June 29, 1995

M E M O R A N D U M

TO: Orville Green, Assistant Administrator
Permits and Enforcement

FROM: Harbi Elshafei, Air Quality Engineer
Operating Permits Bureau

THROUGH: Sue Richards, Air Quality Permit Manager
Operating Permits Bureau

Brian R. Monson, Chief
Operating Permits Bureau

SUBJECT: Issuance of Tier II Operating Permit for Micron Technology, Inc., for the Emergency Generators

PURPOSE:

The purpose for this memorandum is to satisfy the requirements of IDAPA 16.01.01 Sections 400 through 406 (Rules for the Control of Air Pollution in Idaho) for issuing Operating Permits (OP).

PROJECT DESCRIPTION:

This project is for the existing five (5) diesel emergency generators located at Micron Technology, Inc., with rated capacities of 475, 339, 1443, 1851, and 263 hp. The project also allows for additional emergency generators to be installed at the facility in accordance with the permit and the Rules.

SUMMARY OF EVENTS:

On March 8, 1995, DEQ received an application for a Tier II OP to limit the potential to emit from emergency generators. On March 30, 1995, that application was determined complete. On May 15, 1995, a proposed Tier II OP was issued for public comment.

RECOMMENDATIONS:

Based on the review of the Operating Permit application and on applicable state and federal rules and regulations and comments received concerning the issuance of OP, the Bureau staff recommends that Micron Technology, Inc., in Boise be issued a Tier II Operating Permit. Staff also recommends that the facility be notified in writing of the obligation to pay permit application fees for Tier II permits.

HE/rj:C:\...\JJ\HE\MICTECH2.MEM

cc: J. Palmer, SWIRO
S. Richards
Source File
OP File Manual
COF

June 23, 1995

M E M O R A N D U M

TO: Brian R. Monson, Chief
Operating Permits Bureau

FROM: Harbi Elshafei, Air Quality Engineer
Operating Permits Bureau

THROUGH: Sue Richards, Air Quality Permit Manager
Operating Permits Bureau

SUBJECT: Technical Analysis for Tier II Operating Permit #001-00044, Micron Technology, Boise, for the Emergency Generators

PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 16.01.01 Sections 400 through 406 (Rules for the Control of Air Pollution in Idaho) for issuing Operating Permits (OP).

FACILITY DESCRIPTION

Micron Technology, Inc., is a semiconductor manufacturing facility located in Boise at 8000 South Federal Way. The primary manufacturing operation at the facility is the silicon based integrated circuits. The semiconductor manufacturing processes performed at the facility are fabrication, assembly, and test.

A more detailed process description is found in the operating permit application materials.

PROJECT DESCRIPTION

This project is for an Operating Permit for the existing five diesel emergency generators located at Micron Technology, Inc., with rated capacities of 475, 339, 1443, 1851, and 263 hp. The project also allows for additional emergency generators to be installed at the facility in accordance with the permit and the Rules.

SUMMARY OF EVENTS

On March 8, 1995, DEQ received an application for a Tier II Operating Permit to limit the potential to emit from emergency generators. After reviewing all applicable federal and state rules and regulations, the application was determined complete on March 30, 1995. A public comment period was held from May 15, 1995, through June 14, 1995.

DISCUSSION

1. Emission Calculations

DEQ estimated the PM, PM-10, SO_2, NO_x, CO, and VOC emissions from the five emergency generators by using emission factors found in Sections 3.3 and 3.4 of AP-42. All PM emissions are assumed to be PM-10. The emission estimates are included in Table-1, Appendix A.

Emission estimates are based on 200 hours of operations for each generator per year.

Since NO_x is the pollutant emitted in the greatest amount from the generators, an emission "cap" of 50 T/yr for that pollutant is set from all generators (existing & additional) at the facility. Emissions of PM, PM-10, SO_2, CO, and VOCs from the additional generators are estimated by a pro rating based on the NO_x emission cap. Emissions from the additional generators are also shown in Appendix A.

An aggregated annual emissions limit from all generators at the facility was calculated by adding the annual emissions from the existing generators and the additional generators that are allowed to be installed at the facility.

2. Modeling

The five emergency generators are assumed to be operating simultaneously. The estimated PM-10 and No_x emissions were input into EPA approval ISC dispersion model. The modeling results predicted a 24-hour maximum concentrations for PM-10 of 41.1 $\mu g/m^3$ and an annual maximum of 0.94 $\mu g/m^3$. The predicted maximum annual NO_x concentrations were 13.17 $\mu g/m^3$. The modeling input and results are shown in Appendix B.

The predicted PM-10 and No_x impacts are considered significant. However, the ambient No_x levels during operation of the generators were determined to be below the National Ambient Air Quality Standards (NAAQS). The ambient PM-10 levels during operation were determined to be below the NAAQS when operation of the generators did not coincide with local Stagnation Advisory.

A technical memo by Chris Johnson, DEQ Meteorologist, regarding the modeling of emissions from the emergency generators is included in Appendix B.

3. Area Classification

Micron Technology is located in Boise. Boise is designated a non-attainment for PM-10 and CO. For other criteria air pollutants, the area is classified as attainment or unclassified.

4. Facility Classification

The facility is not a designated facility as defined in IDAPA 16.01.01.25. The facility is major because the actual emissions of VOCs exceed 100 tons per year.

5. Regulatory Review

This operating permit is subject to the following permitting requirements:

a. IDAPA 16.01.01.403 Permit Requirements for Tier II Sources.

b. IDAPA 16.01.01.406 Obligation to Comply.

c. IDAPA 16.01.01.404.04 Authority to Revise Operating Permits.

d. IDAPA 16.01.01.404.01(c) Opportunity for Public Comment.

e. IDAPA 16.01.01.625 Visible Emission Limitation.

f. IDAPA 16.01.01.728 Sulfur Content Limitation in No. 2 Fuel Oil.

g. IDAPA 16.01.01.200 Procedures and Requirements for Permit to Construct.

h. IDAPA 16.01.01.470 Permit Application Fees for Tier II Permits.

FEES

Fees apply to this facility in accordance with IDAPA 16.01.01.526. The potential to emit from the facility is greater than 100 T/yr of VOCs.

This project, however, is for a Tier II operating permit for only the emergency generators existing at the facility and for any additional generators to be installed at the facility. According to IDAPA 16.01.01.470, the facility is subject to permit

application fees for Tier II permits of five hundred dollars ($500.00).

RECOMMENDATIONS

Based on the review of the Operating Permit application and on applicable state and federal regulations concerning the permitting of air pollution sources, I recommend that Micron Technology, Inc., in Boise be issued a Tier II Operating Permit for the emergency generators. An opportunity for public comment shall be provided as required by IDAPA 16.01.01.404.01. I also recommend that the facility be notified in writing of the obligation to pay permit application fees for Tier II permits.

BRM/SJR/HE/rj:c:\...\JJ\HE\MICRON.TM1

cc: Joy Palmer, SWIRO
Source File
COF

APPENDIX A

TABLE - 1

SOURCE	PM		PM-10		SO_2		CO		NO_x		VOC	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
EU1-GEN-01	1.05	0.11	1.05	0.11	0.97	0.1	3.2	0.32	14.7	1.47	1.4	0.14
EU1-GEN-02	0.75	0.08	0.75	0.08	0.70	0.07	2.3	0.23	10.5	1.05	1.0	0.1
EU1-GEN-03	0.77	0.08	0.77	0.08	5.8	0.58	7.6	0.76	35.0	3.5	1.1	0.11
EU1-GEN-04	0.99	0.10	0.99	0.10	7.5	0.75	9.8	0.98	44.9	4.49	1.4	0.14
EU1-GEN-05	0.58	0.06	0.58	0.06	0.54	0.05	1.80	0.18	8.1	0.81	0.78	0.08
Additional Generators	8.54	0.85	8.54	0.85	64.56	6.46	84.44	8.44	387	38.7	11.61	1.16
Aggregated Generators		1.28		1.28		8.01		10.91		50.02		1.73

<u>Example Calculation for PM from the 1851 hp generator</u>:

Emission factor = 0.2426 grams/hp-hr (AP-42, Table 3.4-5)

$$1851 \text{ hp} \times \frac{0.2426 \text{ g}}{\text{hp-hr}} \times \frac{1 \text{ lb}}{453.6 \text{ g}} = 0.99 \text{ lb/hr}$$

$$\frac{0.99 \text{ lb}}{\text{hr}} \times \frac{200 \text{ hr}}{\text{yr}} \times \frac{1 \text{ Ton}}{2000 \text{ lb}} = 0.1 \text{ T/yr}$$

Emissions from the additional generators

Aggregated generators NO_x emissions = 50 T/yr

Total NOx emissions from generator 1 through 5 = 11.33 T/yr

NO_x emissions from the additional generators based on 50 T/yr cap = 50 − 11.33 = 38.7 T/yr

Total horse power resulting from additional generators =

$$\frac{38.7\ T}{yr} \left| \frac{2{,}000\ lb}{1\ Ton} \right| \frac{453.6\ g}{1\ lb} \left| \frac{1\ yr}{200\ hr} \right| \frac{hp\text{-}hr}{11\ g} = 15{,}958.5\ hp$$

PM emissions $= \frac{15{,}958.5\ hp}{} \left| \frac{.2426\ g}{hp\text{-}hr} \right| \frac{1\ lb}{453.6\ g} = 8.54\ lb/hr$ or 0.854 T/yr

Assume PM = PM-10, per applicant submittal

PM-10 emissions = 8.54 lb/hr or 0.854 T/yr

SO_2 emissions $= \frac{15{,}958.5\ hp}{} \left| \frac{1.835\ g}{hp\text{-}hr} \right| \frac{1\ lb}{453.6\ g} = 64.56\ lb/hr$ or 6.46 T/yr

CO emissions $= \frac{15{,}958.5\ hp}{} \left| \frac{2.4\ g}{hp\text{-}hr} \right| \frac{1\ lb}{453.6\ g} = 84.44\ lb/hr$ or 8.44 T/yr

NO_x emissions $= \frac{15{,}958.5\ hp}{} \left| \frac{11\ g}{hp\text{-}hr} \right| \frac{1\ lb}{453.6\ g} = 387.0\ lb/hr$ or 38.7 T/yr

VOC emissions $= \frac{15{,}958.5\ hp}{} \left| \frac{0.33\ g}{hp\text{-}hr} \right| \frac{1\ lb}{453.6} = 11.61\ lb/hr$ or 1.16 T/yr

APPENDIX B

FACILITIES [illegible]

SOURCE NAME: Micron Technology, Inc.

POINT SOURCES

#	Location (m) x	Location (m) y	Description	Stack Base Elev (m)	Stack Height (m)	Stack Diam (m)	Emission Rate (g/sec) PM-10	Emission Rate (g/sec) NO_x	Exit Velocity (m/sec)	Exit Temp (K)	For Building downwash calculations: Adjacent Building Height (m)	Adjacent Building Length (m)	Adjacent Building Width (m)
1G1	-91.8	176.8	1175 hp Gen.	0	2.74	.15	0.132	1.852	66.05	816.5			
10G1	-23.8	119	339 hp Gen.	0	2.74	.15	.095	1.323	49.41	806.5			
15G1	-95.2	-88.4	1443 hp Gen.	0	3.96	.23	.097	4.41	94.59	743.2			
24G1	139.4	-193.8	1851 hp Gen.	0	4.57	.23	.125	5.66	109.96	758.2			
6G1	-27.2	54.4	263 hp Gen.	0	3.66	.15	.073	1.02	37.68	961			

AREA SOURCES

#	Location (m) x	Location (m) y	Base Elevation (m)	Effective Emission Ht. (m)	Emission Rate Fugitive (g/sec/m2)	Emission Rate Other (g/sec)	Threshold Wind Speed (m/sec) or Wind Exponent	Length Side Square Source (m)	Description

May 9, 1995

M E M O R A N D U M

TO: Robert Wilkosz, Chief, Technical Services Bureau (TSB), Permits and Enforcement (P&E)

FROM: Chris Johnson, Air Quality Meteorologist, TSB, P&E

THRU: Avijit Ray, Environmental Sciences Manager, TSB, P&E

SUBJECT: Modeling/Impact Assessment of Micron Emergency Generators (Boise)

1. SUMMARY

The applicant operates five emergency diesel generators at their manufacturing facility in East Boise. The applicant requested an operating permit for these generators. The emissions will result from no more than 200 hours of operation for each generator, and consist mainly of NOx, PM-10, VOCs, CO and SO2. The source is in the Northern Ada County nonattainment area for PM-10 and CO. Emissions of NOx and PM-10 were modeled.

Maximum impacts for each pollutant were predicted by the applicant to be within applicable state and federal limits on the condition that operations must be restricted during Air Stagnation Advisories affecting the Boise area.

2. DISCUSSION

2.1 Project Description

The applicant operates a manufacturing facility on Federal Way in East Boise. The applicant requested a Tier II operating permit for the operation of five existing diesel generators for no more than 200 hours per year. The stack height is below GEP, and, therefore, building downwash was considered.

2.2 Applicable Air Quality Impact Limits

Northern Ada County is considered nonattainment for PM-10 and CO. The National Ambient Air Quality Standard (NAAQS) standards apply for other criteria pollutants. The NAAQS for NO2 is 100 ug/m3, annual average.

2.3 Background Concentrations

The PM-10 background concentration in the nonattainment area is at or above the NAAQS when Air Stagnation Advisories (ASAs) are in effect. Since ASAs are issued when PM-10 concentrations reach 100 ug/m3, this level was conservatively

POLLUTANT	Emiss. (lb/hr)	Predicted conc. (ug/m3)	Ave. Per.	Allowable conc. (ug/m3)	Impact limit %
PM-10 (nonstag.)	0.522	41.1	24 hr	50.	82.2%
(source)	0.522	0.94	ann.	1.	94.0%
NOx (source)	14.3	13.2	ann.	100.	13.2%
NOx (post constr)	14.3	63.2	ann.	100.	63.2%

Allowable impacts are based on significant contribution levels except 24 hr PM-10, which is based on the highest PM-10 concentration expected without an Air Stagnation Advisory.

3. MODELING RESULTS

The modeling is saved on the fileserver as \ISC2\MICRONG.OUT.

CJ/ve micrgen.tec

Attachments

cc: H. Elshafei
K. Viswanathan
COF (w/o attachments)

```
CO STARTING
CO TITLEONE Micron 5 generators      PM-10 (1-24), NOx (88:50)
CO MODELOPT CONC   RURAL          NOSTD          NOCALM
CO AVERTIME  24 period
CO POLLUTID OTHER
CO DCAYCOEF     .000000
CO RUNORNOT RUN
CO ERRORFIL ERRORS.OUT
CO FINISHED


SO STARTING

** Source Location Cards:
**            SRCID SRCTYP        XS            YS            ZS

SO LOCATION     1  POINT       -91.8000      176.8000        .0000
SO LOCATION    10  POINT       -23.8000      119.0000        .0000
SO LOCATION    15  POINT       -95.2000      -88.4000        .0000
SO LOCATION    24  POINT       139.4000     -193.8000        .0000
SO LOCATION     6  POINT       -27.2000       54.4000        .0000
SO LOCATION    51  POINT       -91.8000      176.8000        .0000
SO LOCATION    60  POINT       -23.8000      119.0000        .0000
SO LOCATION    65  POINT       -95.2000      -88.4000        .0000
SO LOCATION    74  POINT       139.4000     -193.8000        .0000
SO LOCATION    56  POINT       -27.2000       54.4000        .0000

** Source Parameter Cards:
** POINT:   SRCID       QS            HS          TS          VS          DS
** VOLUME:  SRCID       QS            HS       SYINIT      SZINIT
** AREA:    SRCID       QS            HS        XINIT

SO SRCPARAM     1     .132          2.7400    816.5000     66.050      .1500
SO SRCPARAM    10     .095          2.7400    806.5000     49.410      .1500
SO SRCPARAM    15     .097          3.9600    743.2000     94.590      .2300
SO SRCPARAM    24     .125          4.5700    758.2000    109.960      .2300
SO SRCPARAM     6     .073          3.6600    961.0000     37.680      .1500
SO SRCPARAM    51    1.852          2.7400    816.5000     66.050      .1500
SO SRCPARAM    60    1.323          2.7400    806.5000     49.410      .1500
SO SRCPARAM    65    4.41           3.9600    743.2000     94.590      .2300
SO SRCPARAM    74    5.66           4.5700    758.2000    109.960      .2300
SO SRCPARAM    56    1.02           3.6600    961.0000     37.680      .1500

SO BUILDHGT 1          .00      12.19      12.19       5.79       5.79       5.79
SO BUILDHGT 1         5.79       5.79       5.79       5.79       5.79      12.19
SO BUILDHGT 1        12.19      12.19      12.19      12.19      12.19      12.19
SO BUILDHGT 1        12.19      12.19      12.19       5.79       5.79       5.79
SO BUILDHGT 1         5.79        .00        .00        .00       5.79      12.19
SO BUILDHGT 1        12.19      12.19       5.79        .00        .00        .00
SO BUILDWID 1          .00     121.85     118.58     106.10     109.45     109.48
SO BUILDWID 1       106.18      99.65      90.10      98.77     104.44      86.40
SO BUILDWID 1        99.26     109.11     115.64     118.66     118.07     117.30
SO BUILDWID 1       121.42     121.85     118.58     106.10     109.45     109.48
SO BUILDWID 1       106.18        .00        .00        .00     104.44      86.40
SO BUILDWID 1        99.26     109.11      95.11        .00        .00        .00
SO BUILDHGT 10        7.32       7.32       7.32       7.32       7.32       7.32
SO BUILDHGT 10        7.32       7.32       7.32       7.32       7.32       7.32
SO BUILDHGT 10        7.32       7.32       7.32       7.32       7.32       7.32
SO BUILDHGT 10        7.32       7.32       7.32       7.32       7.32       7.32
SO BUILDHGT 10        7.32       7.32       7.32       7.32       7.32       7.32
SO BUILDHGT 10        7.32       7.32       7.32       7.32       7.32       7.32
SO BUILDWID 10       67.84      75.83      81.51      84.71      85.34      83.37
SO BUILDWID 10       78.88      71.98      62.90      66.96      68.99      70.12
SO BUILDWID 10       73.62      74.87      73.86      70.59      65.19      57.80
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[illegible]	[illegible]	78.88	71.98	[illegible]	84.71	85.34	83.37
SO BUILDHGT	10	73.62	74.87	73.86	66.96	68.99	70.12
SO BUILDHGT	15	10.06	10.06	10.06	70.59	65.19	57.80
SO BUILDHGT	15	10.06	10.06	10.06	10.06	10.06	10.06
SO BUILDHGT	15	10.06	10.06	10.06	10.06	10.06	10.06
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SO BUILDHGT	15	10.06	10.06	10.06	10.06	10.06	10.06
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SO BUILDWID	15	124.77	138.18	149.60	156.48	158.60	155.91
SO BUILDWID	15	148.47	136.53	120.44	100.69	97.51	112.20
SO BUILDWID	15	123.48	131.02	134.57	134.03	129.42	126.30
SO BUILDWID	15	124.77	138.18	149.60	156.48	158.60	155.91
SO BUILDWID	15	148.47	136.53	120.44	100.69	97.51	112.20
SO BUILDHGT	6	.00	.00	.00	.00	.00	.00
SO BUILDHGT	6	.00	.00	.00	.00	.00	.00
SO BUILDHGT	6	.00	.00	.00	.00	.00	.00
SO BUILDHGT	6	.00	.00	.00	.00	7.32	.00
SO BUILDHGT	6	.00	.00	.00	.00	.00	.00
SO BUILDHGT	6	.00	.00	.00	.00	.00	.00
SO BUILDWID	6	.00	.00	.00	.00	.00	.00
SO BUILDWID	6	.00	.00	.00	.00	.00	.00
SO BUILDWID	6	.00	.00	.00	.00	.00	.00
SO BUILDWID	6	.00	.00	.00	.00	.00	.00
SO BUILDWID	6	.00	.00	.00	.00	85.34	.00
SO BUILDWID	6	.00	.00	.00	.00	.00	.00
SO BUILDHGT	51	.00	12.19	12.19	5.79	5.79	5.79
SO BUILDHGT	51	5.79	5.79	5.79	5.79	5.79	12.19
SO BUILDHGT	51	12.19	12.19	12.19	12.19	12.19	12.19
SO BUILDHGT	51	12.19	12.19	12.19	5.79	5.79	5.79
SO BUILDHGT	51	5.79	.00	.00	.00	5.79	12.19
SO BUILDHGT	51	12.19	12.19	5.79	.00	.00	.00
SO BUILDWID	51	.00	121.85	118.58	106.10	109.45	109.48
SO BUILDWID	51	106.18	99.65	90.10	98.77	104.44	86.40
SO BUILDWID	51	99.26	109.11	115.64	118.66	118.07	117.30
SO BUILDWID	51	121.42	121.85	118.58	106.10	109.45	109.48
SO BUILDWID	51	106.18	.00	.00	.00	104.44	86.40
SO BUILDWID	51	99.26	109.11	95.11	.00	.00	.00
SO BUILDHGT	60	7.32	7.32	7.32	7.32	7.32	7.32
SO BUILDHGT	60	7.32	7.32	7.32	7.32	7.32	7.32
SO BUILDHGT	60	7.32	7.32	7.32	7.32	7.32	7.32
SO BUILDHGT	60	7.32	7.32	7.32	7.32	7.32	7.32
SO BUILDHGT	60	7.32	7.32	7.32	7.32	7.32	7.32
SO BUILDHGT	60	7.32	7.32	7.32	7.32	7.32	7.32
SO BUILDWID	60	67.84	75.83	81.51	84.71	85.34	83.37
SO BUILDWID	60	78.88	71.98	62.90	66.96	68.99	70.12
SO BUILDWID	60	73.62	74.87	73.86	70.59	65.19	57.80
SO BUILDWID	60	67.84	75.83	81.51	84.71	85.34	83.37
SO BUILDWID	60	78.88	71.98	62.90	66.96	68.99	70.12
SO BUILDWID	60	73.62	74.87	73.86	70.59	65.19	57.80
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SO BUILDHGT	65	10.06	10.06	10.06	10.06	10.06	10.06
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SO BUILDHGT	65	10.06	10.06	10.06	10.06	10.06	10.06
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SO BUILDHGT	65	10.06	10.06	10.06	10.06	10.06	10.06
SO BUILDWID	65	123.48	131.02	134.57	134.03	129.42	126.30
SO BUILDWID	65	124.77	138.18	149.60	156.48	158.60	155.91
SO BUILDWID	65	148.47	136.53	120.44	100.69	97.51	112.20
SO BUILDWID	65	123.48	131.02	134.57	134.03	129.42	126.30
SO BUILDWID	65	124.77	138.18	149.60	156.48	158.60	155.91
SO BUILDWID	65	148.47	136.53	120.44	100.69	97.51	112.20
SO BUILDHGT	56	.00	.00	.00	.00	.00	.00
SO BUILDHGT	56	.00	.00	.00	.00	.00	.00

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SO BUILDHGT 56          .00        .00        .00        .00        .00        .00
SO BUILDHGT 56          .00        .00        .00        .00       7.32        .00
SO BUILDHGT 56          .00        .00        .00        .00        .00        .00
SO BUILDHGT 56          .00        .00        .00        .00        .00        .00
SO BUILDWID 56          .00        .00        .00        .00        .00        .00
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SO BUILDWID 56          .00        .00        .00        .00        .00        .00
SO BUILDWID 56          .00        .00        .00        .00        .00        .00
SO BUILDWID 56          .00        .00        .00        .00      85.34        .00
SO BUILDWID 56          .00        .00        .00        .00        .00        .00
SO BUILDWID 56          .00        .00        .00        .00        .00        .00

SO EMISUNIT     .100000E+07 (GRAMS/SEC)          (MICROGRAMS/CUBIC-METER)
SO SRCGROUP     PM10      1 10 15 24  6
SO SRCGROUP     NOx      51 60 65 74 56
SO FINISHED


RE STARTING
RE GRIDPOLR POL STA
RE GRIDPOLR POL ORIG      -30.0        0.0
RE GRIDPOLR POL DIST        300.0  325.0  350.0  400.0
RE GRIDPOLR POL DDIR    10.00    20.00    30.00  240.00
RE GRIDPOLR POL DDIR  250.00  260.00  270.00  280.00  290.00  300.00
RE GRIDPOLR POL DDIR  340.00  350.00  360.00
RE GRIDPOLR POL END

RE DISCCART      -380.80      270.30
RE DISCCART      -360.80      270.30
RE DISCCART      -340.80      270.30
RE DISCCART      -320.70      270.30
RE DISCCART      -300.70      270.30
RE DISCCART      -280.70      270.30
RE DISCCART      -260.60      270.30
RE DISCCART      -240.60      270.30
RE DISCCART      -220.50      270.30
RE DISCCART      -200.50      270.30
RE DISCCART      -180.40      270.30
RE DISCCART      -160.40      270.30
RE DISCCART      -140.30      270.30
RE DISCCART      -120.30      270.30
RE DISCCART      -100.20      270.30
RE DISCCART       -80.20      270.30
RE DISCCART       -60.10      270.30
RE DISCCART       -40.10      270.30
RE DISCCART       -20.00      270.30
RE DISCCART         0.00      270.30
RE DISCCART        20.00      270.30
RE DISCCART        40.00      270.30
RE DISCCART      -373.48      246.30
RE DISCCART      -366.15      222.31
RE DISCCART      -358.83      198.31
RE DISCCART      -351.51      174.32
RE DISCCART      -344.18      150.32
RE DISCCART      -336.86      126.32
RE DISCCART      -329.54      102.33
RE DISCCART      -322.22       78.33
RE DISCCART      -314.89       54.33
RE DISCCART      -307.57       30.34
RE DISCCART      -300.25        6.34
RE DISCCART      -292.92      -17.65
RE DISCCART      -285.60      -41.65
RE DISCCART      -278.28      -65.65
RE DISCCART      -270.95      -89.64
RE DISCCART      -263.63     -113.64
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RE DISCCART      -248.98   -161.63
RE DISCCART      -241.66   -185.63
RE DISCCART      -234.34   -209.62
RE DISCCART      -227.02   -233.62
RE DISCCART      -219.69   -257.62
RE DISCCART      -212.37   -281.61
RE DISCCART      -205.05   -305.61
RE DISCCART      -197.72   -329.60
RE DISCCART      -190.40   -353.60
RE FINISHED

ME STARTING
ME INPUTFIL Boi85.met                          (4I2,2F9.4,F6.1,I2,2F7.1)
ME ANEMHGHT   10.000 METERS
ME SURFDATA  24131  1985            SURFNAME
ME UAIRDATA  24131  1985            UAIRNAME
ME STARTEND  85 01 01  85 12 31
ME WINDCATS    1.54     3.09     5.14     8.23    10.80
ME FINISHED

OU STARTING
OU MAXTABLE ALLAVE  20
OU FINISHED

 *** Message Summary For ISC2 Model Setup ***

 --------- Summary of Total Messages --------

A Total of           0 Fatal Error Message(s)
A Total of           6 Warning Message(s)
A Total of           0 Informational Message(s)

   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***

   ********   WARNING MESSAGES   ********
 SO W320    34 PPARM : Source Parameter May Be Out-of-Range for Parameter      VS
 SO W320    36 PPARM : Source Parameter May Be Out-of-Range for Parameter      VS
 SO W320    37 PPARM : Source Parameter May Be Out-of-Range for Parameter      VS
 SO W320    39 PPARM : Source Parameter May Be Out-of-Range for Parameter      VS
 SO W320    41 PPARM : Source Parameter May Be Out-of-Range for Parameter      VS
 SO W320    42 PPARM : Source Parameter May Be Out-of-Range for Parameter      VS

 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

  *** ISCST2 - VERSION 92062 ***    *** Micron 5 generators     PM-10 (1-24), NOx (#s:50)                 ***        04/12/95
                                    ***                                                                   ***        09:56:55
                                                                                                                     PAGE   1
  *** MODELING OPTIONS USED:  CONC   RURAL  FLAT                          NOSTD        NOCALM

                                             ***     MODEL SETUP OPTIONS SUMMARY       ***
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 **Model Is Setup For Calculation of Average CONCentration Values.

 **Model Uses RURAL Dispersion.
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```
**Model Uses User-Specified Options:
          1. Final Plume Rise.
          2. Not Use Stack-tip Downwash.
          3. Buoyancy-induced Dispersion.
          4. Not Use Calms Processing Routine.
          5. Not Use Missing Data Processing Routine.
          6. Default Wind Profile Exponents.
          7. Default Vertical Potential Temperature Gradients.

**Model Assumes Receptors on FLAT Terrain.

**Model Assumes No FLAGPOLE Receptor Heights.

**Model Calculates  1 Short Term Average(s) of:  24-HR
    and Calculates PERIOD Averages

**This Run Includes:    10 Source(s);       2 Source Group(s); and    100 Receptor(s)

**The Model Assumes A Pollutant Type of:  OTHER

**Model Set To Continue RUNning After the Setup Testing.

**Output Options Selected:
         Model Outputs Tables of PERIOD Averages by Receptor
         Model Outputs Tables of Overall Maximum Short Term Values (MAXTABLE Keyword)

**Misc. Inputs:  Anem. Hgt. (m) =    10.00 ;    Decay Coef. =    .0000      ;    Rot. Angle =      .0
                 Emission Units = (GRAMS/SEC)                               ;  Emission Rate Unit Factor =    .10000E+07
                 Output Units   = (MICROGRAMS/CUBIC-METER)

**Input Runstream File: micrgen.in                               ;  **Output Print File: micrgen.out
**Detailed Error/Message File:   ERRORS.OUT
```


*** POINT SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (USER UNITS)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	STACK HEIGHT (METERS)	STACK TEMP. (DEG.K)	STACK EXIT VEL. (M/SEC)	STACK DIAMETER (METERS)	BUILDING EXISTS	EMISSION RATE SCALAR VARY BY
1	0	.13200E+00	-91.8	176.8	.0	2.74	816.50	66.05	.15	YES	
10	0	.95000E-01	-23.8	119.0	.0	2.74	806.50	49.41	.15	YES	
15	0	.97000E-01	-95.2	-88.4	.0	3.96	743.20	94.59	.23	YES	
24	0	.12500E+00	139.4	-193.8	.0	4.57	758.20	109.96	.23	NO	
6	0	.73000E-01	-27.2	54.4	.0	3.66	961.00	37.68	.15	YES	
51	0	.18520E+01	-91.8	176.8	.0	2.74	816.50	66.05	.15	YES	
60	0	.13230E+01	-23.8	119.0	.0	2.74	806.50	49.41	.15	YES	
65	0	.44100E+01	-95.2	-88.4	.0	3.96	743.20	94.59	.23	YES	
74	0	.56600E+01	139.4	-193.8	.0	4.57	758.20	109.96	.23	NO	
56	0	.10200E+01	-27.2	54.4	.0	3.66	961.00	37.68	.15	YES	

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SOURCE IDs

PM10 1 , 10 , 15 , 24 , 6 ,

NOX 51 , 60 , 65 , 74 , 56 ,

*** ISCST2 - VERSION 92062 *** *** Micron 5 generators PM-10 (1-24), NOx (Na+50) *** *** 04/12/95 09:56:55 PAGE 4

*** MODELING OPTIONS USED: CONC RURAL FLAT NOSTD NOCALM

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: 1

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	.0,	.0,	0	2	12.2,	121.9,	0	3	12.2,	118.6,	0	4	5.8,	106.1,	0	5	5.8,	109.5,	0	6	5.8,	109.5,	0
7	5.8,	106.2,	0	8	5.8,	99.7,	0	9	5.8,	90.1,	0	10	5.8,	98.8,	0	11	5.8,	104.4,	0	12	12.2,	86.4,	0
13	12.2,	99.3,	0	14	12.2,	109.1,	0	15	12.2,	115.6,	0	16	12.2,	118.7,	0	17	12.2,	118.1,	0	18	12.2,	117.3,	0
19	12.2,	121.4,	0	20	12.2,	121.9,	0	21	12.2,	118.6,	0	22	5.8,	106.1,	0	23	5.8,	109.5,	0	24	5.8,	109.5,	0
25	5.8,	106.2,	0	26	.0,	.0,	0	27	.0,	.0,	0	28	.0,	.0,	0	29	5.8,	104.4,	0	30	12.2,	86.4,	0
31	12.2,	99.3,	0	32	12.2,	109.1,	0	33	5.8,	95.1,	0	34	.0,	.0,	0	35	.0,	.0,	0	36	.0,	.0,	0

SOURCE ID: 10

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	7.3,	67.8,	0	2	7.3,	75.8,	0	3	7.3,	81.5,	0	4	7.3,	84.7,	0	5	7.3,	85.3,	0	6	7.3,	83.4,	0
7	7.3,	78.9,	0	8	7.3,	72.0,	0	9	7.3,	62.9,	0	10	7.3,	67.0,	0	11	7.3,	69.0,	0	12	7.3,	70.1,	0
13	7.3,	73.6,	0	14	7.3,	74.9,	0	15	7.3,	73.9,	0	16	7.3,	70.6,	0	17	7.3,	65.2,	0	18	7.3,	57.8,	0
19	7.3,	67.8,	0	20	7.3,	75.8,	0	21	7.3,	81.5,	0	22	7.3,	84.7,	0	23	7.3,	85.3,	0	24	7.3,	83.4,	0
25	7.3,	78.9,	0	26	7.3,	72.0,	0	27	7.3,	62.9,	0	28	7.3,	67.0,	0	29	7.3,	69.0,	0	30	7.3,	70.1,	0
31	7.3,	73.6,	0	32	7.3,	74.9,	0	33	7.3,	73.9,	0	34	7.3,	70.6,	0	35	7.3,	65.2,	0	36	7.3,	57.8,	0

SOURCE ID: 15

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	10.1,	123.5,	0	2	10.1,	131.0,	0	3	10.1,	134.6,	0	4	10.1,	134.0,	0	5	10.1,	129.4,	0	6	10.1,	126.3,	0
7	10.1,	124.8,	0	8	10.1,	138.2,	0	9	10.1,	149.6,	0	10	10.1,	156.5,	0	11	10.1,	158.6,	0	12	10.1,	155.9,	0
13	10.1,	148.5,	0	14	10.1,	136.5,	0	15	10.1,	120.4,	0	16	10.1,	100.7,	0	17	10.1,	97.5,	0	18	10.1,	112.2,	0
19	10.1,	123.5,	0	20	10.1,	131.0,	0	21	10.1,	134.6,	0	22	10.1,	134.0,	0	23	10.1,	129.4,	0	24	10.1,	126.3,	0
25	10.1,	124.8,	0	26	10.1,	138.2,	0	27	10.1,	149.6,	0	28	10.1,	156.5,	0	29	10.1,	158.6,	0	30	10.1,	155.9,	0
31	10.1,	148.5,	0	32	10.1,	136.5,	0	33	10.1,	120.4,	0	34	10.1,	100.7,	0	35	10.1,	97.5,	0	36	10.1,	112.2,	0

SOURCE ID: 6

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	.0,	.0,	0	2	.0,	.0,	0	3	.0,	.0,	0	4	.0,	.0,	0	5	.0,	.0,	0	6	.0,	.0,	0
7	.0,	.0,	0	8	.0,	.0,	0	9	.0,	.0,	0	10	.0,	.0,	0	11	.0,	.0,	0	12	.0,	.0,	0
13	.0,	.0,	0	14	.0,	.0,	0	15	.0,	.0,	0	16	.0,	.0,	0	17	.0,	.0,	0	18	.0,	.0,	0
19	.0,	.0,	0	20	.0,	.0,	0	21	.0,	.0,	0	22	.0,	.0,	0	23	7.3,	85.3,	0	24	.0,	.0,	0
25	.0,	.0,	0	26	.0,	.0,	0	27	.0,	.0,	0	28	.0,	.0,	0	29	.0,	.0,	0	30	.0,	.0,	0
31	.0,	.0,	0	32	.0,	.0,	0	33	.0,	.0,	0	34	.0,	.0,	0	35	.0,	.0,	0	36	.0,	.0,	0

*** ISCST2 - VERSION 92062 *** *** Micron 5 generators PM-10 (1-24), NOx (Na+50) *** *** 04/12/95 09:56:55 PAGE 5

*** MODELING OPTIONS USED: CONC RURAL FLAT NOSTD NOCALM

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: 51

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	.0,	.0,	0	2	12.2,	121.9,	0	3	12.2,	118.6,	0	4	5.8,	106.1,	0	5	5.8,	109.5,	0	6	5.8,	109.5,	0
7	5.8,	106.2,	0	8	5.8,	99.7,	0	9	5.8,	90.1,	0	10	5.8,	98.8,	0	11	5.8,	104.4,	0	12	12.2,	86.4,	0
13	12.2,	99.3,	0	14	12.2,	109.1,	0	15	12.2,	115.6,	0	16	12.2,	118.7,	0	17	12.2,	118.1,	0	18	12.2,	117.3,	0
19	12.2,	121.4,	0	20	12.2,	121.9,	0	21	12.2,	118.6,	0	22	5.8,	106.1,	0	23	5.8,	109.5,	0	24	5.8,	109.5,	0
25	5.8,	106.2,	0	26	.0,	.0,	0	27	.0,	.0,	0	28	.0,	.0,	0	29	5.8,	104.4,	0	30	12.2,	86.4,	0
31	12.2,	99.3,	0	32	12.2,	109.1,	0	33	5.8,	95.1,	0	34	.0,	.0,	0	35	.0,	.0,	0	36	.0,	.0,	0

SOURCE ID: 60

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	7.3,	67.8,	0	2	7.3,	75.8,	0	3	7.3,	81.5,	0	4	7.3,	84.7,	0	5	7.3,	85.3,	0	6	7.3,	83.4,	0
7	7.3,	78.9,	0	8	7.3,	72.0,	0	9	7.3,	62.9,	0	10	7.3,	67.0,	0	11	7.3,	69.0,	0	12	7.3,	70.1,	0
13	7.3,	71.6,	0	14	7.3,	74.9,	0	15	7.3,	73.9,	0	16	7.3,	70.6,	0	17	7.3,	65.2,	0	18	7.3,	57.8,	0
19	7.3,	67.8,	0	20	7.3,	75.8,	0	21	7.3,	81.5,	0	22	7.3,	84.7,	0	23	7.3,	85.3,	0	24	7.3,	83.4,	0
25	7.3,	78.9,	0	26	7.3,	72.0,	0	27	7.3,	62.9,	0	28	7.3,	67.0,	0	29	7.3,	69.0,	0	30	7.3,	70.1,	0
31	7.3,	73.6,	0	32	7.3,	74.9,	0	33	7.3,	73.9,	0	34	7.3,	70.6,	0	35	7.3,	65.2,	0	36	7.3,	57.8,	0

SOURCE ID: 65

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	10.1,	123.5,	0	2	10.1,	131.0,	0	3	10.1,	134.6,	0	4	10.1,	134.0,	0	5	10.1,	129.4,	0	6	10.1,	126.3,	0
7	10.1,	124.8,	0	8	10.1,	138.2,	0	9	10.1,	149.6,	0	10	10.1,	156.5,	0	11	10.1,	158.6,	0	12	10.1,	155.9,	0
13	10.1,	148.5,	0	14	10.1,	136.5,	0	15	10.1,	120.4,	0	16	10.1,	100.7,	0	17	10.1,	97.5,	0	18	10.1,	112.2,	0
19	10.1,	123.5,	0	20	10.1,	131.0,	0	21	10.1,	134.6,	0	22	10.1,	134.0,	0	23	10.1,	129.4,	0	24	10.1,	126.3,	0
25	10.1,	124.8,	0	26	10.1,	138.2,	0	27	10.1,	149.6,	0	28	10.1,	156.5,	0	29	10.1,	158.6,	0	30	10.1,	155.9,	0
31	10.1,	148.5,	0	32	10.1,	136.5,	0	33	10.1,	120.4,	0	34	10.1,	100.7,	0	35	10.1,	97.5,	0	36	10.1,	112.2,	0

SOURCE ID: 56

IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK	IFV	BH	BW	WAK
1	.0,	.0,	0	2	.0,	.0,	0	3	.0,	.0,	0	4	.0,	.0,	0	5	.0,	.0,	0	6	.0,	.0,	0
7	.0,	.0,	0	8	.0,	.0,	0	9	.0,	.0,	0	10	.0,	.0,	0	11	.0,	.0,	0	12	.0,	.0,	0
13	.0,	.0,	0	14	.0,	.0,	0	15	.0,	.0,	0	16	.0,	.0,	0	17	.0,	.0,	0	18	.0,	.0,	0
19	.0,	.0,	0	20	.0,	.0,	0	21	.0,	.0,	0	22	.0,	.0,	0	23	7.3,	85.3,	0	24	.0,	.0,	0
25	.0,	.0,	0	26	.0,	.0,	0	27	.0,	.0,	0	28	.0,	.0,	0	29	.0,	.0,	0	30	.0,	.0,	0
31	.0,	.0,	0	32	.0,	.0,	0	33	.0,	.0,	0	34	.0,	.0,	0	35	.0,	.0,	0	36	.0,	.0,	0

*** MODELING OPTIONS USED: CONC RURAL FLAT NOSTD NOCALM

*** GRIDDED RECEPTOR NETWORK SUMMARY ***

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

*** ORIGIN FOR POLAR NETWORK ***
X-ORIG = -30.00 ; Y-ORIG = .00 (METERS)

*** DISTANCE RANGES OF NETWORK ***
(METERS)

300.0, 325.0, 350.0, 400.0,

*** DIRECTION RADIALS OF NETWORK ***
(DEGREES)

```
      10.0,      20.0,       0,     240.0,     250.0,     260.0,     270.0,     280.0,     290.0,     300.0,
     310.0,     350.0,   360.0,
*** ISCST2 - VERSION 92062 ***    *** Micron 5 generators      PM-10 (1-24), NOx (#a:50)                    ***      04/12/95
                                  ***                                                                        ***      09:56:55
*** MODELING OPTIONS USED:  CONC   RURAL  FLAT                          NOSTD        NOCALM                          PAGE    7

                                   *** DISCRETE CARTESIAN RECEPTORS ***
                                  (X-COORD, Y-COORD, ZELEV, ZFLAG)
                                          (METERS)

(   -380.8,     270.3,        .0,        .0);        (   -360.8,     270.3,        .0,        .0);
(   -340.8,     270.3,        .0,        .0);        (   -320.7,     270.3,        .0,        .0);
(   -300.7,     270.3,        .0,        .0);        (   -280.7,     270.3,        .0,        .0);
(   -260.6,     270.3,        .0,        .0);        (   -240.6,     270.3,        .0,        .0);
(   -220.5,     270.3,        .0,        .0);        (   -200.5,     270.3,        .0,        .0);
(   -180.4,     270.3,        .0,        .0);        (   -160.4,     270.3,        .0,        .0);
(   -140.3,     270.3,        .0,        .0);        (   -120.3,     270.3,        .0,        .0);
(   -100.2,     270.3,        .0,        .0);        (    -80.2,     270.3,        .0,        .0);
(    -60.1,     270.3,        .0,        .0);        (    -40.1,     270.3,        .0,        .0);
(    -20.0,     270.3,        .0,        .0);        (       .0,     270.3,        .0,        .0);
(     20.0,     270.3,        .0,        .0);        (     40.0,     270.3,        .0,        .0);
(   -371.5,     246.3,        .0,        .0);        (   -366.1,     222.3,        .0,        .0);
(   -358.8,     198.3,        .0,        .0);        (   -351.5,     174.3,        .0,        .0);
(   -344.2,     150.3,        .0,        .0);        (   -336.9,     126.3,        .0,        .0);
(   -329.5,     102.3,        .0,        .0);        (   -322.2,      78.3,        .0,        .0);
(   -314.9,      54.3,        .0,        .0);        (   -307.6,      30.3,        .0,        .0);
(   -300.3,       6.3,        .0,        .0);        (   -292.9,     -17.6,        .0,        .0);
(   -285.6,     -41.6,        .0,        .0);        (   -278.3,     -65.7,        .0,        .0);
(   -270.9,     -89.6,        .0,        .0);        (   -263.6,    -113.6,        .0,        .0);
(   -256.3,    -137.6,        .0,        .0);        (   -249.0,    -161.6,        .0,        .0);
(   -241.7,    -185.6,        .0,        .0);        (   -234.3,    -209.6,        .0,        .0);
(   -227.0,    -233.6,        .0,        .0);        (   -219.7,    -257.6,        .0,        .0);
(   -212.4,    -281.6,        .0,        .0);        (   -205.1,    -305.6,        .0,        .0);
(   -197.7,    -329.6,        .0,        .0);        (   -190.4,    -353.6,        .0,        .0);
*** ISCST2 - VERSION 92062 ***    *** Micron 5 generators      PM-10 (1-24), NOx (#a:50)                    ***      04/12/95
                                  ***                                                                        ***      09:56:55
*** MODELING OPTIONS USED:  CONC   RURAL  FLAT                          NOSTD        NOCALM                          PAGE    8

                                   *** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
                                  (1=YES; 0=NO)

1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1

                 METEOROLOGICAL DATA PROCESSED BETWEEN START DATE:  85  1  1  0
                                                     AND END DATE:  85 12 31 24

NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

                                   *** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
                                  (METERS/SEC)

                                   1.54,    3.09,    5.14,    8.23,   10.80,
```

*** WIND PROFILE EXPONENTS ***

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
B	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01	.70000E-01
C	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00	.10000E+00
D	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00	.15000E+00
E	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00	.35000E+00
F	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00	.55000E+00

*** VERTICAL POTENTIAL TEMPERATURE GRADIENTS ***
(DEGREES KELVIN PER METER)

STABILITY CATEGORY	WIND SPEED CATEGORY 1	2	3	4	5	6
A	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
B	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
C	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
D	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00	.00000E+00
E	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01	.20000E-01
F	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01	.35000E-01

*** MODELING OPTIONS USED: CONC RURAL FLAT NOSTD NOCALM

*** THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

FILE: Boi85.met
SURFACE STATION NO.: 24131
NAME: SURFNAME
YEAR: 1985

FORMAT: (4I2,2F9.4,F6.1,I2,2F7.1)
UPPER AIR STATION NO.: 24131
NAME: UAIRNAME
YEAR: 1985

YEAR	MONTH	DAY	HOUR	FLOW VECTOR	SPEED (M/S)	TEMP (K)	STAB CLASS	MIXING HEIGHT (M) RURAL	URBAN
85	1	1	1	191.0	2.10	265.0	6	107.0	135.0
85	1	1	2	188.0	1.00	265.0	7	121.0	135.0
85	1	1	3	74.0	2.10	264.0	6	135.0	135.0
85	1	1	4	353.0	2.10	262.0	6	148.0	135.0
85	1	1	5	353.0	1.50	262.0	7	162.0	135.0
85	1	1	6	62.0	2.10	263.0	6	176.0	135.0
85	1	1	7	315.0	2.60	261.0	6	190.0	135.0
85	1	1	8	313.0	1.50	261.0	7	203.0	135.0
85	1	1	9	47.0	2.10	262.0	6	31.0	151.0
85	1	1	10	51.0	1.00	265.0	5	82.0	178.0
85	1	1	11	54.0	1.00	266.0	4	133.0	205.0
85	1	1	12	106.0	2.60	268.0	3	184.0	232.0
85	1	1	13	123.0	4.60	270.0	3	235.0	259.0
85	1	1	14	139.0	5.70	271.0	4	286.0	286.0
85	1	1	15	152.0	4.60	272.0	3	286.0	286.0
85	1	1	16	134.0	4.60	272.0	4	286.0	286.0
85	1	1	17	101.0	3.60	271.0	4	286.0	286.0
85	1	1	18	37.0	3.10	269.0	5	288.0	273.0
85	1	1	19	84.0	1.50	268.0	6	290.0	255.0
85	1	1	20	307.0	3.10	265.0	6	293.0	238.0
85	1	1	21	310.0	2.60	264.0	6	295.0	221.0
85	1	1	22	292.0	3.10	264.0	6	298.0	204.0

	-	1	21	310.0	3.10	264.0	6	300.0	187.0
85	1	1	24	290.0	3.10	264.0	6	302.0	170.0

*** NOTES: STABILITY CLASS 1=A, 2=B, 3=C, 4=D, 5=E AND 6=F.
FLOW VECTOR IS DIRECTION TOWARD WHICH WIND IS BLOWING.

*** MODELING OPTIONS USED: CONC RURAL FLAT NOSTD NOCALM

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: PM10 ***
INCLUDING SOURCE(S): 1 , 10 , 15 , 24 , 6 ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION (DEGREES)	DISTANCE (METERS) 300.00	325.00	350.00	400.00
10.00	.87767	.81344	.79170	.75793
20.00	.79764	.69787	.61666	.51748
30.00	.84831	.76747	.68633	.58532
240.00	.40665	.36995	.33985	.30149
250.00	.43329	.40225	.37607	.33582
260.00	.58334	.52693	.47948	.41010
270.00	.87492	.76719	.68202	.55823
280.00	1.29891	1.20489	1.11073	.93519
290.00	1.41180	1.35826	1.29616	1.20035
300.00	1.46349	1.46169	1.47154	1.48941
340.00	2.40861	2.04950	1.79325	1.44467
350.00	1.43827	1.30601	1.20065	1.02559
360.00	1.68085	1.46332	1.26599	.90564

*** MODELING OPTIONS USED: CONC RURAL FLAT NOSTD NOCALM

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: PM10 ***
INCLUDING SOURCE(S): 1 , 10 , 15 , 24 , 6 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
-380.80	270.30	2.31231	-360.80	270.30	2.62799
-340.80	270.30	3.10172	-320.70	270.30	3.81375
-300.70	270.30	4.85201	-280.70	270.30	6.23681
-260.60	270.30	7.58059	-240.60	270.30	8.52291
-220.50	270.30	9.29659	-200.50	270.30	9.47593
-180.40	270.30	8.65514	-160.40	270.30	6.65387
-140.30	270.30	1.82707	-120.30	270.30	2.23794
-100.20	270.30	1.84583	-80.20	270.30	1.67821
-60.10	270.30	2.37497	-40.10	270.30	2.21683
-20.00	270.30	1.54209	.00	270.30	1.15508
20.00	270.30	1.02129	40.00	270.30	.97277
-373.48	246.30	2.00786	-366.15	222.31	1.76281
-358.83	198.31	1.54432	-351.51	174.32	1.42801
-344.18	150.32	1.35648	-336.86	126.32	1.34783
-329.54	102.33	1.36635	-322.22	78.33	1.33537

-314.89	54.33	1.34326	-307.57	30.34	1.32627
-300.25	6.34	1.15818	-292.92	-17.65	.94192
-285.60	-41.65	.76100	-278.28	-65.65	.62755
-270.95	-89.64	.52194	-263.63	-113.64	.49026
-256.31	-137.63	.45482	-248.98	-161.63	.41296
-241.66	-185.63	.36755	-234.34	-209.62	.34562
-227.02	-233.62	.33969	-219.69	-257.62	.32845
-212.37	-281.61	.32143	-205.05	-305.61	.32923
-197.72	-329.60	.34329	-190.40	-353.60	.35562

*** MODELING OPTIONS USED: CONC RURAL FLAT NOSTD NOCALM

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: NOX ***
INCLUDING SOURCE(S): 51 , 60 , 65 , 74 , 56 ,

*** NETWORK ID: POL ; NETWORK TYPE: GRIDPOLR ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

DIRECTION (DEGREES)	DISTANCE (METERS) 300.00	325.00	350.00	400.00
10.00	15.03009	14.04672	13.66247	13.03511
20.00	13.48551	12.00633	10.79416	9.26626
30.00	13.90344	12.66426	11.42757	9.83022
240.00	8.10001	7.46459	6.93404	6.20875
250.00	9.53582	8.70601	8.09128	7.20408
260.00	15.09019	13.28688	11.84785	9.81990
270.00	27.00511	22.72249	19.58620	15.33826
280.00	43.23252	39.65434	35.95798	29.09984
290.00	41.30950	39.83542	38.32509	36.03676
300.00	34.34334	34.55285	34.96585	35.70848
340.00	38.50320	33.37729	29.68694	24.61121
350.00	23.99516	22.10454	20.57855	17.99369
360.00	26.61832	23.50911	20.68321	15.51259

*** MODELING OPTIONS USED: CONC RURAL FLAT NOSTD NOCALM

*** THE PERIOD (8760 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: NOX ***
INCLUDING SOURCE(S): 51 , 60 , 65 , 74 , 56 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
-380.80	270.30	43.03490	-360.80	270.30	46.84914
-340.80	270.30	52.78877	-320.70	270.30	62.02899
-300.70	270.30	75.96623	-280.70	270.30	94.89290
-260.60	270.30	113.36020	-240.60	270.30	126.33510
-220.50	270.30	136.97590	-200.50	270.30	139.16460
-180.40	270.30	127.25200	-160.40	270.30	98.75666
-140.30	270.30	58.67234	-120.30	270.30	36.00823
-100.20	270.30	30.36646	-80.20	270.30	27.42492
-60.10	270.30	36.78720	-40.10	270.30	34.26245
-20.00	270.30	24.70644	.00	270.30	19.17485
20.00	270.30	17.09568	40.00	270.30	16.21370
-373.48	246.30	39.60678	-366.15	222.31	37.23341
-358.83	198.31	35.56589	-351.51	174.32	35.68804

-329.54	[illegible]	36.66799	-336.86	126.32	38.50478
-314.89	102.11	40.66952	-322.22	78.33	42.26677
-300.25	54.33	44.58997	-307.57	30.34	45.35942
-285.60	6.34	38.74288	-292.92	-17.65	29.45021
-270.95	-41.65	21.46149	-278.28	-65.65	16.20631
-256.31	-89.64	12.05787	-263.63	-113.64	10.02864
-241.66	-137.63	8.96333	-248.98	-161.63	8.08966
-227.02	-185.63	7.14797	-234.34	-209.62	6.60793
-212.37	-233.62	6.51397	-219.69	-257.62	6.24109
-197.72	-281.61	6.09941	-205.05	-305.61	6.37062
	-329.60	6.75045	-190.40	-353.60	7.04522

*** ISCST2 - VERSION 92062 *** *** Micron 5 generators PM-10 (1-24), NOx (Bs:50) *** *** 04/12/95 *** 09:56:55 PAGE 14

*** MODELING OPTIONS USED: CONC RURAL FLAT NOSTD NOCALM

*** THE MAXIMUM 20 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: PM10 ***
INCLUDING SOURCE(S): 1 , 10 , 15 , 24 , 6 ,

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE
1.	41.11130	(85101424)	AT (	-200.50,	270.30)	DC	11.	28.71812	(85012724)	AT (	-200.50,	270.30)	DC
2.	35.16157	(85033024)	AT (	-200.50,	270.30)	DC	12.	28.57663	(85102424)	AT (	-180.40,	270.30)	DC
3.	34.66824	(85101424)	AT (	-220.50,	270.30)	DC	13.	28.37705	(85101024)	AT (	-200.50,	270.30)	DC
4.	33.21051	(85102424)	AT (	-200.50,	270.30)	DC	14.	28.18323	(85033024)	AT (	-180.40,	270.30)	DC
5.	32.35416	(85020424)	AT (	-200.50,	270.30)	DC	15.	28.01484	(85101024)	AT (	-180.40,	270.30)	DC
6.	31.14912	(85100424)	AT (	-200.50,	270.30)	DC	16.	27.82244	(85033024)	AT (	-220.50,	270.30)	DC
7.	30.53937	(85010324)	AT (	-260.60,	270.30)	DC	17.	27.78150	(85012424)	AT (	-160.40,	270.30)	DC
8.	29.44295	(85012324)	AT (	-180.40,	270.30)	DC	18.	27.77090	(85012424)	AT (	-180.40,	270.30)	DC
9.	29.33415	(85111424)	AT (	-200.50,	270.30)	DC	19.	27.75641	(85121324)	AT (	-240.60,	270.30)	DC
10.	28.81016	(85121124)	AT (	-220.50,	270.30)	DC	20.	27.35543	(85022624)	AT (	-200.50,	270.30)	DC

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

PM-10 24 hr max

Aug pg/m³

SIGNIFICANT

Conversion

Annual PM-10 max

$\left(41.1\ \frac{\mu g}{m^3}\right)\left(\frac{200\ \frac{kg}{yr}}{[illegible]}\right)$

(24 hr max) (3.6)

*** ISCST2 - VERSION 92062 *** *** Micron 5 generators PM-10 (1-24), NOx (Bs:50) *** *** 04/12/95 *** 09:56:55 PAGE 15

*** MODELING OPTIONS USED: CONC RURAL FLAT NOSTD NOCALM

*** THE MAXIMUM 20 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: NOX ***
INCLUDING SOURCE(S): 51 , 60 , 65 , 74 , 56 ,

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE	RANK	CONC	(YYMMDDHH)	AT	RECEPTOR (XR,YR)		OF TYPE
1.	576.86200	(85101424)	AT (	-200.50,	270.30)	DC	11.	417.31970	(85012424)	AT (	-180.40,	270.30)	DC
2.	494.22230	(85033024)	AT (	-200.50,	270.30)	DC	12.	415.28660	(85101024)	AT (	-200.50,	270.30)	DC
3.	487.11580	(85101424)	AT (	-220.50,	270.30)	DC	13.	410.30740	(85121124)	AT (	-220.50,	270.30)	DC
4.	473.60810	(85102424)	AT (	-200.50,	270.30)	DC	14.	409.99070	(85012424)	AT (	-160.40,	270.30)	DC
5.	461.11250	(85100424)	AT (	-200.50,	270.30)	DC	15.	409.42920	(85101024)	AT (	-180.40,	270.30)	DC
6.	453.27650	(85020424)	AT (	-200.50,	270.30)	DC	16.	406.34920	(85102424)	AT (	-180.40,	270.30)	DC
7.	429.32380	(85010324)	AT (	-260.60,	270.30)	DC	17.	403.08970	(85022624)	AT (	-200.50,	270.30)	DC
8.	428.04540	(85012724)	AT (	-200.50,	270.30)	DC	18.	399.53950	(85121324)	AT (	-240.60,	270.30)	DC
9.	427.02270	(85012324)	AT (	-180.40,	270.30)	DC	19.	395.97840	(85012424)	AT (	-220.50,	270.30)	DC
10.	426.06980	(85111424)	AT (	-200.50,	270.30)	DC	20.	395.38930	(85033024)	AT (	-180.40,	270.30)	DC

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART

Conversion

Annual NOx input

$\left(576.86\ \frac{\mu g}{m^3}\right)\left(\frac{200\ \frac{kg}{yr}}{[illegible]}\right)$

(24 hr max)

DP = DISCPOLR
BD = BOUNDARY

*** MODELING OPTIONS USED: CONC RURAL FLAT NOSTD NOCALM

*** THE SUMMARY OF MAXIMUM PERIOD (8760 HRS) RESULTS ***

** CONC OF OTHER IN (MICROGRAMS/CUBIC-METER) **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZFLAG)				OF TYPE	NETWORK GRID-ID
PM10	1ST HIGHEST VALUE IS	9.47593 AT (	-200.50,	270.30,	.00,	.00)	DC	
	2ND HIGHEST VALUE IS	9.29659 AT (	-220.50,	270.30,	.00,	.00)	DC	
	3RD HIGHEST VALUE IS	8.65614 AT (	-180.40,	270.30,	.00,	.00)	DC	
	4TH HIGHEST VALUE IS	8.52291 AT (	-240.60,	270.30,	.00,	.00)	DC	
	5TH HIGHEST VALUE IS	7.58059 AT (	-260.60,	270.30,	.00,	.00)	DC	
	6TH HIGHEST VALUE IS	6.65387 AT (	-160.40,	270.30,	.00,	.00)	DC	
NOX	1ST HIGHEST VALUE IS	139.16460 AT (	-200.50,	270.30,	.00,	.00)	DC	
	2ND HIGHEST VALUE IS	136.97590 AT (	-220.50,	270.30,	.00,	.00)	DC	
	3RD HIGHEST VALUE IS	127.25200 AT (	-180.40,	270.30,	.00,	.00)	DC	
	4TH HIGHEST VALUE IS	126.33510 AT (	-240.60,	270.30,	.00,	.00)	DC	
	5TH HIGHEST VALUE IS	113.36020 AT (	-260.60,	270.30,	.00,	.00)	DC	
	6TH HIGHEST VALUE IS	98.75666 AT (	-160.40,	270.30,	.00,	.00)	DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
BD = BOUNDARY

*** MODELING OPTIONS USED: CONC RURAL FLAT NOSTD NOCALM

*** Message Summary For ISC2 Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 7 Warning Message(s)
A Total of 0 Informational Message(s)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********
SO W320 34 PPARM : Source Parameter May Be Out-of-Range for Parameter VS
SO W320 36 PPARM : Source Parameter May Be Out-of-Range for Parameter VS
SO W320 37 PPARM : Source Parameter May Be Out-of-Range for Parameter VS
SO W320 39 PPARM : Source Parameter May Be Out-of-Range for Parameter VS
SO W320 41 PPARM : Source Parameter May Be Out-of-Range for Parameter VS
SO W320 42 PPARM : Source Parameter May Be Out-of-Range for Parameter VS
MX W430 822 METQA : Ambient Temperature Data Out-of-Range. KURDAT= 85020406

****

Responses to Comments and Questions submitted during a Public Comment Period on Micron Technology, Incorporated (Boise) Proposed Tier II Operating Permit (OP) for Emergency Generators

II. COMMENTS AND RESPONSES

Comment #1: The address for Micron Technology, Inc., (MTI) has changed since submittal of the application. The new address is 8000 South Federal Way.

DEQ Response: DEQ revised the final OP to reflect this comment.

Comment #2: The numbering scheme used in the proposed permit is not consistent with the system used at MTI. Numbers corresponding to those given in the permit application (and reiterated below) are affixed to the external surface of each generator enclosure. Changing the numbers in the proposed permit will allow easier identification for MTI facility personnel and for DEQ inspectors. The coordination of these numbers would also eliminate confusion if future generators are installed that have capacities identical to the existing generators. Please revise the identification numbers as set forth below:

Requested Generator Identification Numbers	Generator Capacity
1	475
2	339
3	1443
4	1851
5	263

DEQ Response: DEQ revised the final OP to reflect this comment.

Comment #3: The last sentence of this section is unclear. We recommend changing this sentence to "other combustion emissions are uncontrolled."

DEQ Response: DEQ revised that sentence of the final OP to read as follows: "Other pollutants resulting from combustion are uncontrolled."

Comment #4: Section 1.3, Stack Design Specifications. General stack parameters were supplied in the permit application forms to assist the DEQ in conducting dispersion modeling. These parameters were not intended to be limiting factors for each individual generator. Suggested permit terms and conditions included in the permit application requested a range of stack specifications for all five existing generators. Stack parameters will vary for each generator depending on the load applied to the engine. These parameters may also change based on the configuration or location of the generators. The requested range of stack parameters account for these potential variations so that no parameter will exceed the ranges. The parameters supplied in the forms are anticipated to be worst-case for each generator given the current design and location and therefore remain valid for use in dispersion modeling. Please revise the individual unit specifications to reflect the ranges set forth below:

Height	9.0 - 15.0 feet
Diameter	0.5 - 0.75 feet
Volumetric Flow Rate	1465 - 9620 ACFM
Exit Temperature	878 - 1270° F

As noted in the suggested permit terms and conditions, future emergency generators may have stack specifications that do not fall within these ranges. Future generator specifications will be consistent with the capacity of the generator as recommended or approved by the manufacturer.

DEQ Response: **DEQ did not revise the final OP to reflect this comment. The stack parameters were supplied in the application forms and were used for the modeling assessment. Using a range for stack parameters which are not specific for each generator may result in different ambient concentrations. It is expected that using worst case modeling assumptions of maximum emissions from 9 foot high, .75 foot diameter stacks with 1465 ACFM at 878 °F would result in a higher predicted ambient impact.**

Comment #5: Section 1.4, Equipment Specification. The model number for Generator #5 should be change to Caterpillar 3208. This is consistent with information supplied in the permit application.

DEQ Response: **DEQ revised the final OP to reflect this comment.**

Comment #6: Section 3.2, the Operating Requirements in this section should be changed to read:

All emergency generators shall not be operated, except for emergencies, during any period in which an Atmospheric Stagnation Advisory and/or a mandatory Wood Stove Curtailment in Boise have been declared by the Department.

The addition of the qualifier "mandatory" is necessary to clarify when the generators can not be operated. Two different levels of wood stove curtailments may be declared in Boise depending on PM-10 concentrations in the area. Voluntary curtailments are declared when PM-10 concentrations reach 100 Ug/m^3. While MTI may not operate the emergency generators during voluntary curtailments as a matter of company policy, the permit should limit operations only during mandatory curtailments. This is consistent with the modeling/impact assessment conducted for the MTI emergency generators. In this assessment the DEQ used the 100 Ug/m^3 Air Stagnation Advisory threshold as the background PM-10 concentration. Please revise this section to include the term "mandatory" as drafted above.

DEQ Response: **DEQ revised the final OP to reflect this comment.**

Comment #7: Future generator capacity limitations.

Specification 1.4.6 should be changed to read:

Additional generators with capacities not to exceed 1851 hp or emissions not to exceed the pound per hour (lb/hr) emission limit values listed for Generator #4 in Appendix A.

Section 3.3 should be changed to read:

Any additional emergency generators that are installed at the facility shall have capacities that not exceed 1851 hp or emissions that do not exceed the pound per hour (lb/hr) limit values listed for generator #4 in Appendix A.

These comments are based on the desire to take advantage of advances in engine design technology. Newer, more powerful engines may become available that have similar or lower emissions than the 1851 hp engine. An upper limit on the capacity of the engines, without regard to emissions, would unduly restrict the ability of the MTI to use such higher powered engines with reduced emission impact. The lower capacity limit does not appear to provide any benefit. When using AP-42 emission factors any generator with a capacity less than 263 hp will always have emissions lower than the five existing emergency generators. please revise these sections as drafted above (the above language assumes the requested numbering changes in comment #2 are adopted).

DEQ Response: **DEQ revised the final OP to reflect this comment.**

Comment #8: The first sentence of Section 1.2, Control Equipment, should be changed to read:

Control of sulfur dioxide (SO_2) emission shall be performed by burning No. 2 and/or No. 1 fuel oil which has a sulfur content of no more than 0.5 percent by weight.

Section 2.5 should be changed to read:

Sulfur dioxide (SO_2) emissions shall be limited by burning No. 2 and/or No. 1 fuel oil that contains a maximum sulfur content of 0.5 percent by weight as required in IDAPA 16.01.01.728.

The first sentence of Section 3.1 should be changed to read:

Each emergency generator shall use only No. 2 and/or No. 1 fuel oil.

The first sentence of Section 4.1 should be changed to read:

The Permittee shall record the amount of No. 2 and No. 1 fuel oil used in each emergency generator in a calendar year and the hours of operation (hours per day and hours per year) for each emergency generator.

These changes are necessary to allow the use of No. 1 fuel oil during cold winter months. No. 1 fuel may be blended with No. 2 fuel to ensure the fuel oil does not become so viscous as to prohibit the operation of the emergency generators. The maximum amount of sulfur allowed in No. 2 and No. 1 fuel oils is 0.5 percent and 0.3 percent by weight, respectively, as required by IDAPA 16.01.01.728. Since No.1 fuel oil must always have less sulfur than No. 2 fuel oil, the emissions of SO_2 from the combustion of No. 1 fuel oil or blends of No. 2 and No. 1 fuel oils will always be less than the emissions of SO_2 from the combustion of only No. 2 fuel oil. Please revise these sections as drafted above.

DEQ response: **DEQ revised the final OP to reflect this comment.**