0.85	3.01
1 59 27	1.41	2.59	0.66	1.26	0.18	0.40	0.03	0.09	1.86	10.18	3.44	12.23
1 59 28	0.85	1.55	0.45	0.87	0.16	0.35	0.03	0.10	1.05	5.71	1.78	6.34
2 59 29	2.47	4.52	1.68	3.21	1.03	2.26	0.46	1.36	1.11	6.09	2.29	8.14
1 59 30	0.29	0.53	0.14	0.27	0.04	0.09	0.01	0.02	0.41	2.25	0.69	2.45
1 59 31	0.46	0.84	0.27	0.52	0.11	0.24	0.03	0.09	0.46	2.51	0.81	2.88
1 59 32	0.14	0.25	0.04	0.08	0.01	0.02	0.00	0.00	0.79	4.34	0.92	3.26
1 59 33	0.42	0.76	0.11	0.21	0.02	0.04	0.00	0.00	1.74	9.58	2.62	9.30
1 59 34	0.10	0.19	0.02	0.04	0.00	0.00	0.00	0.00	1.23	6.74	1.44	5.12
1 59 35	0.13	0.24	0.03	0.05	0.00	0.01	0.00	0.00	1.34	7.34	1.60	5.67
1 59 36	0.27	0.50	0.08	0.16	0.02	0.03	0.00	0.00	1.06	5.81	1.42	5.05
1 59 37	0.33	0.60	0.11	0.21	0.02	0.05	0.00	0.01	0.96	5.28	1.37	4.87
1 59 38	0.15	0.27	0.04	0.09	0.01	0.02	0.00	0.00	0.68	3.72	0.85	3.02
1 59 39	0.26	0.47	0.08	0.15	0.02	0.03	0.00	0.00	0.99	5.42	1.30	4.61
1 59 40	1.22	2.24	0.81	1.55	0.56	1.23	0.33	0.99	0.34	1.84	0.73	2.59
1 59 90	0.09	0.16	0.06	0.12	0.03	0.06	0.01	0.03	0.02	0.08	0.03	0.11
1 59 91	0.42	0.76	0.29	0.55	0.19	0.41	0.13	0.39	0.03	0.15	0.08	0.28
1 59 92	3.52	6.44	2.40	4.60	1.60	3.50	1.08	3.19	0.10	0.56	0.34	1.20
1 59 93	2.11	3.86	1.43	2.74	0.93	2.03	0.44	1.30	0.47	2.55	1.14	4.07
1 59 94	1.07	1.96	0.70	1.33	0.47	1.03	0.30	0.90	0.08	0.46	0.24	0.85
TOTAL CONCENTRATION (UG/M**3)												
	54.57		52.23		45.65		33.82		18.29		28.13	

RECEPTORS	43.	44.	45.	46.	47.	48.

SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
3 59 06	0.02	0.05	0.08	0.19	0.34	0.72	1.06	2.15	2.23	4.44	3.20	6.66
3 59 15	0.03	0.08	0.13	0.29	0.44	0.93	1.11	2.26	1.98	3.94	2.58	5.37
3 59 18	0.08	0.21	0.35	0.81	1.23	2.64	2.92	5.95	4.56	9.07	5.34	11.12
3 59 19	0.03	0.07	0.06	0.14	0.25	0.53	0.82	1.66	2.06	4.08	3.71	7.73
3 59 20	0.05	0.12	0.17	0.40	0.49	1.05	0.95	1.93	1.31	2.61	1.43	2.97
3 59 22	0.04	0.12	0.17	0.39	0.49	1.05	0.95	1.94	1.32	2.63	1.44	2.99
3 59 05	0.03	0.07	0.01	0.02	0.02	0.05	0.10	0.21	0.37	0.74	0.95	1.97
3 59 09	0.94	2.54	2.25	5.21	4.04	8.57	5.50	11.20	5.96	11.85	5.26	10.96
3 59 10	2.38	6.39	4.04	9.33	5.25	11.27	5.45	11.08	4.62	9.19	5.36	6.99
3 59 11	0.49	1.32	1.24	2.87	2.38	5.06	3.36	6.84	3.79	7.54	3.49	7.27
3 59 13	0.05	0.14	0.19	0.45	0.60	1.28	1.44	2.94	2.62	5.20	3.60	7.49
3 59 21	0.97	2.60	1.45	3.35	1.70	3.65	1.70	3.46	1.43	2.85	1.01	2.10
1 59 24	1.20	3.23	0.95	2.20	0.64	1.38	0.44	0.89	0.31	0.61	0.19	0.39
1 59 25	0.90	2.41	0.90	2.09	0.75	1.60	0.52	1.05	0.35	0.69	0.25	0.52
1 59 26	0.82	2.21	0.65	1.51	0.43	0.92	0.28	0.57	0.19	0.38	0.11	0.23
1 59 27	4.65	12.50	4.74	10.95	3.81	8.17	2.67	5.43	1.91	3.79	1.38	2.88
1 59 28	2.27	6.11	2.34	5.35	1.96	4.21	1.38	2.81	0.95	1.86	0.67	1.39
2 59 29	3.49	9.39	4.21	9.74	4.33	9.29	3.57	7.27	2.56	5.13	1.79	3.73
1 59 30	0.86	2.32	0.87	2.00	0.71	1.52	0.49	0.99	0.33	0.66	0.24	0.49
1 59 31	1.05	2.82	1.11	2.57	1.00	2.14	0.73	1.48	0.48	0.98	0.34	0.70
1 59 32	0.88	2.36	0.69	1.59	0.47	1.01	0.33	0.66	0.23	0.46	0.14	0.30
1 59 33	2.88	7.73	2.42	5.59	1.69	3.63	1.17	2.38	0.84	1.67	0.51	1.06
1 59 34	1.37	3.68	1.03	2.37	0.65	1.40	0.44	0.89	0.28	0.56	0.14	0.29
1 59 35	1.55	4.16	1.19	2.76	0.76	1.63	0.50	1.02	0.33	0.66	0.17	0.35
1 59 36	1.51	4.05	1.30	3.00	0.91	1.95	0.60	1.21	0.41	0.83	0.26	0.55
1 59 37	1.51	4.06	1.36	3.15	0.95	2.12	0.65	1.31	0.45	0.94	0.29	0.61
1 59 38	0.88	2.36	0.76	1.75	0.52	1.12	0.33	0.68	0.23	0.46	0.14	0.29
1 59 39	1.37	3.68	1.20	2.76	0.84	1.80	0.54	1.10	0.37	0.74	0.24	0.49
1 59 40	1.18	3.17	1.51	3.48	1.62	3.48	1.50	3.06	1.19	2.37	0.84	1.74
1 59 90	0.05	0.13	0.06	0.14	0.06	0.12	0.04	0.09	0.02	0.05	0.01	0.02
1 59 91	0.17	0.46	0.28	0.64	0.35	0.76	0.38	0.77	0.35	0.70	0.28	0.58
1 59 92	0.90	2.41	1.81	4.18	2.73	5.87	3.23	6.57	3.09	6.14	3.45	8.09
1 59 93	2.11	5.67	2.94	6.80	3.25	6.98	2.93	5.96	2.22	4.42	1.65	3.22
1 59 94	0.52	1.39	0.83	1.91	1.04	2.22	1.08	2.20	0.95	1.88	0.70	1.46
TOTAL CONCENTRATION (UG/M**3)												
	37.23		43.29		46.60		49.16		50.30		45.04	

RECEPTORS	49.		50.									
SOURCE NAME	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.	PARTIAL CONC.	% CONT.
3 59 06	3.58	8.42	3.32	9.68								
3 59 15	2.64	6.21	2.16	6.30								
3 59 18	5.28	12.42	4.25	12.39								
3 59 19	4.93	11.61	5.03	14.68								
3 59 20	1.26	2.97	0.91	2.65								
3 59 22	1.27	2.98	0.91	2.65								
3 59 05	1.59	3.75	1.96	5.70								
3 59 09	3.93	9.25	2.75	8.02								
3 59 10	2.37	5.59	1.76	5.15								
3 59 11	2.68	6.32	1.87	5.45								
3 59 13	4.00	9.42	3.74	10.93								
3 59 21	0.67	1.59	0.48	1.40								
1 59 24	0.09	0.21	0.03	0.09								
1 59 25	0.16	0.37	0.08	0.23								
1 59 26	0.05	0.11	0.01	0.04								
1 59 27	0.84	1.98	0.38	1.10								
1 59 28	0.44	1.03	0.22	0.65								
2 59 29	1.32	3.10	0.93	2.70								
1 59 30	0.15	0.34	0.07	0.20								
1 59 31	0.23	0.55	0.13	0.38								
1 59 32	0.07	0.16	0.02	0.07								
1 59 33	0.23	0.54	0.07	0.20								
1 59 34	0.05	0.11	0.01	0.03								
1 59 35	0.06	0.14	0.02	0.04								
1 59 36	0.13	0.30	0.04	0.13								
1 59 37	0.15	0.35	0.05	0.16								
1 59 38	0.07	0.16	0.02	0.06								
1 59 39	0.11	0.27	0.04	0.12								
1 59 40	0.60	1.41	0.45	1.30								
1 59 90	0.00	0.01	0.00	0.01								
1 59 91	0.20	0.46	0.14	0.41								
1 59 92	1.72	4.06	1.24	3.62								
1 59 93	1.13	2.67	0.82	2.40								
1 59 94	0.49	1.15	0.35	1.03								

TOTAL CONCENTRATION (UG/M**3)

42.47 34.27

TCP OUTPUT CHARGE: $ .22

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301

BOB GRAHAM
GOVERNOR

JACOB D. VARN
SECRETARY

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

January 18, 1980

Dr. John B. Koogler, P. E.
Sholtes and Koogler
Environmental Consultants
1213 N. W. 6th Street
Gainesville, Fla 32601

Dear John:

I would like to bring you up to date on our review of the air quality analysis for the proposed new sources at the New Wales Chemical Company in Polk County. The Southwest District office is handling the construction permit applications for the two sulfuric acid plants, the granular products load-out system, and the liming station. The Central Air Permitting Section in Tallahassee is handling the application to construct the dual-train Di-ammonium phosphate (DAP) plant.

Background

On October 4, 1979, we notified the company that the DAP plant application was incomplete and that we needed, among other things, a BACT recommendation for each source and a PSD air quality analysis. On December 6, 1979, I received from the District office a report entitled "Supplemental Data for PSD Review, New Wales Chemical Company, Polk County, Florida, November 1979". The District asked me to review the report in connection with the sulfuric acid plants. At the same time, they asked you for an emissions inventory of SO_2 sources used in the study. On December 11, 1979, you sent me two copies of the dispersion model output supporting the PSD report. I forwarded one copy of the output to the District office and confirmed with you that these materials, the PSD report and the associated model output, were intended to also comprise the required PSD analysis for the DAP plant.

Although the modeling appeared complete, the PSD report did not address BACT. Therefore, we notified the company on December 20, 1979, that BACT recommendations for both particulate and SO_2 emissions from the DAP plant were still needed and that the PSD analysis should reflect the impact of emissions at the levels of proposed BACT. On January 14, 1980, we received the requested BACT recommendations.

While awaiting the BACT information, we began reviewing the PSD analysis for both the sulfuric acid plants and the DAP plant, bearing in mind that the final DAP plant BACT determinations could somewhat alter the analysis results. Preliminary results of this review are as follows.

General Comments

Often in reviewing analyses of this sort, we find minor errors in model input data, modeling technique, and tabulated results. Our policy in these cases has been to assess the significance of the errors, perhaps by repeating certain model runs ourselves, to determine whether or not we can support the conclusions of the analysis if not the exact results. If conclusions can be reasonably drawn, we have made it our practice not to delay administrative action by requiring such errors to be corrected by the company or consultant.

Adhering to this policy in this case, we have determined that the PSD analysis for SO_2, though faulted, can be accepted; however, the analysis for TSP contains errors which can be corrected only by the submission of additional model runs and other information. Before discussing these problems in detail, we would like to point out some general deficiencies common to both the SO_2 and TSP analyses which in this case we can overcome but in future analyses should be avoided. They are as follows.

1. The meteorological data base used for CRSTER/PTMTPW modeling does not reflect the mixing height corrections made by the National Climatic Center, nor does it employ the standard EPA wind vector randomization scheme. If you send us a scratch tape, we will copy onto it the revised mixing heights and, if desired, a version of the CRSTER/RAM preprocessor program which uses the EPA random numbers.

2. It appears that one day of data has been inadvertently added to each year of meteorological data used. Comparing data sets, your day 222/1970, is our day 222/1970;

your day 175/1972, is our day 173/1972; and your day 12/1973, is our day 9/1973.

3. In many of the PTMTPW runs, the critical receptor is on the edge of the receptor grid, thereby leaving open the possibility that higher concentrations might be predicted if the grid were expanded. The critical receptor should always be an internal receptor, and the grid itself should be large enough to verify that contributing sources would not produce a second, possibly greater, maximum at some other point. We will consider exceptions to this rule on a case-by-case basis (if, for example, the receptor grid were expanded to include the area within the secured perimeter of the immediate production complex).

4. Emission rates and stack parameters used in the modeling are somewhat inconsistent from run to run and in many cases are not traceable to information contained in current permits or permit applications. For example, DAP plant scrubber TSP emissions are given as 4.3 g/s in the PSD report, 3.8 g/s in the CRSTER runs, 4.8 g/s in the PTMTPW runs, and 7.8 g/s in the AQDM runs. We note similar variations in stack diameter, exit temperature, and volumetric flow rate. New sources should be modeled at proposed BACT emission rates. Existing sources should be modeled at emission rates equal to the maximum levels allowed by permit or rule. If the allowable emission rate of a company-owned source is unrealistically high and, as such, would contribute to a modeled violation of increments or standards, we would recommend that the company request an amendment to that source's operating permit to reduce its allowable emission rate to a realistic level.

Sulfur Dioxide Analysis

Since existing monitoring data in the area indicate low annual average SO_2 concentrations, we concur with EPA's decision that preconstruction SO_2 monitoring is unnecessary. Since the primary source of SO_2 in the atmosphere is stack emissions and since the modeling included all significant SO_2 emitters within 50 km of New Wales, we also concur with the use of a background SO_2 concentration of 0.0 ug/m^3 in the analysis.

The selection of worst-case meteorological periods for modeling the short-term impacts of a facility such as this is complicated by the fact that pollutants are being emitted at various rates from stacks of various heights with the result that what is

worst-case for one source or group of sources may not correspond to what is worst-case for another source or group of sources. For this reason we generally recommend that for such facilities CRSTER models be run for each scenario of interest, e.g. the new source alone, all baseline sources, all increment-consuming sources, or all sources at the facility. Although you have not done this in this case, we believe that CRSTER sets #2 and #3 adequately support your choice of worst-case periods. These sets model stacks typical of all significant SO_2 sources at New Wales, and both sets flag the same overall worst-case period.

The CRSTER and PTMTPW runs suggest that the limiting case for SO_2 impact analysis is likely the 24-hour average for either day 173/1972 or 174/1972. Not only do these days produce maximum plant-alone impacts, they also result in maximum upwind source contributions. We remodeled each day using larger receptor grids and setting emission rates equal to maximum allowable levels. The results are as follows.

Second Maximum 24-Hour Average	Day	Location UTM E	Location UTM N	Concentration (ug/m^3)
Vs. PSD Increment	173	398.7	3078.6	52
Vs. AAQS[1]	173	398.8	3078.7	213
Vs. AAQS[2]	173	398.6	3078.8	267
Vs. AAQS[3]	173	398.7	3078.8	243

1. Without standby boiler (NEDS 59-13).
2. Standby boiler replacing sulfuric acid plant #1.
3. Same as 2. with boiler stack raised to 85 ft.

The above results indicate that operation of the new SO_2 sources together with the standby boiler and other sources at the facility could result in a violation of the 260 ug/m^3 24-hour AAQS for SO_2. The boiler's relatively short stack (35 ft.) is the chief problem. If the stack were raised to 85 feet, as the company has proposed, the maximum 24-hour average concentration would fall to an acceptable 243 ug/m^3. We are recommending to the District, then, by copy of this letter, that permitting of the new sulfuric acid plants be conditioned upon the standby boiler's stack being raised. If the stack height increase is accomplished, we are satisfied that SO_2 emissions from the DAP plant at the proposed rate of 44 lb/hr will not cause or contribute to any violation of increments or standards. Copies of our model runs are enclosed.

Particulate Analysis

The determination of background TSP concentration is crucial in this case because of the history of high annual average TSP concentrations at monitoring sites throughout Polk County. For this reason, we are requesting that SAROAD side identification and site evaluation forms be completed for the proposed background monitoring station and that at least the most recent year of data from the site be submitted in SAROAD format. We will reserve judgment on whether or not these data are adequate until we have had a chance to review these materials.

The CRSTER modeling for TSP is inadequate for the following reasons: (1) no runs are included for the total facility to flag worst-case periods for comparison with AAQS, and (2) the runs made for the DAP plant should have receptor rings positioned closer to the plant (e.g. 0.5 - 2.5 km.) and include other increment-consuming sources at the facility. Because of these problems with the CRSTER modeling, we are unable to verify the selection of worst-case periods used for the PTMTPW runs. We recommend that at least two new sets of CRSTER runs be made, as described above, and that PTMTPW models be run for the resultant overall and azimuth-specific (220^{o} - 270^{o}) worst-case periods. These additional runs should be made using maximum allowable emission rates, consistent and traceable stack parameters, and sufficiently detailed receptor grids as discussed previously.

By copy of this letter, we are notifying the company that the DAP plant application is being considered incomplete pending the submittal of these additional materials and our evaluation of them. I would like to emphasize to you our willingness to cooperate with you and the company in any way we reasonably can to resolve these inadequacies and proceed with the expeditious review of this application.

Sincerely,

Lawrence A. George, Meteorologist
Bureau of Air Quality Management

LAG/ht

cc: A. L. Girardin, III, New Wales Chemicals, Inc.
D. A. Williams, Southwest District (w/attachments)
W. Thomas

SHOLTES & KOOGLER, ENVIRONMENTAL CONSULTANTS
1213 N.W. 6th Street Gainesville, Florida 32601 (904) 377-5822

SKEC 124-79-01

February 13, 1980

Mr. Larry George
Florida Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, FL 32301

Subject: New Wales Chemicals
Air Pollution Construction Permit Applications

Dear Larry:

The purpose of this letter is to transmit information related to the air quality impact of particulate matter emissions from proposed sources at the New Wales Chemical Complex that will satisfy deficiencies in the original Permit Applications as set forth in your letter dated January 18, 1980. No additional information or comment is included on the SO_2 impact analyses since all matters have been resolved and the affected FDER permits issued.

Included in this packet are:

1. A list of proposed and existing New Wales particulate matter sources with proposed and allowable particulate matter emission rates,

2. A summary of the suspended particulate matter monitoring data collected at New Wales Monitoring Site No. 1 during the period January, 1975 through December, 1979,

3. CRSTER model runs utilizing Tampa meteorological data for the period 1970 through 1974 and emission data from the proposed New Wales particulate matter sources, and

4. Annual average and 24-hour average particulate matter impact analyses.

The subjects are discussed in the following sections of this letter.

1.0 SUMMARY

Proposed particulate matter emission rates for new and proposed sources have been developed. These emission rates represent significant reductions over allowable emission rates, in many cases, and more closely reflect actual emission rates from the various sources. These emission rates are discussed in Section 2.0.

Total suspended particulate matter monitoring data from the New Wales monitoring site No. 1 were analyzed for a five-year period and annual and 24-hour average background levels developed. It was determined that a reasonable annual average total suspended particulate matter background concentration of 32.7 micrograms per cubic meter is appropriate for the area. The 24-hour total suspended particulate matter background level developed was 57.0 micrograms per cubic meter. The development of these background concentrations is presented in Section 3.0.

Air quality modeling was conducted to determine the annual and 24-hour average impact of new, existing and proposed sources at the New Wales Chemical Complex. The results of this modeling are summarized in Table 1 and Figure 1. The results show that the maximum new source impact will be 36.6 micrograms per cubic meter for a 24-hour period and 11.0 micrograms per cubic meter for the annual average period. These impacts compare with allowable Class II PSD increments of 37.0 micrograms per cubic meter for a 24-hour period and 19.0 micrograms per cubic meter for an annual average period.

The maximum total suspended particulate matter impact of all sources at the New Wales Chemical Complex was determined to be 148 micrograms per cubic meter for a 24-hour period and 59 micrograms per cubic meter for an annual average period. Both impacts include background concentrations. These predicted concentrations compare with ambient air quality standards of 150 micrograms per cubic meter for a 24-hour period and 60 micrograms per cubic meter for an annual average period.

It should be noted that all impacts occur on New Wales property well within the New Wales property line.

2.0 SOURCE EMISSION DATA

Air quality modeling at maximum allowable particulate matter emission rates from proposed and existing sources at the New Wales Chemical Complex indicates there will be predicted violations of the 24-hour and annual average ambient air quality standards. In many cases, however, the actual particulate matter emission rates from a source is much less than the maximum allowable emission rate. This is particularly true where a materials handling source is controlled with a bag collector and where allowable particulate matter emission rates have been established by the Process Weight Table (Chapter 17-2.05 Florida Administrative Code). In such cases, the allowable particulate matter emission rate might be in the range of 30 to 40 pounds per hour and the actual emission rate in the range of 2 to 5 pounds per hour.

To eliminate the conditions which result in calculated violations of the particulate matter air quality standards, it is proposed that some permitted particulate matter emission rates on existing sources be reduced. Table 2 lists all operating particulate matter emissions sources at the New Wales Chemical Complex. In this Table are proposed particulate matter emission rates for all sources and allowable particulate matter emission rates. So that permitting for the proposed sources can proceed, New Wales suggest that existing particulate matter source operating permits be modified to reflect the proposed emission rates in Table 2.

The proposed particulate matter emission rates are the emission rates which have been used in the attached air quality modeling. It should also be noted that emissions from sources which New Wales intended to retire are included in Table 2 and have been included in all modeling.

3.0 BACKGROUND TOTAL SUSPENDED PARTICULATE MATTER DATA

New Wales has operated a total suspended particulate matter monitoring site approximately 3.5 kilometers west of the plant site for approximately six (6) years. The monitoring, shown in Figure 2, was initiated at the site in 1974 prior to the startup of the Chemical Complex and has continued since that time.

A site evaluation was recently made by representatives of the Florida Department of Environmental Regulation and New Wales. The site was found to be adequate and representative of background particulate matter levels in the area, except as the site might be affected when winds blow from the New Wales Chemical Complex toward the site (easterly winds). A five-year wind direction frequency distribution for Tampa indicates that easterly winds occur approximately 10 percent of the time (Figure 2).

The number of samples collected and the geometric mean total suspended particulate matter levels for the five years, 1975 through 1979, are summarized in Table 3. Over the five-year period, there was 89 percent data recovery. The geometric mean for the 5-year period was 32.7 micrograms per cubic meter. This value was selected as the annual average total suspended particulate matter background for the area, neglecting the impact of emissions from New Wales which possibly effect the site ten percent of the time.

In Table 4, the individual particulate matter levels monitored at the site over the 5-year period of record are listed in descending order. These data are displayed graphically in Figure 3. From Figure 3 it will be noted that there is a break in the frequency distribution of the monitoring data at approximately the eighth percentile. This percentile, perhaps fortuitously, corresponds to the fraction of time that winds blow from the New Wales Chemical Complex toward the monitoring site ten percent).

For this analysis, it was assumed that the frequency distribution of total suspended particulate matter data to the right of the eighth percentile represents the distribution of background of total suspended particulate levels and the distribution of the left of the eighth percentile was assumed to represent particulate matter levels at the monitoring site when the site was influenced by emissions from the New Wales Chemical Complex. The 24-hour total suspended particulate matter background level for the area was assumed to be the concentration occurring at the eighth percentile; or 57 micrograms per cubic meter.

The annual average background level of the 32.7 micrograms per cubic meter and the 24-hour background level of 57 micrograms per cubic meter were added to particulate matter of impacts resulting from the point sources of air pollutants within the study area when comparing particulate matter impacts with ambient air quality standards.

4.0 ANNUAL AVERAGE TOTAL SUSPENDED PARTICULATE MATTER IMPACT

The impact of total suspended particulate matter emissions from the New Wales Chemical Complex for the annual average was determined with the Air Quality Display Model (AQDM). Source data from Table 2, adjusted to reflect annual average operating time, were input to the AQDM with Tampa meterological data representing the period 1970 through 1974. Emission data for the proposed and "new" sources were input to the model to compare new source impact with the applicable PSD increments. Proposed and new source and existing source emission data were then input the model to compare total emission impact with applicable ambient air quality standards.

The new source emission impact is summarized in Figure 4 which is a graphical representation of the AQDM results. In this figure, the annual average impact of new source emissions is shown. The maximum new source impact on annual average total suspended particulate matter levels is 11 micrograms per cubic meter. This impact occurs on New Wales property within 1.5 kilometers to the east of the Chemical Complex. This impact is less than the annual average total suspended particulate matter Class II PSD increment of 19 micrograms per cubic meter.

The impact of particulate matter emissions from existing, proposed, and new sources is summarized in Figure 5. The maximum expected annual average particulate matter levels including background occurring after the proposed expansion will be 59 micrograms per cubic meter. This concentration will occur approximately 1 kilometer east of the Chemical Complex in the gypsum stack area. The maximum property line concentration will be 43 micrograms per cubic meter. This concentration will occur northeast of the Chemical Complex along S.R. 640. The Florida annual ambient air quality standard for total suspended particulate matter is 60 micrograms per cubic meter.

The model runs which produce the data summarized in Figures 4 and 5 are included in the attachment to this letter.

5.0 24-HOUR TOTAL SUSPENDED PARTICULATE MATTER IMPACTS

The 24-hour total suspended particulate matter impact was determined with the CRSTER and PTMTPW quality models. The CRSTER model was first run with allowable particulate matter emission rates from the proposed sources and Tampa meterological data representing 5-year period 1970 through 1974. From these results, the worst case meterological data were selected and input to the PTMTPW model together with allowable particulate matter emissions from the proposed, new and existing sources. Based on these preliminary runs, proposed particulate matter emission rates for existing and new sources were determined. The proposed emission rates, in most cases, represent significant reductions over allowable emission rates and reflect more closely actual particulate matter emission rates from existing and new sources at the New Wales Chemical Complex. The proposed particulate matter emission rates are included in Table 2.

Once proposed particulate matter emission rates for existing and new sources were determined, the CRSTER was again run for one year (1973) to determine whether or not "worst case" meterological conditions remained the same. It was determined that changing source emission rates from allowable to proposed did not materially effect the determination of the "worst case" meterological conditions. The initial CRSTER runs were therefore used for selecting various meterological conditions with which to evaluate the maximum expected impacts at various receptors. It should be noted that days 173 to 180 were omitted from calendar year 1972 meterological data because of the extremely low probability of reoccurance of conditions represented by these days.

The results of the CRSTER modeling are summarized in Table 5. The maximum impact of the proposed New Wales sources occurs with meteorology from day 41, 1971. It will also be noted, from Table 5, that the highest second-high 24-hour impacts with allowable and proposed emissions occurred on day 341 in 1973. All CRSTER runs are included in the attachment to this letter.

Once "worst case" meterological conditions were determined with the CRSTER model, the meterological conditions and source emission data were input to the PTMTPW model. This model was used to investigate the impact that particulate matter emissions at five (5) different locations; one resulting from the impact of the emissions under meterological conditions representing day 49, 1971 and four other locations representing the combined impact of New Wale sources and other sources in the area.

In each case, the PTMTPW was run with emissions from proposed and new sources and again with emissions from proposed, new and existing sources. The impacts of emissions from the new and proposed sources were compared with the 24-hour Class II PSD Increment and impacts from emissions from all sources were compared with ambient air quality standards. Emission data listed in Table 2 of this report were used for modeling.

The results of all 24-hour TSP modeling are summarized in Table 1 and Figure 1. It will be noted the maximum impact of new and proposed sources occurs at receptor 1A. This impact, 36.6 micrograms per cubic meter, results with meterological conditions from day 49, 1971. The maximum impact of all sources, including background, is 148 micrograms per cubic

meter. This occurs at a location approximately 1 kilometer south-southwest of the Chemical Complex on New Wales property.

In locating receptors at which to evaluate the impact of particulate matter emissions, no receptors were placed closer than approximately one kilometer to the chemical complex boundary. One kilometer was selected since it approximately represented the north-south and east-west dimension of the chemical complex. In all cases receptors were located well within the New Wales property line. Receptors located closer to the chemical complex are in areas which are physically inaccessible to the general public or in areas where New Wales can reasonably restrict public access. The New Wales property line for all property contiguous with the chemical complex is shown in Figure 6.

All PTMTPW runs used in generating data presented in this section are included in the attachment to this letter.

6.0 CONCLUSION

The emission data, total suspended particulate matter ambient monitoring data, and the impact analyses presented herein are consistent with our recent discussions and telephone conversations. I hope you find this information adequate to complete your review of the pending New Wales construction permit application. If you have any comments or additional questions, please feel free to give me a call. I appreciate your cooperation in preparing this information.

Very truly yours,

SHOLTES & KOOGLER
ENVIRONMENTAL CONSULTANTS

John B. Koogler, Ph.D., P.E.

JBK:sc

Attachments

TABLE 1

SUMMARY OF PARTICULATE MATTER IMPACTS
ON AIR QUALITY

NEW WALES CHEMICALS, INC.
POLK COUNTY, FLORIDA

Time Period	New Source Impact (ug/m^3)	Class II PSD Increment (ug/m^3)	All Source Impact* (ug/m^3)	Air Quality Standard (ug/m^3)
Annual	11	19	59	60
24-Hour				
1A	36.6	37	126.6	150
2	29.5		111.4	
3	22.9		93.1	
4	29.2		108.9	
5	35.2		147.6	

* Includes background: Annual - 33 ug/m^3
24-Hour - 57 ug/m^3

TABLE 2

PARTICULATE MATTER SOURCES

NEW WALES CHEMICALS, INC.
POLK COUNTY, FLORIDA

Source Number	Source	Emission Rate		Stack Parameters			
		Actual (lb/hr)	Allowed (lb/hr)	Ht. (M)	Temp (°K)	Vel. (m/s)	Dia (m)
3 59 05	Railcar Gnd. Rock Unload	4.8	31.3	12.2	319	20.2	0.9
3 59 06	Dry Rock Silo	10.0	44.3	21.0	319	10.0	0.3
3 59 09	DAP Plant	31.7	31.7	36.6	319	15.5	2.1
3 59 10	GTSP Plant	30.5	30.5	36.6	325	20.6	1.8
3 59 11	MAP Plant	19.9	19.9	41.2	336	10.7	1.2
3 59 13	Aux. Boiler	28.0	28.0	10.7	564	17.1	1.7
3 59 15	Rock Grinding East	10.0	41.3	30.5	344	15.8	0.8
3 59 18	Dryer Prod. Belt Trans.	10.0	44.0	5.5	319	15.2	0.5
3 59 19	Wet Rock Dryer	25.6	46.1	32.9	327	14.8	2.3
3 59 20	Phos. Acid Rock Bin West	5.0	41.3	30.5	319	12.7	0.6
3 59 21	GTSP Rock Bin	4.8	28.0	13.7	319	12.7	0.6
2 59 22	Phos. Acid Rock Bin East	5.0	41.3	30.5	319	12.7	0.6
1 59 24	Multiphos Ship. Bin	3.6	9.7	16.8	319	13.9	0.6
1 59 25	Limestone Stg. Silo	3.6	33.3	34.4	319	10.7	0.3
1 59 26	Silica Handling	1.6	15.0	5.5	319	10.0	0.3
1 59 27	AFI Plant	36.8	36.8	52.4	321	13.1	2.4
1 59 28	AFI Stg. Silos (2)	9.5	72.0	35.4	319	14.9	0.5
2 59 29	Fert. Products Ship.	20.0	41.7	36.6	319	10.1	0.9
1 59 30	AFI Limestone Feed Silo	3.6	34.5	36.0	319	12.7	0.6
1 59 31	AFI Truck Ship.	3.6	40.4	23.5	319	8.4	0.3
1 59 32	AFI Rail Ship.	3.6	40.3	32.3	319	10.7	0.6
1 59 33	Multiphos Plant	18.4	18.4	52.4	319	7.1	2.4
1 59 34	Soda Ash Unloading	3.6	5.7	18.3	319	3.2	0.3
1 59 35	Soda Ash Conveying	3.6	5.0	13.7	319	3.2	0.3
1 59 36	Multiphos Cooler A	4.8	15.0	26.5	319	8.5	0.5
1 59 37	Multiphos Cooler B	4.8	15.0	26.5	319	8.5	0.5
1 59 38	Multiphos Sizing	1.6	23.0	5.2	319	8.1	0.4
1 59 39	Multiphos Glass	3.6	18.4	17.4	319	8.1	0.4
1 59 40	Second Product L/O	7.1	77.2	30.5	319	11.7	0.7
1 59 90	Liming Station	1.0	1.0	22.9	319	10.4	0.3
1 59 91	Third Product L/O	1.7	1.7	30.5	319	11.7	0.7
1 59 92	DAP Scrubber 1	17.1	17.1	36.6	319	20.9	1.8
1 59 93	DAP Scrubber 2	17.1	17.1	36.6	319	20.4	1.8
1 59 94	DAP Bag Collector	4.3	4.3	24.4	319	10.2	1.8

TABLE 3

SUMMARY OF TOTAL SUSPENDED PARTICULATE
MONITORING DATA
NEW WALES SITE #1, 1/1975-12/1979

NEW WALES CHEMICALS, INC.
POLK COUNTY, FLORIDA

Year	Number of Samples	Data Recovery	Geometric Mean (ug/m^3)
1975	55	90%	33.5
1976	54	89%	31.0
1977	55	90%	32.9
1978	57	94%	28.7
1979	51	84%	38.8
	272	89%	32.7

Standard deviation of annual averates = 3.8 ug/m^3

All annual means within 1.6σ of the mean (32.7)

TABLE 4

RANKING OF TOTAL SUSPENDED PARTICULATE MONITORING DATA
NEW WALES SITE #1, 1/1975-12/1979

NEW WALES CHEMICALS, INC.
POLK COUNTY, FLORIDA

Rank	TSP Conc. (ug/m^3)	Freq.	Rank	TSP Conc. (ug/m^3)	Freq.	Rank	TSP Conc. (ug/m^3)	Freq.	Rank	TSP Conc. (ug/m^3)	Freq.
1	132	0.22	69	45	25.22	137	34	50.22	205	26	75.22
2	125	0.59	70	45	25.59	139	34	50.59	206	26	75.59
3	89	0.96	71	45	25.96	139	34	50.96	207	25	75.96
4	89	1.32	72	45	26.32	140	34	51.32	208	25	76.32
5	84	1.69	73	45	26.69	141	34	51.69	209	25	76.69
6	80	2.06	74	45	27.06	142	34	52.06	210	25	77.06
7	80	2.43	75	45	27.43	143	33	52.43	211	25	77.43
8	80	2.79	76	44	27.79	144	33	52.79	212	25	77.79
9	77	3.16	77	44	28.16	145	33	53.16	213	25	78.16
10	73	3.53	78	44	28.53	146	33	53.53	214	25	78.53
11	73	3.90	79	44	28.90	147	33	53.90	215	24	78.90
12	73	4.26	80	44	29.26	148	32	54.26	216	24	79.26
13	68	4.63	81	44	29.63	149	32	54.63	217	24	79.63
14	68	5.00	82	44	30.00	150	32	55.00	218	24	80.00
15	66	5.37	83	43	30.37	151	32	55.37	219	23	80.37
16	65	5.74	84	43	30.74	152	32	55.74	220	23	80.74
17	64	6.10	85	43	31.10	153	32	56.10	221	23	81.10
18	61	6.47	86	42	31.47	154	32	56.47	222	23	81.47
19	60	6.84	87	42	31.84	155	31	56.84	223	23	81.84
20	57	7.21	88	42	32.21	156	31	57.21	224	23	82.21
21	57	7.57	89	42	32.57	157	31	57.57	225	23	82.57
22	56	7.94	90	42	32.94	158	31	57.94	226	23	82.94
23	56	8.31	91	42	33.31	159	31	58.31	227	23	83.31
24	55	8.68	92	42	33.68	160	31	58.68	228	23	83.68
25	54	9.04	93	42	34.04	161	31	59.04	229	22	84.04
26	54	9.41	94	41	34.41	162	31	59.41	230	22	84.41
27	54	9.78	95	41	34.78	163	31	59.79	231	22	84.78
28	53	10.15	96	41	35.15	164	31	60.15	232	21	85.15
29	53	10.51	97	40	35.51	165	31	60.51	233	21	85.51
30	53	10.88	98	40	35.88	166	31	60.88	234	21	85.88
31	53	11.25	99	40	36.25	167	30	61.25	235	21	86.25
32	52	11.62	100	40	36.62	168	30	61.62	236	21	86.62
33	52	11.99	101	40	36.99	169	30	61.99	237	21	86.99
34	52	12.35	102	40	37.35	170	30	62.35	238	20	87.35
35	52	12.72	103	40	37.72	171	30	62.72	239	20	87.72
36	52	13.09	104	39	38.09	172	30	63.09	240	20	88.09
37	51	13.46	105	39	38.46	173	30	63.46	241	19	88.46
38	51	13.82	106	39	38.82	174	30	63.82	242	19	88.82
39	51	14.19	107	39	39.19	175	29	64.19	243	19	89.19
40	51	14.56	108	38	39.56	176	29	64.56	244	19	89.56
41	51	14.93	109	38	39.93	177	29	64.93	245	19	89.93
42	50	15.29	110	38	40.29	178	29	65.29	246	18	90.29
43	50	15.66	111	38	40.66	179	29	65.66	247	18	90.66
44	50	16.03	112	38	41.03	180	29	66.03	248	18	91.03
45	50	16.40	113	38	41.40	181	29	66.40	249	18	91.40
46	50	16.76	114	38	41.76	182	29	66.76	250	17	91.76
47	49	17.13	115	37	42.13	183	29	67.13	251	17	92.13
48	49	17.50	116	37	42.50	184	29	67.50	252	16	92.50
49	49	17.87	117	37	42.87	185	28	67.87	253	16	92.87
50	49	18.24	118	36	43.24	186	28	68.24	254	15	93.24
51	49	18.60	119	36	43.60	187	28	68.60	255	15	93.60
52	49	18.97	120	36	43.97	188	28	68.97	256	15	93.97
53	48	19.34	121	36	44.34	189	28	69.34	257	14	94.34
54	48	19.71	122	36	44.71	190	28	69.71	258	14	94.71
55	48	20.07	123	36	45.07	191	28	70.07	259	13	95.07
56	48	20.44	124	36	45.44	192	27	70.44	260	13	95.44
57	46	20.81	125	36	45.81	193	27	70.81	261	13	95.81
58	47	21.18	126	35	46.18	194	27	71.18	262	13	96.18
59	47	21.54	127	35	46.54	195	27	71.54	263	12	96.54
60	47	21.91	128	35	46.91	196	27	71.91	264	12	96.91
61	47	22.28	129	35	47.28	197	27	72.28	265	11	97.28
62	47	22.65	130	35	47.65	198	27	72.65	266	11	97.65
63	47	23.01	131	35	48.01	199	27	73.01	267	7	98.01
64	46	23.38	132	35	48.38	200	27	73.38	269	7	98.38
65	46	23.75	133	35	48.75	201	26	73.75	269	6	98.75
66	46	24.12	134	34	49.12	202	26	74.12	270	4	99.12
67	46	24.49	135	34	49.49	203	26	74.49	271	4	99.49
68	46	24.85	136	34	49.85	204	26	74.85	272	2	99.85

TABLE 5

CRSTER SUMMARY
NEW WALES CHEMICAL COMPLEX
PARTICULATE MATTER EMISSIONS

NEW WALES CHEMICALS, INC.
POLK COUNTY, FLORIDA

Meteorology	Maximum Predicted Particulate Matter Impact (ug/m^3)			
	Annual		24-Hour	
	Allowable Emissions	Proposed Emissions	Allowable Emissions	Proposed Emissions
1970	28.0		187.3	
1971	21.9		198.1 (day 49)	
1972*	30.0		175.3	
1973	22.5	7.7	177.0 (day 341)	62.0 (day 341)
1974	14.8		143.9	

* Without days 173-180

Receptor	Maximum Annual Impact ($\mu g/m^3$)	Maximum Annual Incr. Impact ($\mu g/m^3$)	Maximum 24-Hour Impact ($\mu g/m^3$)	Maximum 24-Hour 2nd Incr. Impact ($\mu g/m^3$)
A	11	59	36.6	127
B			29.5	111
1A			22.9	93
2			29.2	109
3			35.2	148
4				
5				

FIGURE 1

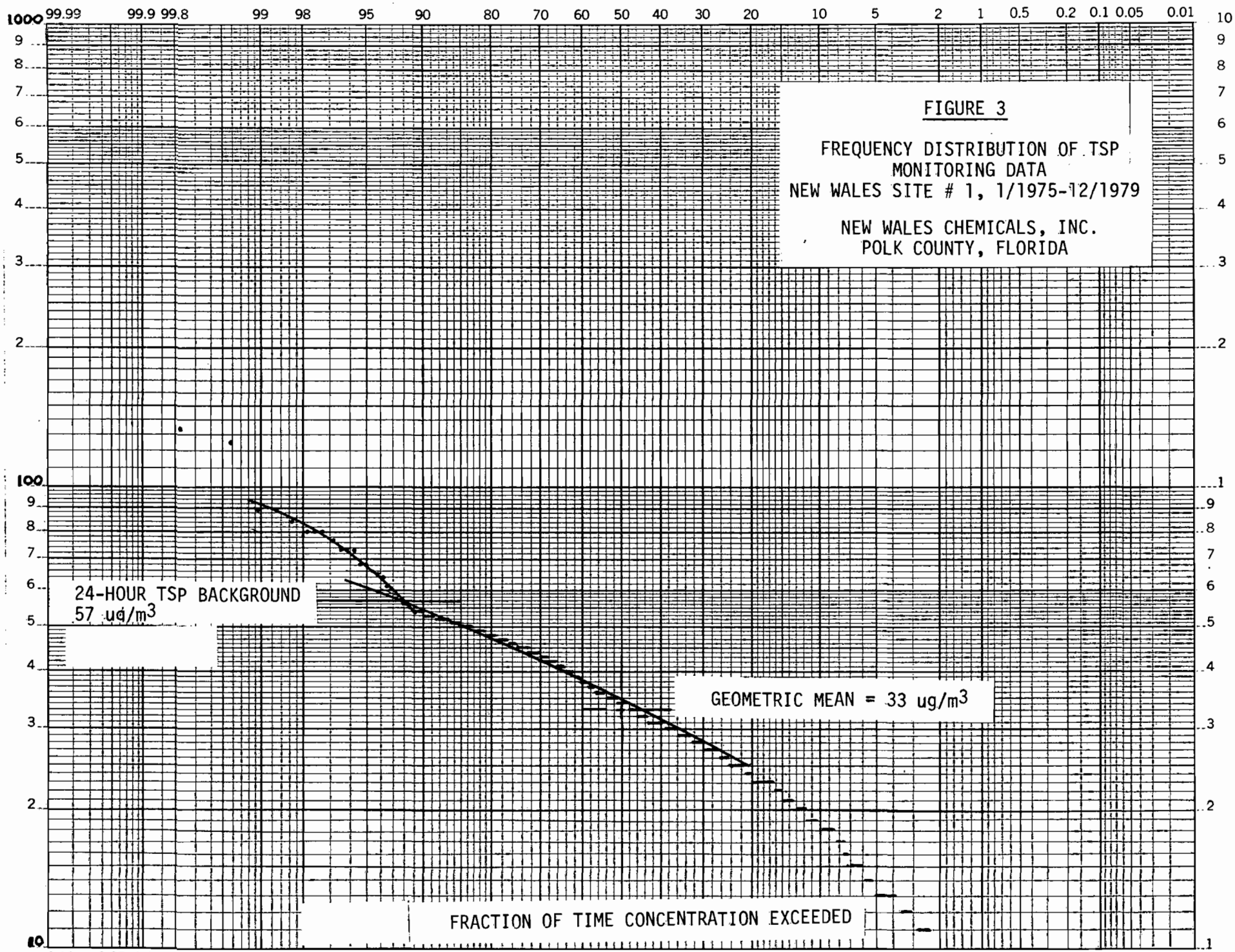
ANNUAL & 24-HR
PARTICULATE MATTER
IMPACTS

NEW WALES CHEMICALS, INC.
POLK COUNTY, FLORIDA

FIGURE 2

TSP MONITORING SITE LOCATION &
ANNUAL WIND DIRECTION DISTRIBUTION

NEW WALES CHEMICALS, INC.
POLK COUNTY, FLORIDA



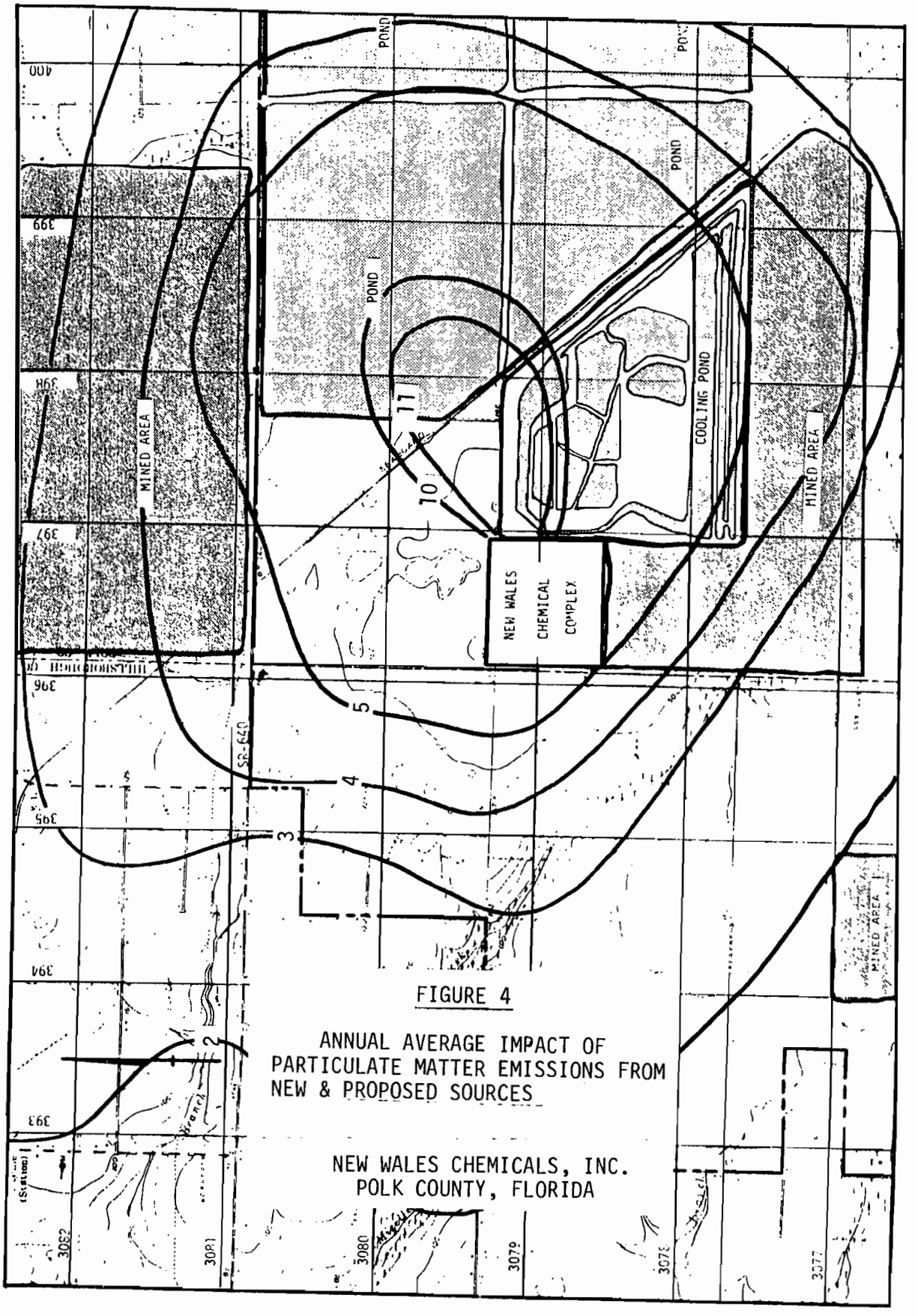


FIGURE 4

ANNUAL AVERAGE IMPACT OF
PARTICULATE MATTER EMISSIONS FROM
NEW & PROPOSED SOURCES

NEW WALES CHEMICALS, INC.
POLK COUNTY, FLORIDA

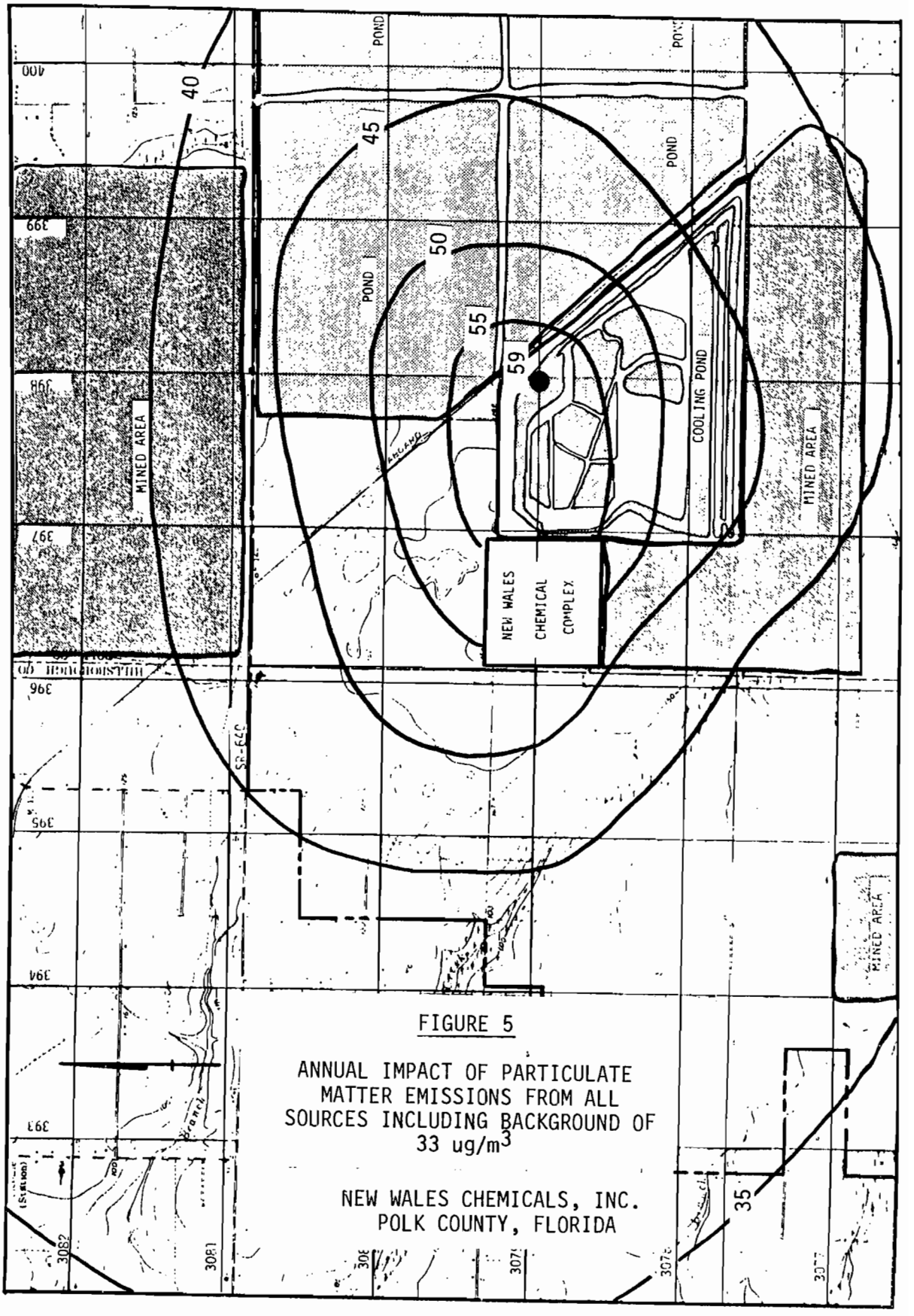


FIGURE 5

ANNUAL IMPACT OF PARTICULATE MATTER EMISSIONS FROM ALL SOURCES INCLUDING BACKGROUND OF 33 ug/m^3

NEW WALES CHEMICALS, INC.
POLK COUNTY, FLORIDA

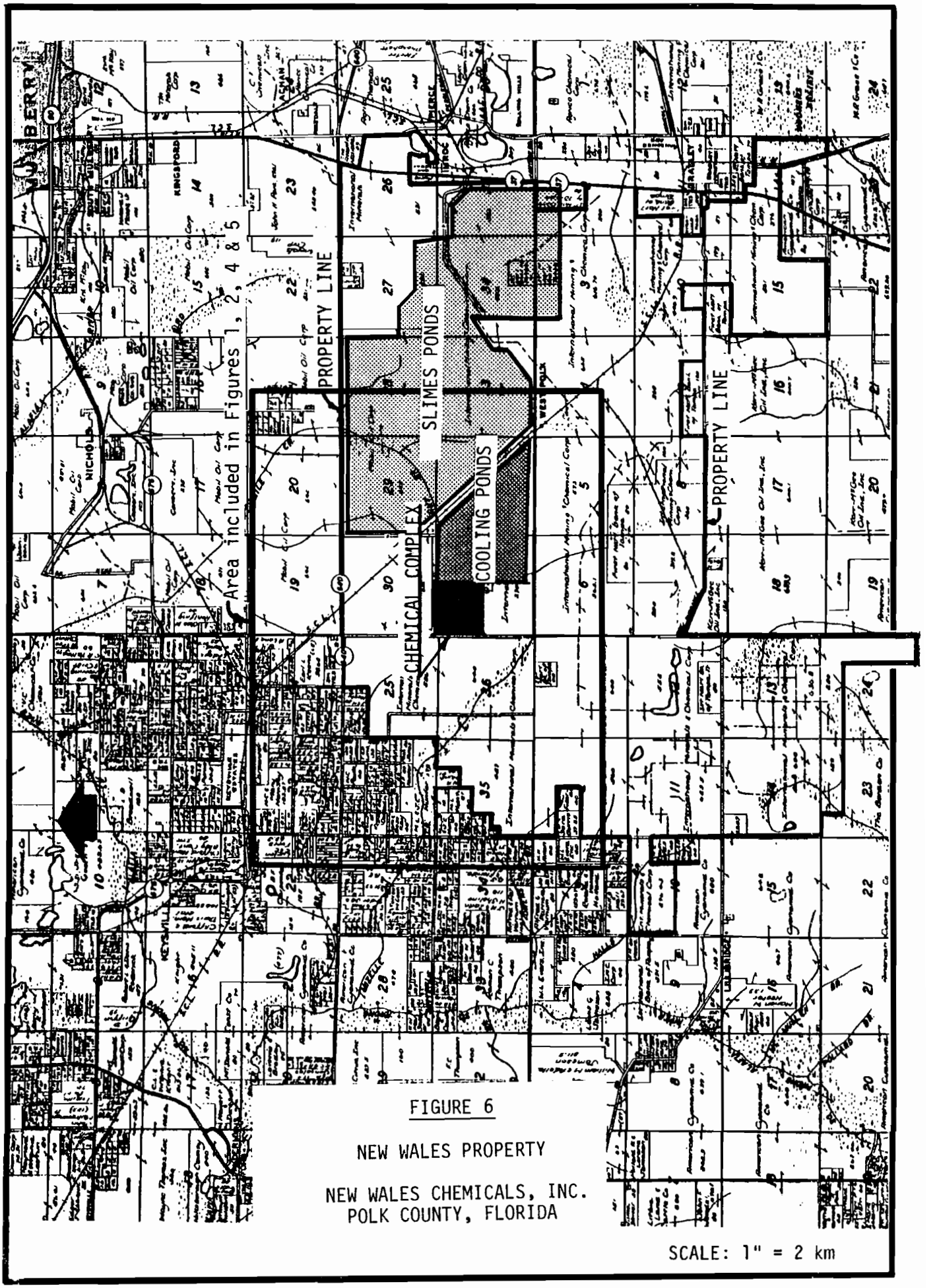


FIGURE 6

NEW WALES PROPERTY

NEW WALES CHEMICALS, INC.
POLK COUNTY, FLORIDA

SHOLTES & KOOGLER