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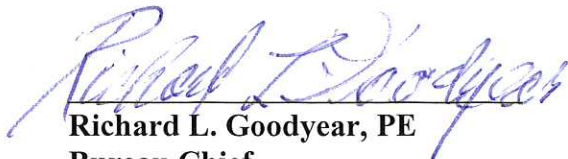
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**AIR QUALITY BUREAU**  
**NEW SOURCE REVIEW PERMIT**  
Issued under 20.2.72 NMAC

Certified Mail No: 7014 3490 0001 8188 7584

Return Receipt Requested

<b>NSR Permit No:</b>	0325-M11-R8
<b>Facility Name:</b>	Intel Corporation – Rio Rancho Facility
<b>Permittee Name:</b>	Intel Corporation
<b>Mailing Address:</b>	4100 Sara Rd., Mail Stop RR5-491 Rio Rancho, NM 87124-1025
<b>TEMPO/IDEA ID No:</b>	1103 - PRN20150001
<b>AIRS No:</b>	35-043-0005
<b>Permitting Action:</b>	Technical Permit Revision
<b>Source Classification:</b>	Title V Synthetic Minor > 80
<b>Facility Location:</b>	349,153m E by 3,898,946m N, UTM Zone 13
<b>County:</b>	Sandoval
<b>Air Quality Bureau Contact</b>	Daren K. Zigich
<b>Main AQB Phone No.</b>	(505) 476-4300

  
**Richard L. Goodyear, PE**  
 Bureau Chief  
 Air Quality Bureau

SEP 3 2015  
 \_\_\_\_\_  
 Date

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**PART A      FACILITY SPECIFIC REQUIREMENTS****A100 Introduction**

- A. This permit, NSR 0325-M11-R8, supersedes all portions of Air Quality Permit 0325-M11-R5 issued April 26, 2013, permit 0325-M11-R6 issued April 25, 2014, and permit 0325-M11-R7 issued June 11, 2014, except the portion requiring compliance tests. Compliance test conditions from previous permits, if not completed, are still in effect, in addition to compliance test requirements contained in this permit.
- B. Fee Requirement: This permit is not effective until the Department receives the permit fee specified in the attached invoice. Pursuant to 20.2.75.12 NMAC, the permittee shall pay this invoice no later than thirty (30) days after the permit issue date (invoicing), unless the Department has granted an extension. The permit fee must be paid by this date regardless of the permittee's intended use or non-use of the permit or of the Department's cancellation of the permit. The permittee's failure to pay this fee when due will automatically void the permit and the Department may initiate enforcement action to collect the fee and assess a civil penalty for non-payment.

**A101 Permit Duration (expiration)**

- A. The term of this permit is permanent unless withdrawn or cancelled by the Department.

**A102 Facility: Description**

- A. The function of the facility is to use silicon wafers to manufacture semi-conductor chips for use in the computer industry. The facility consists of buildings in which chips are manufactured (Fabrication Facilities, or Fabs) and buildings containing the support equipment for the Fab including waste tanks, natural gas fired boilers and cooling towers.
- B. This facility is located approximately 1 mile southeast of Rio Rancho, New Mexico in Sandoval County.
- C. This modification consists of updating equipment information, removing references and requirements related to the cancelled Title V permit, clarifying language for emission limits and scrubbers, removing boiler Units 28 and 29 and removing the minor NSR exempt emergency generator units and fire pump units from the list in

Table 104, and associated specific conditions. The description of this modification is for informational purposes only and is not enforceable.

- D. [Table 102.A](#) and [Table 102.B](#) show the total potential emissions from this facility for information only, not an enforceable condition, excluding exempt sources or activities.

**Table 102.A: Total Potential Pollutant Emissions from Entire Facility**

Pollutant	Emissions (tons per year)
Nitrogen Oxides (NO <sub>x</sub> )	95.7
Carbon Monoxide (CO)	94.7
Volatile Organic Compounds (VOC) *	96.5
Sulfur Dioxide (SO <sub>2</sub> )	95.0
Total Suspended Particulates (TSP)	95.0
Particulate Matter less than 10 microns (PM <sub>10</sub> )	95.0
Particulate Matter less than 2.5 microns (PM <sub>2.5</sub> )	95.0
Greenhouse Gas (GHG)	>75,000

\* VOC total includes emissions from Fugitives, SSM and Malfunctions

**Table 102.B: Total Potential \*HAPS that exceed 1.0 ton per year**

Pollutant	Emissions (tons per year)
Any Individual HAP	9.0
Total HAPs	24.0

### **A103 Facility: Applicable Regulations**

- A. The permittee shall comply with all applicable sections of the requirements listed in [Table 103.A](#).

**Table 103.A: Applicable Requirements**

Applicable Requirements	Federally Enforceable	Unit No.
20.2.1.116 NMAC General Provisions	X	Entire Facility
20.2.3 NMAC Ambient Air Quality Standards	X	Entire Facility
20.2.7 NMAC Excess Emissions	X	Entire Facility
20.2.61 Smoke & Visible Emissions	X	Boilers (Units 15, 16, 17, 18, 19, 20, 21, 22, 23, 183)
20.2.72 NMAC Construction Permits	X	Entire Facility
20.2.73 NMAC NOI & Emissions Inventory Requirements	X	Entire Facility
20.2.75 NMAC Construction Permit Fees	X	Entire Facility

**Table 103.A: Applicable Requirements**

<b>Applicable Requirements</b>	<b>Federally Enforceable</b>	<b>Unit No.</b>
20.2.77 NMAC New Source Performance Standards (NSPS)	X	Boilers (Units 15, 16, 17, 18, 19, 20, 21, 22, 23, 183) Subject to Subpart Dc
40 CFR 50 NAAQS	X	Entire Facility
40 CFR 60 Subpart A General Provisions (NSPS)	X	Boilers (Units 15, 16, 17, 18, 19, 20, 21, 22, 23, 183) Subject to Subpart Dc
40 CFR 60.40c Subpart Dc Small Industrial-Commercial-Institutional Steam Generating Units (NSPS)	X	Boilers (Units 15, 16, 17, 18, 19, 20, 21, 22, 23, 183)
40 CFR 68 Chemical Accident Prevention (NESHAP)	X	Entire Facility
40 CFR 82 Protection of Stratospheric Ozone (Title VI)	X	Entire Facility

**A104 Facility: Regulated Sources**

- A. Table 104 lists the emission units authorized for this facility. Emission units identified as exempt activities (as defined in 20.2.72.202 NMAC) and/or equipment not regulated pursuant to the Act are not included.

**Table 104: Regulated Sources List**

<b>Unit No.</b>	<b>Source Description</b>	<b>Make Model</b>	<b>Serial No.</b>	<b>Maximum Capacity/ Permitted Capacity</b>	<b>Manufacture/ Construction Date</b>
197	Semiconductor Manufacturing Fab				
14	Boiler	TBD	TBD	8.37 MMBtu/hr	TBD
15	Boiler	TBD	TBD	29.3 MMBtu/hr	TBD
16	Boiler	Superior Boiler Works/ 6-5-6250-5150	12254	52.5 MMBtu/hr	1995
17	Boiler	Superior Boiler Works / 6-5-6250-5150	12183	52.5 MMBtu/hr	1994

Unit No.	Source Description	Make Model	Serial No.	Maximum Capacity/ Permitted Capacity	Manufacture/ Construction Date
18	Boiler	Superior Boiler Works / 6-5-6250-5150	12184	52.5 MMBtu/hr	1994
19	Boiler	Superior Boiler Works / 6-5-6250-5150	12255	52.5 MMBtu/hr	1994
20	Boiler	Superior Boiler Works / 6-5-6250-5150	12185	52.5 MMBtu/hr	1994
21	Boiler	Superior Boiler Works / 6-5-6250-5150	12466	52.5 MMBtu/hr	1995
22	Boiler	TBD	TBD	29.3 MMBtu/hr	TBD
23	Boiler	TBD	TBD	29.3 MMBtu/hr	TBD
183	Boiler	TBD	TBD	29.3 MMBtu/hr	TBD
121-132	Cooling Tower	Alpha Southwest / UL-3030-75-19P6	NA	7,500 gpm (each cell)	NA
133-135	Cooling Tower	Ingersoll Rand / 5KS449DP7010AN	NA	6,000 gpm (each cell)	NA
136	Cooling Tower	Flowserve / NA	NA	3,000 gpm (each cell)	NA
137-144	Cooling Tower	Ingersoll Rand / 5KS449DP7010AN	NA	6,000 gpm (each cell)	NA
184-193	Cooling Tower	TBD / TBD	TBD	10,000 gpm (each cell)	TBD
194-195	Cooling Tower	Marley / NC9001GM	NA	1,640 gpm (each cell)	NA
196	Cooling Tower	TBD / TBD	TBD	1,640 gpm (each cell)	TBD

1. All TBD (to be determined) units and like-kind engine replacements must be evaluated for applicability to NSPS and NESHAP requirements.

### **A105 Facility: Control Equipment**

- A. [Table 105](#) lists all the pollution control equipment required for this facility. Each emission point is identified by the same number that was assigned to it in the permit application.

**Table 105: Control Equipment List:**

Control Equipment Unit No. <sup>1</sup>	Control Description	Pollutant being controlled	Control for Unit Number (s) <sup>2</sup>	Manufacturer	Model No.	Serial No.	Capacity	Install Date
162	Thermal Oxidizer	Organic solvents	197	Munters	1ZS-3546-TH	3546-038	2.4 MMBtu/hr	10/1/2008

		including VOCs/HAPs						
163	Thermal Oxidizer	Organic solvents including VOCs/HAPs	197	Munters	1ZS- 3546-TH	3546- 039	2.4 MMBtu/hr	10/1/2008
164	Thermal Oxidizer	Organic solvents including VOCs/HAPs	197	Munters	1ZS- 3546-TH	3546- 053	2.4 MMBtu/hr	1/12/2010
171	Thermal Oxidizer	Organic solvents including VOCs/HAPs	197	Munters	1ZS- DS2946- TH	2946- 051- 2946- 52	2.4 MMBtu/hr	6/27/2011
170	Thermal Oxidizer	Organic solvents including VOCs/HAPs	197	Munters	1ZS- DS2946- TH	2946- 054- 2946- 55	2.4 MMBtu/hr	6/27/2011
168	Thermal Oxidizer	Organic solvents including VOCs/HAPs	197	Munters	1ZS- DS2946- TH	2946- 049- 2946- 050	2.4 MMBtu/hr	6/27/2011
167	Thermal Oxidizer	Organic solvents including VOCs/HAPs	197	Munters	1ZS- DS2946- TH	2946- 056- 2946- 057	2.4 MMBtu/hr	6/27/2011
176	Thermal Oxidizer	Organic solvents including VOCs/HAPs	197	TBD	TBD	TBD	2.4 MMBtu/hr	TBD
177	Thermal Oxidizer	Organic solvents including VOCs/HAPs	197	TBD	TBD	TBD	2.4 MMBtu/hr	TBD
178	Thermal Oxidizer	Organic solvents including VOCs/HAPs	197	TBD	TBD	TBD	2.4 MMBtu/hr	TBD
169	Thermal Oxidizer	Organic solvents including VOCs/HAPs	197	TBD	TBD	TBD	2.4 MMBtu/hr	TBD
166	Thermal Oxidizer	Organic solvents including VOCs/HAPs	197	TBD	TBD	TBD	2.4 MMBtu/hr	TBD
172	Thermal Oxidizer	Organic solvents including VOCs/HAPs	197	TBD	TBD	TBD	2.4 MMBtu/hr	TBD
173	Thermal Oxidizer	Organic solvents	197	TBD	TBD	TBD	2.4 MMBtu/hr	TBD

		including VOCs/HAPs						
174	Thermal Oxidizer	Organic solvents including VOCs/HAPs	197	TBD	TBD	TBD	2.4 MMBtu/hr	TBD
175	Thermal Oxidizer	Organic solvents including VOCs/HAPs	197	TBD	TBD	TBD	2.4 MMBtu/hr	TBD
165	Thermal Oxidizer	Organic solvents including VOCs/HAPs	197	TBD	TBD	TBD	2.4 MMBtu/hr	TBD
159	Ammonia Treatment System	Ammonia and NOx	197	Catalytic Products International	CPI Vector 6.5	91132	3.0 MMBtu/hr	2/16/2011
180	Ammonia Treatment System	Ammonia and NOx	197	Catalytic Products International	TBD	TBD	3.0 MMBtu/hr	TBD
181	Ammonia Treatment System	Ammonia and NOx	197	Catalytic Products International	TBD	TBD	3.0 MMBtu/hr	TBD
182	Ammonia Treatment System	Ammonia and NOx	197	Catalytic Products International	TBD	TBD	3.0 MMBtu/hr	TBD
179	Bulk Specialty Solvent Waste (BSSW) Treatment System	Organic solvents including VOCs/HAPs	197	Catalytic Products International	TBD	TBD	0.5 MMBtu/hr	TBD
7	Acid Gas Scrubber	Inorganic acids including HAPs	197	Viron International Corp.	VVS- 7284- FRP- 12.0-60- S-1-J- 460-3-60	12344	21,000 cfm	12/5/2005
52	Acid Gas Scrubber	Inorganic acids including HAPs	197	Viron International Corp.	VVS- 7284- FRP- 12.0-60- S-1-J- 460-3-60	12343	21,000 cfm	12/5/2005
37	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 5 5- 5 LB	S- 02149 4-9	10,000 cfm	6/12/1995
152	Acid Gas Scrubber	Inorganic acids including	197	Harrington Plastics	ECV 3 4- 5 LB	S- 10150 4-5	5,000 cfm	5/26/2005



		HAPs						
151	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 3 4-5 LB	S-07240 3-1	5,000 cfm	12/2/2003
153	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 3 4-5 LB	S-10150 4-6	5,000 cfm	5/26/2005
47	Acid Gas Scrubber	Inorganic acids including HAPs	197	NA	NA	NA	NA	TBD
96	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 10 10-5 LB	S-02140 1-1	50,000 cfm	1/9/2002
95	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 10 10-5 LB	S-02140 1-2	50,000 cfm	1/9/2002
93	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 10 10-5 LB	S-02140 1-3	50,000 cfm	1/9/2002
89	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 10 10-5 LB	S-10150 4-1	50,000 cfm	11/1/2005
161	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 4 5 5LB	S-06110 2-1	10,000 cfm	11/30/2002
160	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 4 5 5LB	S-10150 4-3	10,000 cfm	2/18/2005
1	Acid Gas Scrubber	Inorganic acids including HAPs	197	Beverly Pacific	PSUR 510-5	BPC 680-5	10,000 cfm	10/7/2008
45a	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 3 4 5LB	S-11290 1-1	5,000 cfm	11/30/2002
46	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 10 10-5 LB	S-02140 1-04	50,000 cfm	12/17/2001
53	Acid Gas Scrubber	Inorganic acids including	197	Harrington Plastics	ECV 10 10-5 LB	S-02140 1-05	50,000 cfm	12/17/2001

		HAPs						
4	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 10 10-5 LB	S-10150 4-2	50,000 cfm	5/5/2005
84	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	TBD	TBD	55,000 cfm	TBD
85	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 10.5 9-5LB	S-11149 5-1	55,000 cfm	6/12/1995
86	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 10.5 9-5LB	SO-21494-1	55,000 cfm	6/12/1995
87	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 10.5 9-5LB	S-06279 5-1	55,000 cfm	10/24/1995
88	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 10.5 9-5LB	SO-21494-2	55,000 cfm	6/12/1995
90	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 10.5 9-5LB	SO214 94-3	55,000 cfm	7/1/2009
91	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 10.5 9-5LB	S1114 95-2	55,000 cfm	7/1/2009
92	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	EVC 10.5 9-5LB	SO-21494-4	55,000 cfm	7/1/2009
94	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 10.5 9-5LB	SO-21494-5	55,000 cfm	6/12/1995
97	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 10.5 9-5LB	S-11139 6-1	55,000 cfm	6/1/1997
45b	Acid Gas Scrubber	Inorganic acids including HAPs	197	Harrington Plastics	ECV 3 4 5LB	S-10150 4-4	5,000 cfm	5/26/2005
43	Acid Gas Scrubber	Inorganic acids including	197	TBD	TBD	TBD	TBD	TBD

		HAPs						
44	Acid Gas Scrubber	Inorganic acids including HAPs	197	TBD	TBD	TBD	TBD	TBD
66	Acid Gas Scrubber	Inorganic acids including HAPs	197	TBD	TBD	TBD	TBD	TBD
67	Acid Gas Scrubber	Inorganic acids including HAPs	197	TBD	TBD	TBD	TBD	TBD
68	Acid Gas Scrubber	Inorganic acids including HAPs	197	TBD	TBD	TBD	TBD	TBD
69	Acid Gas Scrubber	Inorganic acids including HAPs	197	TBD	TBD	TBD	TBD	TBD
70	Acid Gas Scrubber	Inorganic acids including HAPs	197	TBD	TBD	TBD	TBD	TBD
71	Acid Gas Scrubber	Inorganic acids including HAPs	197	TBD	TBD	TBD	TBD	TBD
72	Acid Gas Scrubber	Inorganic acids including HAPs	197	TBD	TBD	TBD	TBD	TBD
75	Acid Gas Scrubber	Inorganic acids including HAPs	197	TBD	TBD	TBD	TBD	TBD
76	Acid Gas Scrubber	Inorganic acids including HAPs	197	TBD	TBD	TBD	TBD	TBD
40	Acid Gas Scrubber	Inorganic acids including HAPs	197	TBD	TBD	TBD	TBD	TBD
41	Acid Gas Scrubber	Inorganic acids including HAPs	197	TBD	TBD	TBD	TBD	TBD
42	Acid Gas Scrubber	Inorganic acids including	197	TBD	TBD	TBD	TBD	TBD

		HAPs						
73	Acid Gas Scrubber	Inorganic acids including HAPs	197	TBD	TBD	TBD	TBD	TBD

- 1 Sources with negligible or no emissions such as emergency gas pad scrubbers, ventilation exhaust, etc are not regulated and therefore not included in this table.
- 2 Control for unit number refers to a unit number from the Regulated Equipment List

**A106 Facility: Allowable Emissions**

A. The following Section lists the emission units and their allowable emission limits. (40 CFR 50, 20.2.72.210.A and B.1 NMAC).

**Table 106.A: Allowable Emissions per Unit by Source Category<sup>1</sup>**

Source Category (Section No.)	Fuel Type	NOx <sup>2</sup> pph	CO pph	<sup>3</sup> TSP/PM <sub>10</sub> /PM <sub>2.5</sub> pph
Boilers (A800)	Natural Gas	2.92	5.6	0.24
Thermal Oxidizers (A801)	Natural Gas	1.0	0.60	1.0
Ammonia Treatment Systems (A803)	Natural Gas	1.0	1.0	0.050
BSSW Treatment System (A804)	Natural Gas	1.0	1.0	0.050

- 1 Thermal Oxidizer (RTO) pph limits for NOx, CO, and PM are applicable for the combustion stack only.
- 2 Nitrogen dioxide emissions include all oxides of nitrogen expressed as NO<sub>2</sub>
3. Limits apply to each individual pollutant (TSP, PM<sub>10</sub> and PM<sub>2.5</sub>) and not the sum.

B. Facility-wide emissions for criteria pollutants, VOC, and HAPs from all emission units, combined, shall not exceed the limits in Table 106.B and Table 106.C.

**Table 106.B Facility Wide Allowable Emissions**

Facility-Wide	<sup>1</sup> NO <sub>x</sub> tpy	CO tpy	VOC tpy	SO <sub>2</sub> tpy	<sup>3</sup> TSP/PM <sub>10</sub> /PM <sub>2.5</sub> tpy	<sup>2</sup> Any Individual HAP tpy	Total HAPs tpy
Sum of emissions from all sources	95.7	94.7	96.5	95	95	9.0	24

- 1 Nitrogen dioxide emissions include all oxides of nitrogen expressed as NO<sub>2</sub>
- 2 HAPs with <9tpy limit listed in Table 106.C
- 3 Limits apply to each individual pollutant (TSP, PM<sub>10</sub> and PM<sub>2.5</sub>) and not the sum.

**Table 106.C Facility Wide Allowable Individual HAP Emissions**

Individual HAP	tpy
Cresols	7.4

<b>Individual HAP</b>	<b>tpy</b>
Hexachlorobenzene	0.50
Hexachlorobutadiene	3.9
Hexachlorocyclopentadiene	2.1
Phenol	1.5
Phosphine	7.9
Phosphorus	1.9
Phosgene	5.9
Arsenic Compounds	0.20
Cobalt Compounds	0.40
Chromium Compounds	0.20
Lead Compounds	0.20
Manganese Compounds	3.8
Mercury Compounds	0.50
Nickel Compounds	0.30
Selenium Compounds	3.8

**A107 Facility: Allowable Startup, Shutdown, & Maintenance (SSM)**

- A. Separate allowable SSM emission limits are not required for this facility since the SSM emissions are predicted to be less than the limits established in Table 106A. The permittee shall maintain records in accordance with Condition B109.C.

**A108 Facility: Allowable Operations**

- A. This facility is authorized for continuous operation. Monitoring, recordkeeping, and reporting are not required to demonstrate compliance with continuous hours of operation.
- B. The Permittee is allowed to make, without a permit revision or prior Department approval, physical or operational changes that are authorized or not prohibited by this Permit. This authorization includes changes in the processes or methods of operation, and changes in amount or type of materials or chemicals used, if:
- (1) such changes do not cause Facility emissions to exceed the Plant Site Emission Limits (PSELs) or other applicable limits;
  - (2) such changes comply with all applicable requirements under the state and federal Acts, and with all conditions of this Permit;
  - (3) Intel keeps records of such changes; and
  - (4) The Department can verify the emissions as described in this Permit.

- C. Addition, replacement, and reconfiguration of the tools and semiconductor production equipment is authorized under this Permit and does not require a permit revision or prior Department approval provided all other conditions of this Permit are met.
- D. Use of process HAPs other than those listed in Section C103 Appendix X shall be included in the semiannual report in Section A109. Appendix X shall be updated during the next permitting action following the semiannual report submittal. Process HAPs are defined as those chemical compounds required for the manufacturing process and do not include small quantities of incidental chemicals, such as (but not limited to) lab chemicals, lubricants, anti-bacterial or anti-fungal agents, or anti-corrosion agents.

**A109 Facility: Reporting Schedules**

- A. A Semi-Annual Report of actual emissions to demonstrate compliance with the facility wide emissions limits in [Table 106B](#) and [Table 106C](#) is due within 45 days following the end of every calendar 6-month reporting period. The six month calendar reporting periods start on January 1st and July 1st of each year.

**A110 Facility: Fuel and Fuel Sulfur Requirements**

- A. Combustion Sources

<p><b>Requirement:</b></p> <ul style="list-style-type: none"> <li>1) During normal operation, all combustion emission units shall combust only natural gas containing no more than 0.75 grains of total sulfur per 100 dry standard cubic feet.</li> </ul> <p>During any operational and/or readiness testing on liquid fuel, the sulfur content of the diesel fuel shall not exceed 15ppm (ULSD).</p>
<p><b>Monitoring:</b> None</p>
<p><b>Recordkeeping:</b></p> <ul style="list-style-type: none"> <li>1) The permittee shall demonstrate compliance with the natural gas and diesel fuel limits on total sulfur content by maintaining records of a current valid purchase contract, tariff sheet, or transportation contract specifying the contents at or below the allowable limit.</li> </ul> <p>The permittee shall maintain records in accordance with Section B109.</p>
<p><b>Reporting:</b> The permittee shall report in accordance with <a href="#">Section B110</a>.</p>

**A111 Facility: 20.2.61 NMAC Opacity**

- A. Combustion Sources

<p><b>Requirement:</b> Visible emissions from all stationary combustion emission stacks shall not equal or exceed an opacity of 20 percent.</p>
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**Monitoring:** Use of natural gas fuel or natural gas liquids constitutes compliance with 20.2.61 NMAC unless opacity equals or exceeds 20% averaged over a 10-minute period. At such time as fuel other than natural gas or natural gas liquids is used, or when any visible emissions are observed during steady state operation, opacity shall be measured over a 10-minute period in accordance with the procedures at 40 CFR 60, Appendix A, Method 9 as required by 20.2.61.114 NMAC. Opacity measurements shall continue on a quarterly basis per calendar year for each affected unit until such time as natural gas or natural gas liquids are used.

**Recordkeeping:** The permittee shall record dates and duration of use of any fuels other than natural gas or natural gas liquids and the corresponding opacity readings. The opacity measures and readings shall be recorded in accordance with Method 9 in 40 CFR 60, Appendix A.

**Reporting:** The permittee shall report in accordance with Section B110.

### **EQUIPMENT SPECIFIC REQUIREMENTS**

**A200 Oil and Gas Industry – Not Required**

**A300 Construction Industry - Aggregate – Not Required**

**A400 Construction Industry – Asphalt – Not Required**

**A500 Construction Industry – Concrete – Not Required**

**A600 Power Generation Industry – Not Required**

**A700 Solid Waste Disposal (Landfills) Industry– Not Required**

### **SEMICONDUCTOR MANUFACTURING**

**A800 Boilers**

A. Operational Inspection (Units 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, and 183)

**Requirement:** The permittee shall comply with the allowable emission limits in [Table 106A](#), [Table 106B](#) and [Table 106C](#).

**Monitoring:** The permittee shall conduct monthly operational inspections on all boilers to determine that the sources are operating properly. The operational inspections shall include operational checks for indications of insufficient excess air, or too much excess combustion air. These operational checks shall include observation of common physical indications of improper combustion, including indications specified by the boiler manufacturer, and indications based

on operational experience with these units.
<b>Recordkeeping:</b> The permittee shall keep records of operational inspections, describing the results of all operational inspections noting chronologically any adjustments needed to bring the boilers into compliance.
<b>Reporting:</b> The permittee shall report in accordance with <a href="#">Section B110</a> .

B. 40 CFR 60, Subpart Dc (Units 15, 16, 17, 18, 19, 20, 21, 22, 23, and 183)

<b>Requirement:</b> The units are subject to <a href="#">40 CFR 60, Subpart Dc</a> and the permittee shall comply with the applicable requirements of <a href="#">40 CFR 60, Subpart A</a> and <a href="#">Subpart Dc</a> .
<b>Monitoring:</b> The permittee shall comply with all applicable monitoring and testing requirements of <a href="#">40 CFR 60, Subpart Dc</a> when the unit is in operation.
<b>Recordkeeping:</b> The permittee shall comply with the recordkeeping requirements of <a href="#">40 CFR 60, Subpart A</a> and <a href="#">Subpart Dc</a> .
<b>Reporting:</b> The permittee shall comply with the reporting requirements of <a href="#">40 CFR 60, Subpart A</a> and <a href="#">Subpart Dc</a> .

C. EPA Methods Test (Units 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, and 183)

<b>Requirement:</b> The permittee shall comply with the allowable emission limits in <a href="#">Table 106A</a> .
<b>Monitoring:</b> The permittee shall conduct EPA Method tests for CO and NO <sub>x</sub> within six (6) months of any new boiler start up. Initial compliance testing shall be conducted in accordance with <a href="#">Section B111</a> .
<b>Recordkeeping:</b> The permittee shall maintain records in accordance with <a href="#">Section B109</a> .
<b>Reporting:</b> The permittee shall report in accordance with <a href="#">Section B110</a> and <a href="#">Section B111</a> .

D. Boiler Operation on Diesel (Units 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, and 183)

<b>Requirement:</b> The boilers shall combust only natural gas except when circumstances beyond the control of the permittee prohibit the use of natural gas (emergency situations) or when the permittee tests the fuel delivery system and emergency boiler operations. Under these circumstances, the permittee may combust No. 2 diesel fuel (or equivalent fuel oil, i.e., fuel oil that has emissions equal to or less than No. 2 diesel fuel) in any of the boilers. The boilers shall be operated on fuel oil for no more than 48 hours per year per boiler for non-emergency maintenance and readiness testing. This condition establishes exemption from <a href="#">40 CFR 63, Subpart JJJJJ</a> .
<b>Monitoring:</b> The permittee shall monitor the hours of operation for each boiler when fired on No 2. diesel fuel.
<b>Recordkeeping:</b> The permittee shall keep records of the annual hours of operation for each boiler on No 2. diesel fuel in accordance with <a href="#">Section B109</a> .
<b>Reporting:</b> None

**A801 Thermal Oxidizers**



A. Operational Requirements (Units 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178)

<p><b>Requirement:</b></p> <ol style="list-style-type: none"> <li>1) The permittee shall comply with the allowable emission limits in <a href="#">Table 106A</a>, <a href="#">Table 106B</a> and <a href="#">Table 106C</a>.</li> <li>2) The permittee shall operate the thermal oxidizers on a continuous basis, except for: a) periods of start-up, shut-down, scheduled maintenance, and malfunction; b) in the event of the loss of the natural gas supply for thermal oxidizer units; or c) during periods when solvent VOCs are not being emitted from a solvent exhaust stack being served by a control unit.</li> </ol>
<p><b>Monitoring:</b></p> <ol style="list-style-type: none"> <li>1) The permittee shall maintain the control units in accordance with the permittees standard operating procedures.</li> <li>2) To demonstrate continuous operation the permittee shall monitor: <ol style="list-style-type: none"> <li>a) the inlet damper position and temperature to demonstrate that a unit is in operation;</li> <li>b) the temperature of the thermal oxidizers primary combustion chamber; <ol style="list-style-type: none"> <li>i) The permittee shall ensure that the combustion chamber remains at 1385°F plus or minus 50°F on a 24 hour block average when the unit is in operation. The 24-hour period means the period of time between 12:01 a.m. and 12:00 midnight. The minimum level of data capture shall be 75% when the unit is in operation.</li> </ol> </li> <li>c) the system bypass damper position.</li> </ol> </li> </ol>
<p><b>Recordkeeping:</b></p> <ol style="list-style-type: none"> <li>1) The permittee shall maintain records of the date, time, and nature of maintenance or repairs performed on thermal oxidizers.</li> <li>2) To demonstrate continuous operation the permittee shall record: <ol style="list-style-type: none"> <li>a) the 24 hour block average temperature and the corresponding inlet damper position.</li> <li>b) the system bypass damper position.</li> </ol> </li> </ol>
<p><b>Reporting:</b> The permittee shall report in accordance with <a href="#">Section B110</a>.</p>

B. EPA Method Tests (Units 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178)

<p><b>Requirement:</b> The permittee shall comply with the allowable emission limits in <a href="#">Table 106B</a>.</p>
<p><b>Monitoring:</b> The permittee shall conduct VOC emission testing on all thermal oxidizer exhaust stack utilizing Method 1-4 and 25A. Each thermal oxidizer exhaust stack shall be tested annually for 8 hours. Testing shall be conducted in accordance with <a href="#">Condition B111.D</a>. <a href="#">Conditions B111.A-C</a> are not applicable to the thermal oxidizer exhaust stack testing.</p>
<p><b>Recordkeeping:</b> The permittee shall maintain records in accordance with <a href="#">Section B109</a>.</p>
<p><b>Reporting:</b> The results shall be reported as lb/hr propane. The permittee shall submit reports described in <a href="#">Section A109</a> and in accordance with <a href="#">Section B110</a> and <a href="#">Condition B111.D</a>.</p>

**A802 Process Scrubbers**

- A. Operational Requirements (Units 1, 4, 7, 37, 40, 41, 42, 43, 44, 45a, 45b, 46, 47, 52, 53, 66, 67, 68, 69, 70, 71, 72, 73, 75, 76, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 151, 152, 153, 160, 161)

<p><b>Requirement:</b></p> <ol style="list-style-type: none"> <li>1) The permittee shall comply with the allowable emission limits in <a href="#">Table 106B</a> and <a href="#">Table 106C</a>.</li> <li>2) The permittee shall operate the process scrubbers on a continuous basis except for periods of start-up, shut-down, scheduled maintenance, and malfunction or during periods when the Fab being served by the equipment is not operating</li> </ol>
<p><b>Monitoring:</b></p> <ol style="list-style-type: none"> <li>1) The permittee shall maintain the control units in accordance with the permittee’s standard operating procedures.</li> <li>2) To demonstrate continuous operation the permittee shall monitor:                     <ol style="list-style-type: none"> <li>a) the scrubber recirculation water flow rate (gallons per minute) and the fan status on a 24 hour (midnight to midnight) block average when the unit is in operation. The recirculation water flow rate shall meet the requirements specified in the standard operating procedures for each unit. The minimum level of data capture shall be 75% when the unit is in operation.</li> <li>b) the operational status through a combination of scrubber fan status and the recirculation water flow rate.</li> </ol> </li> </ol>
<p><b>Recordkeeping:</b></p> <ol style="list-style-type: none"> <li>1) The permittee shall maintain records of the date, time, and nature of maintenance or repairs performed on scrubbers.</li> <li>2) To demonstrate continuous operation the permittee shall record:                     <ol style="list-style-type: none"> <li>a) the 24 hour block average recirculation water flow and the corresponding fan status.</li> <li>b) the operational status of the scrubber through a combination of scrubber fan status and the recirculation water flow.</li> </ol> </li> </ol>
<p><b>Reporting:</b> The permittee shall report in accordance with <a href="#">Section B110</a>.</p>

- B. EPA Method Tests (Units 1, 4, 7, 37, 40, 41, 42, 43, 44, 45a, 45b, 46, 47, 52, 53, 66, 67, 68, 69, 70, 71, 72, 73, 75, 76, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 151, 152, 153, 160, 161)

<p><b>Requirement:</b> The permittee shall comply with the allowable emission limits in <a href="#">Table 106B</a> and <a href="#">Table 106C</a>.</p>
<p><b>Monitoring:</b> The permittee shall conduct HF, HCl and Cl<sub>2</sub> testing on all scrubbers exhaust stacks in operation at the time of the test utilizing ASTM D6348-03 for HF and HCl, Method 26A for Cl<sub>2</sub> and Methods 1-4. Each operational scrubber exhaust stack shall be tested annually for 8 hours. Testing shall be conducted in accordance with <a href="#">Condition B111.D</a>. <a href="#">Conditions B111.A-C</a> are not applicable to the scrubber exhaust stack testing.</p>
<p><b>Recordkeeping:</b> The permittee shall maintain records in accordance with <a href="#">Section B109</a>.</p>

**Reporting:** The results shall be reported in lb/hr. Non detect shall be calculated using ½ the method detection limit. The permittee shall submit reports described in [Section A109](#) and in accordance with [Section B110](#) and [Condition B111.D](#).

### **A803 Ammonia Treatment Systems**

#### A. Operational Requirements (Units 159, 180, 181, and 182)

**Requirement:** The permittee shall comply with the allowable emission limits in [Table 106A](#), [Table 106B](#) and [Table 106C](#).

**Monitoring:** The permittee shall maintain the control units in accordance with the permittee's standard operating procedures

**Recordkeeping:** The permittee shall maintain records of the date, time, and nature of maintenance or repairs performed on the ammonia treatment system.

**Reporting:** The permittee shall report in accordance with [Section B110](#).

### **A804 BSSW Treatment System**

#### A. Operational Requirements (Unit 179)

**Requirement:** The permittee shall comply with the allowable emission limits in [Table 106A](#), [Table 106B](#) and [Table 106C](#).

**Monitoring:** The permittee shall maintain the control units in accordance with the permittee's standard operating procedures.

**Recordkeeping:** The permittee shall maintain records of the date, time, and nature of maintenance or repairs performed on the BSSW system.

**Reporting:** The permittee shall report in accordance with [Section B110](#).

### **A805 Cooling Towers**

#### A. Operational Requirements (Units\* 121-132, 133-135, 136, 137-144, 184-193, 194-195, 196)

**Requirement:** The permittee shall comply with the allowable emission limits in [Table 106B](#).

**Monitoring:** The permittee shall monitor the recirculating water Total Dissolved Solids (TDS) content by direct laboratory analysis of the TDS or through use of conductivity meter values and correlated TDS on a monthly basis. Any correlation other than the 0.9 value described in the requirement above shall be developed by the permittee by independent laboratory measurement of at least 10 water samples with approximately evenly spaced measured TDS values that bracket the minimum and maximum values expected. The TDS shall meet the requirements specified in the permittee's standard operating procedures for each unit.

\*A single representative sample will be taken from units sharing common sumps.

**Recordkeeping:** The permittee shall maintain a record of the monthly TDS and 12-month rolling annual average. If a conductivity meter is used, the record shall include the correlation between conductivity and TDS, any laboratory analyses used to determine the correlation, and

all related calculations.
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<b>Reporting:</b> The permittee shall report in accordance with <a href="#">Section B110</a> .
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### **A806 Plant Site Emission Limits**

#### A. Emissions Calculations (Entire Facility)

<b>Requirement:</b> The permittee shall comply with the facility-wide Title V synthetic minor emissions limits in <a href="#">Table 106B</a> and <a href="#">Table 106C</a> .
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<b>Monitoring:</b> A monthly rolling 12 month total of actual emissions shall be calculated semiannually.
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<b>Recordkeeping:</b> The permittee shall monitor and record all information used to perform emissions calculations including emissions factors, changes to emission factors, emissions testing, times when control equipment is not treating exhaust, production level and hours of operation of emergency standby generators and fire pump engines. Monthly records of chemical purchases for those chemicals used in the emissions calculations and fuel use (natural gas and diesel) shall also be maintained. All records shall be maintained in accordance with Section B109.
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<b>Reporting:</b> The permittee shall report in accordance with <a href="#">Section A109</a> . Actual emissions shall not include Title V Insignificant or Trivial Activities, except that facility-wide emissions from all natural gas combustion sources shall be estimated and emissions from emergency standby generators and fire pumps shall be included.
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The report shall include:

- 1) The monthly rolling 12 month total emissions of NO<sub>x</sub>, CO, TSP/PM<sub>10</sub>/PM<sub>2.5</sub>, VOCs, individual and total HAP. Individual HAPs in [Table 106.B](#), will be reported if emitted in a quantity greater than 0.5 tons per year. Individual HAPs in [Table 106.C](#), will be reported if emitted in a quantity greater than 0.1 tons per year.
- 2) A summary of the VOC and HAPs test results, if testing occurred during the reporting period.
- 3) Production level expressed as percentage of full capacity of each source Fab.

The permittee shall report in accordance with Section B110.
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**PART B      GENERAL CONDITIONS (Attached)**

**PART C      MISCELLANEOUS: Supporting On-Line Documents; Definitions; Acronyms (Attached); Appendix X – HAPs List**

**AIR QUALITY BUREAU  
NEW SOURCE REVIEW PERMIT  
Issued under 20.2.72 NMAC**

**GENERAL CONDITIONS AND MISCELLANEOUS**

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**PART B GENERAL CONDITIONS****B100 Introduction**

- A. The Department has reviewed the permit application for the proposed construction/modification/revision and has determined that the provisions of the Act and ambient air quality standards will be met. Conditions have been imposed in this permit to assure continued compliance. 20.2.72.210.D NMAC, states that any term or condition imposed by the Department on a permit is enforceable to the same extent as a regulation of the Environmental Improvement Board.

**B101 Legal**

- A. The contents of a permit application specifically identified by the Department shall become the terms and conditions of the permit or permit revision. Unless modified by conditions of this permit, the permittee shall construct or modify and operate the Facility in accordance with all representations of the application and supplemental submittals that the Department relied upon to determine compliance with applicable regulations and ambient air quality standards. If the Department relied on air quality modeling to issue this permit, any change in the parameters used for this modeling shall be submitted to the Department for review. Upon the Department's request, the permittee shall submit additional modeling for review by the Department. Results of that review may require a permit modification. (20.2.72.210.A NMAC)
- B. Any future physical changes, changes in the method of operation or changes in restricted area may constitute a modification as defined by 20.2.72 NMAC, Construction Permits. Unless the source or activity is exempt under 20.2.72.202 NMAC, no modification shall begin prior to issuance of a permit. (20.2.72 NMAC Sections 200.A.2 and E, and 210.B.4)
- C. Changes in plans, specifications, and other representations stated in the application documents shall not be made if they cause a change in the method of control of emissions or in the character of emissions, will increase the discharge of emissions or affect modeling results. Any such proposed changes shall be submitted as a revision or modification. (20.2.72 NMAC Sections 200.A.2 and E, and 210.B.4)
- D. The permittee shall establish and maintain the property's Restricted Area as identified in plot plan submitted with the application. (20.2.72 NMAC Sections 200.A.2 and E, and 210.B.4)
- E. Applications for permit revisions and modifications shall be submitted to:  
Program Manager, Permits Section  
New Mexico Environment Department

Air Quality Bureau  
525 Camino de los Marquez, Suite 1  
Santa Fe, NM 87505

- F. The owner or operator of a source having an excess emission shall, to the extent practicable, operate the source, including associated air pollution control equipment, in a manner consistent with good air pollutant control practices for minimizing emissions. (20.2.7.109 NMAC). The establishment of allowable malfunction emission limits does not supersede this requirement.

### **B102 Authority**

- A. This permit is issued pursuant to the Air Quality Control Act (Act) and regulations adopted pursuant to the Act including Title 20, Chapter 2, Part 72 of the New Mexico Administrative Code (NMAC), (20.2.72 NMAC), Construction Permits and is enforceable pursuant to the Act and the air quality control regulations applicable to this source.
- B. The Department is the Administrator for 40 CFR Parts 60, 61, and 63 pursuant to the delegation and exceptions of Section 10 of 20.2.77 NMAC (NSPS), 20.2.78 NMAC (NESHAP), and 20.2.82 NMAC (MACT).

### **B103 Annual Fee**

- A. The Department will assess an annual fee for this Facility. The regulation 20.2.75 NMAC set the fee amount at \$1,500 through 2004 and requires it to be adjusted annually for the Consumer Price Index on January 1. The current fee amount is available by contacting the Department or can be found on the Department's website. The AQB will invoice the permittee for the annual fee amount at the beginning of each calendar year. This fee does not apply to sources which are assessed an annual fee in accordance with 20.2.71 NMAC. For sources that satisfy the definition of "small business" in 20.2.75.7.F NMAC, this annual fee will be divided by two. (20.2.75.11 NMAC)
- B. All fees shall be remitted in the form of a corporate check, certified check, or money order made payable to the "NM Environment Department, AQB" mailed to the address shown on the invoice and shall be accompanied by the remittance slip attached to the invoice.

### **B104 Appeal Procedures**

- A. Any person who participated in a permitting action before the Department and who is adversely affected by such permitting action, may file a petition for hearing before the Environmental Improvement Board. The petition shall be made in writing to the

Environmental Improvement Board within thirty (30) days from the date notice is given of the Department's action and shall specify the portions of the permitting action to which the petitioner objects, certify that a copy of the petition has been mailed or hand-delivered and attach a copy of the permitting action for which review is sought. Unless a timely request for hearing is made, the decision of the Department shall be final. The petition shall be copied simultaneously to the Department upon receipt of the appeal notice. If the petitioner is not the applicant or permittee, the petitioner shall mail or hand-deliver a copy of the petition to the applicant or permittee. The Department shall certify the administrative record to the board. Petitions for a hearing shall be sent to: (20.2.72.207.F NMAC)

Secretary, New Mexico Environmental Improvement Board  
1190 St. Francis Drive, Runnels Bldg. Rm. N2153  
Santa Fe, New Mexico 87502

**B105 Submittal of Reports and Certifications**

- A. Stack Test Protocols and Stack Test Reports shall be submitted electronically to [Stacktest.AQB@state.nm.us](mailto:Stacktest.AQB@state.nm.us) or as directed by the Department.
- B. Excess Emission Reports shall be submitted as directed by the Department. (20.2.7.110 NMAC)
- C. Routine reports shall be submitted to the mailing address below, or as directed by the Department:

Manager, Compliance and Enforcement Section  
New Mexico Environment Department  
Air Quality Bureau  
525 Camino de los Marquez, Suite 1  
Santa Fe, NM 87505

**B106 NSPS and/or MACT Startup, Shutdown, and Malfunction Operations**

- A. If a facility is subject to a NSPS standard in 40 CFR 60, each owner or operator that installs and operates a continuous monitoring device required by a NSPS regulation shall comply with the excess emissions reporting requirements in accordance with 40 CFR 60.7(c), unless specifically exempted in the applicable subpart.
- B. If a facility is subject to a NSPS standard in 40 CFR 60, then in accordance with 40 CFR 60.8(c), emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction shall not be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.



- C. If a facility is subject to a MACT standard in 40 CFR 63, then the facility is subject to the requirement for a Startup, Shutdown and Malfunction Plan (SSM) under 40 CFR 63.6(e)(3), unless specifically exempted in the applicable subpart.

**B107 Startup, Shutdown, and Maintenance Operations**

- A. The establishment of permitted startup, shutdown, and maintenance (SSM) emission limits does not supersede the requirements of 20.2.7.14.A NMAC. Except for operations or equipment subject to Condition B106, the permittee shall establish and implement a plan to minimize emissions during routine or predictable start up, shut down, and scheduled maintenance (SSM work practice plan) and shall operate in accordance with the procedures set forth in the plan. (SSM work practice plan) (20.2.7.14.A NMAC)

**B108 General Monitoring Requirements**

- A. These requirements do not supersede or relax requirements of federal regulations.
- B. The following monitoring requirements shall be used to determine compliance with applicable requirements and emission limits. Any sampling, whether by portable analyzer or EPA reference method, that measures an emission rate over the applicable averaging period greater than an emission limit in this permit constitutes noncompliance with this permit. The Department may require, at its discretion, additional tests pursuant to EPA Reference Methods at any time, including when sampling by portable analyzer measures an emission rate greater than an emission limit in this permit; but such requirement shall not be construed as a determination that the sampling by portable analyzer does not establish noncompliance with this permit and shall not stay enforcement of such noncompliance based on the sampling by portable analyzer.
- C. If the emission unit is shutdown at the time when periodic monitoring is due to be accomplished, the permittee is not required to restart the unit for the sole purpose of performing the monitoring. Using electronic or written mail, the permittee shall notify the Department's Compliance and Enforcement Section of a delay in emission tests prior to the deadline for accomplishing the tests. Upon recommencing operation, the permittee shall submit any pertinent pre-test notification requirements set forth in the current version of the Department's Standard Operating Procedures For Use Of Portable Analyzers in Performance Test, and shall accomplish the monitoring.
- D. The requirement for monitoring during any monitoring period is based on the percentage of time that the unit has operated. However, to invoke the monitoring period exemption at B108.D(2), hours of operation shall be monitored and recorded.

- (1) If the emission unit has operated for more than 25% of a monitoring period, then the permittee shall conduct monitoring during that period.
  - (2) If the emission unit has operated for 25% or less of a monitoring period then the monitoring is not required. After two successive periods without monitoring, the permittee shall conduct monitoring during the next period regardless of the time operated during that period, except that for any monitoring period in which a unit has operated for less than 10% of the monitoring period, the period will not be considered as one of the two successive periods.
  - (3) If invoking the monitoring **period** exemption in B108.D(2), the actual operating time of a unit shall not exceed the monitoring period required by this permit before the required monitoring is performed. For example, if the monitoring period is annual, the operating hours of the unit shall not exceed 8760 hours before monitoring is conducted. Regardless of the time that a unit actually operates, a minimum of one of each type of monitoring activity shall be conducted during any five-year period.
- E. For all periodic monitoring events, except when a federal or state regulation is more stringent, three test runs shall be conducted at 90% or greater of the unit's capacity as stated in this permit, or in the permit application if not in the permit, and at additional loads when requested by the Department. If the 90% capacity cannot be achieved, the monitoring will be conducted at the maximum achievable load under prevailing operating conditions except when a federal or state regulation requires more restrictive test conditions. The load and the parameters used to calculate it shall be recorded to document operating conditions and shall be included with the monitoring report.
- F. When requested by the Department, the permittee shall provide schedules of testing and monitoring activities. Compliance tests from previous NSR and Title V permits may be re-imposed if it is deemed necessary by the Department to determine whether the source is in compliance with applicable regulations or permit conditions.
- G. If monitoring is new or is in addition to monitoring imposed by an existing applicable requirement, it shall become effective 120 days after the date of permit issuance. For emission units that have not commenced operation, the associated new or additional monitoring shall not apply until 120 days after the units commence operation. All pre-existing monitoring requirements incorporated in this permit shall continue to apply from the date of permit issuance.

### **B109 General Recordkeeping Requirements**

- A. The permittee shall maintain records to assure and verify compliance with the terms and conditions of this permit and any other applicable requirements that become

effective after permit issuance. The minimum information to be included in these records is as follows:

- (1) Records required for testing and sampling:
    - (a) equipment identification (include make, model and serial number for all tested equipment and emission controls)
    - (b) date(s) and time(s) of sampling or measurements
    - (c) date(s) analyses were performed
    - (d) the qualified entity that performed the analyses
    - (e) analytical or test methods used
    - (f) results of analyses or tests
    - (g) operating conditions existing at the time of sampling or measurement
  - (2) Records required for equipment inspections and/or maintenance required by this permit:
    - (a) equipment identification number (including make, model and serial number)
    - (b) date(s) and time(s) of inspection, maintenance, and/or repair
    - (c) date(s) any subsequent analyses were performed (if applicable)
    - (d) name of the person or qualified entity conducting the inspection, maintenance, and/or repair
    - (e) copy of the equipment manufacturer's or the owner or operator's maintenance or repair recommendations (if required to demonstrate compliance with a permit condition)
    - (f) description of maintenance or repair activities conducted
    - (g) all results of any required parameter readings
    - (h) a description of the physical condition of the equipment as found during any required inspection
    - (i) results of required equipment inspections including a description of any condition which required adjustment to bring the equipment back into compliance and a description of the required adjustments
- B. Except as provided in the Specific Conditions, records shall be maintained on-site or at the permittee's local business office for a minimum of two (2) years from the time of recording and shall be made available to Department personnel upon request.

Sources subject to 20.2.70 NMAC “Operating Permits” shall maintain records on-site for a minimum of five (5) years from the time of recording.

- C. Unless otherwise indicated by Specific Conditions, the permittee shall keep the following records for malfunction emissions and routine or predictable emissions during startup, shutdown, and scheduled maintenance (SSM):
- (1) The owner or operator of a source subject to a permit shall establish and implement a plan to minimize emissions during routine or predictable startup, shutdown, and scheduled maintenance through work practice standards and good air pollution control practices. This requirement shall not apply to any affected facility defined in and subject to an emissions standard and an equivalent plan under 40 CFR Part 60 (NSPS), 40 CFR Part 63 (MACT), or an equivalent plan under 20.2.72 NMAC - Construction Permits, 20.2.70 NMAC - Operating Permits, 20.2.74 NMAC - Permits - Prevention of Significant Deterioration (PSD), or 20.2.79 NMAC - Permits - Nonattainment Areas. The permittee shall keep records of all sources subject to the plan to minimize emissions during routine or predictable SSM and shall record if the source is subject to an alternative plan and therefore, not subject to the plan requirements under 20.2.7.14.A NMAC.
  - (2) If the facility has allowable SSM emission limits in this permit, the permittee shall record all SSM events, including the date, the start time, the end time, a description of the event, and a description of the cause of the event. This record also shall include a copy of the manufacturer’s, or equivalent, documentation showing that any maintenance qualified as scheduled. Scheduled maintenance is an activity that occurs at an established frequency pursuant to a written protocol published by the manufacturer or other reliable source. The authorization of allowable SSM emissions does not supersede any applicable federal or state standard. The most stringent requirement applies.
  - (3) If the facility has allowable malfunction emission limits in this permit, the permittee shall record all malfunction events to be applied against these limits. The permittee shall also include the date, the start time, the end time, and a description of the event. **Malfunction means** any sudden and unavoidable failure of air pollution control equipment or process equipment beyond the control of the owner or operator, including malfunction during startup or shutdown. A failure that is caused entirely or in part by poor maintenance, careless operation, or any other preventable equipment breakdown shall not be considered a malfunction. (20.2.7.7.E NMAC) The authorization of allowable malfunction emissions does not supersede any applicable federal or state standard. The most stringent requirement applies. This authorization only allows the permittee to avoid submitting reports under 20.2.7 NMAC for total annual emissions that are below the authorized malfunction emission limit.

- (4) The owner or operator of a source shall meet the operational plan defining the measures to be taken to mitigate source emissions during malfunction, startup or shutdown. (20.2.72.203.A(5) NMAC)

**B110 General Reporting Requirements**

(20.2.72 NMAC Sections 210 and 212)

- A. Records and reports shall be maintained on-site or at the permittee's local business office unless specifically required to be submitted to the Department or EPA by another condition of this permit or by a state or federal regulation. Records for unmanned sites may be kept at the nearest business office.
- B. The permittee shall notify the Department's Compliance Reporting Section using the current Submittal Form posted to NMED's Air Quality web site under Compliance and Enforcement/Submittal Forms in writing of, or provide the Department with (20.2.72.212.A and B):
  - (1) the anticipated date of initial startup of each new or modified source not less than thirty (30) days prior to the date. Notification may occur prior to issuance of the permit, but actual startup shall not occur earlier than the permit issuance date;
  - (2) after receiving authority to construct, the equipment serial number as provided by the manufacturer or permanently affixed if shop-built and the actual date of initial startup of each new or modified source within fifteen (15) days after the startup date; and
  - (3) the date when each new or modified emission source reaches the maximum production rate at which it will operate within fifteen (15) days after that date.
- C. The permittee shall notify the Department's Permitting Program Manager, in writing of, or provide the Department with (20.2.72.212.C and D):
  - (1) any change of operators or any equipment substitutions within fifteen (15) days of such change;
  - (2) any necessary update or correction no more than sixty (60) days after the operator knows or should have known of the condition necessitating the update or correction of the permit.
- D. Results of emission tests and monitoring for each pollutant (except opacity) shall be reported in pounds per hour (unless otherwise specified) and tons per year. Opacity shall be reported in percent. The number of significant figures corresponding to the full accuracy inherent in the testing instrument or Method test used to obtain the data shall be used to calculate and report test results in accordance with 20.2.1.116.B and C NMAC. Upon request by the Department, CEMS and other tabular data shall be submitted in editable, MS Excel format.

- E. The permittee shall submit reports of excess emissions in accordance with 20.2.7.110.A NMAC.

### **B111 General Testing Requirements**

#### A. Compliance Tests

- (1) Compliance test requirements from previous permits (if any) are still in effect, unless the tests have been satisfactorily completed. Compliance tests may be re-imposed if it is deemed necessary by the Department to determine whether the source is in compliance with applicable regulations or permit conditions. (20.2.72 NMAC Sections 210.C and 213)
- (2) Compliance tests shall be conducted within sixty (60) days after the unit(s) achieve the maximum normal production rate. If the maximum normal production rate does not occur within one hundred twenty (120) days of source startup, then the tests must be conducted no later than one hundred eighty (180) days after initial startup of the source.
- (3) Unless otherwise indicated by Specific Conditions or regulatory requirements, the default time period for each test run shall be **at least** 60 minutes and each performance test shall consist of three separate runs using the applicable test method. For the purpose of determining compliance with an applicable emission limit, the arithmetic mean of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Department approval, be determined using the arithmetic mean of the results of the two other runs.
- (4) Testing of emissions shall be conducted with the emissions unit operating at 90 to 100 percent of the maximum operating rate allowed by the permit. If it is not possible to test at that rate, the source may test at a lower operating rate, subject to the approval of the Department.
- (5) Testing performed at less than 90 percent of permitted capacity will limit emission unit operation to 110 percent of the tested capacity until a new test is conducted.
- (6) If conditions change such that unit operation above 110 percent of tested capacity is possible, the source must submit a protocol to the Department within 30 days of such change to conduct a new emissions test.

#### B. EPA Reference Method Tests

- (1) All compliance tests required by this permit, unless otherwise specified by Specific Conditions of this permit, shall be conducted in accordance with the

requirements of CFR Title 40, Part 60, Subpart A, General Provisions, and the following EPA Reference Methods as specified by CFR Title 40, Part 60, Appendix A:

- (a) Methods 1 through 4 for stack gas flowrate
  - (b) Method 5 for TSP
  - (c) Method 6C and 19 for SO<sub>2</sub>
  - (d) Method 7E for NO<sub>x</sub> (test results shall be expressed as nitrogen dioxide (NO<sub>2</sub>) using a molecular weight of 46 lb/lb-mol in all calculations (each ppm of NO/NO<sub>2</sub> is equivalent to 1.194 x 10<sup>-7</sup> lb/SCF)
  - (e) Method 9 for opacity
  - (f) Method 10 for CO
  - (g) Method 19 may be used in lieu of Methods 1-4 for stack gas flowrate upon approval of the Department. A justification for this proposal must be provided along with a contemporaneous fuel gas analysis (preferably on the day of the test) and a recent fuel flow meter calibration certificate (within the most recent quarter).
  - (h) Method 7E or 20 for Turbines per 60.335 or 60.4400
  - (i) Method 29 for Metals
  - (j) Method 201A for filterable PM<sub>10</sub> and PM<sub>2.5</sub>
  - (k) Method 202 for condensable PM
  - (l) Method 320 for organic Hazardous Air Pollutants (HAPs)
  - (m) Method 25A for VOC reduction efficiency
  - (n) Method 30B for Mercury
- (2) Alternative test method(s) may be used if the Department approves the change

#### C. Periodic Monitoring and Portable Analyzer Requirements

- (1) Periodic emissions tests (periodic monitoring) may be conducted in accordance with EPA Reference Methods or by utilizing a portable analyzer. Periodic monitoring utilizing a portable analyzer shall be conducted in accordance with the requirements of ASTM D 6522-00. However, if a facility has met a previously approved Department criterion for portable analyzers, the analyzer may be operated in accordance with that criterion until it is replaced.
- (2) Unless otherwise indicated by Specific Conditions or regulatory requirements, the default time period for each test run shall be **at least** 20 minutes.

Each performance test shall consist of three separate runs. The arithmetic mean of results of the three runs shall be used to determine compliance with the applicable emission limit.

- (3) Testing of emissions shall be conducted in accordance with the requirements at Section B108.E.
- (4) During emissions tests, pollutant and diluent concentration shall be monitored and recorded. Fuel flow rate shall be monitored and recorded if stack gas flow rate is determined utilizing Method 19. This information shall be included with the test report furnished to the Department.
- (5) Stack gas flow rate shall be calculated in accordance with 40 CFR 60, Appendix A, Method 19 utilizing fuel flow rate (scf) determined by a dedicated fuel flow meter and fuel heating value (Btu/scf) determined from a fuel sample obtained preferably during the day of the test, but no earlier than three months prior to the test date. Alternatively, stack gas flow rate may be determined by using EPA Methods 1-4.

D. Test Procedures:

- (1) The permittee shall notify the Department's Program Manager, Compliance and Enforcement Section at least thirty (30) days before the test date and allow a representative of the Department to be present at the test.
- (2) Equipment shall be tested in the "as found" condition. Equipment may not be adjusted or tuned prior to any test for the purpose of lowering emissions, and then returned to previous settings or operating conditions after the test is complete.
- (3) Contents of test notifications, protocols and test reports shall conform to the format specified by the Department's Universal Test Notification, Protocol and Report Form and Instructions. Current forms and instructions are posted to NMED's Air Quality web site under Compliance and Enforcement Testing.
- (4) The permittee shall provide (a) sampling ports adequate for the test methods applicable to the facility, (b) safe sampling platforms, (c) safe access to sampling platforms and (d) utilities for sampling and testing equipment.
- (5) The stack shall be of sufficient height and diameter and the sample ports shall be located so that a representative test of the emissions can be performed in accordance with the requirements of EPA Method 1 or ASTM D 6522-00 as applicable.
- (6) Where necessary to prevent cyclonic flow in the stack, flow straighteners shall be installed
- (7) Unless otherwise indicated by Specific Conditions or regulatory requirements, test reports shall be submitted to the Department no later than 30 days after completion of the test.



**B112 Compliance**

- A. The Department shall be given the right to enter the facility at all reasonable times to verify the terms and conditions of this permit. Required records shall be organized by date and subject matter and shall at all times be readily available for inspection. The permittee, upon verbal or written request from an authorized representative of the Department who appears at the facility, shall immediately produce for inspection or copying any records required to be maintained at the facility. Upon written request at other times, the permittee shall deliver to the Department paper or electronic copies of any and all required records maintained on site or at an off-site location. Requested records shall be copied and delivered at the permittee's expense within three business days from receipt of request unless the Department allows additional time. Required records may include records required by permit and other information necessary to demonstrate compliance with terms and conditions of this permit. (NMSA 1978, Section 74-2-13)
- B. A copy of the most recent permit(s) issued by the Department shall be kept at the permitted facility or (for unmanned sites) at the nearest company office and shall be made available to Department personnel for inspection upon request. (20.2.72.210.B.4 NMAC)
- C. Emissions limits associated with the energy input of a Unit, i.e. lb/MMBtu, shall apply at all times unless stated otherwise in a Specific Condition of this permit. The averaging time for each emissions limit, including those based on energy input of a Unit (i.e. lb/MMBtu) is one (1) hour unless stated otherwise in a Specific Condition of this permit or in the applicable requirement that establishes the limit.

**B113 Permit Cancellation and Revocation**

- A. The Department may revoke this permit if the applicant or permittee has knowingly and willfully misrepresented a material fact in the application for the permit. Revocation will be made in writing, and an administrative appeal may be taken to the Secretary of the Department within thirty (30) days. Appeals will be handled in accordance with the Department's Rules Governing Appeals From Compliance Orders.
- B. The Department shall automatically cancel any permit for any source which ceases operation for five (5) years or more, or permanently. Reactivation of any source after the five (5) year period shall require a new permit. (20.2.72 NMAC)
- C. The Department may cancel a permit if the construction or modification is not commenced within two (2) years from the date of issuance or if, during the construction or modification, work is suspended for a total of one (1) year. (20.2.72 NMAC)

**B114 Notification to Subsequent Owners**

- A. The permit and conditions apply in the event of any change in control or ownership of the Facility. No permit modification is required in such case. However, in the event of any such change in control or ownership, the permittee shall notify the succeeding owner of the permit and conditions and shall notify the Department's Program Manager, Permits Section of the change in ownership within fifteen (15) days of that change. (20.2.72.212.C NMAC)
- B. Any new owner or operator shall notify the Department's Program Manager, Permits Section, within thirty (30) days of assuming ownership, of the new owner's or operator's name and address. (20.2.73.200.E.3 NMAC)

**B115 Asbestos Demolition**

- A. Before any asbestos demolition or renovation work, the permittee shall determine whether 40 CFR 61 Subpart M, National Emissions Standards for Asbestos applies. If required, the permittee shall notify the Department's Program Manager, Compliance and Enforcement Section using forms furnished by the Department.

**B116 Short Term Engine Replacement**

- A. The following Alternative Operating Scenario (AOS) addresses engine breakdown or periodic maintenance and repair, which requires the use of a short term replacement engine. The following requirements do not apply to engines that are exempt per 20.2.72.202.B(3) NMAC. Changes to exempt engines must be reported in accordance with 20.2.72.202.B NMAC. A short term replacement engine may be substituted for any engine allowed by this permit for no more than 120 days in any rolling twelve month period per permitted engine. The compliance demonstrations required as part of this AOS are in addition to any other compliance demonstrations required by this permit.
  - (1) The permittee may temporarily replace an existing engine that is subject to the emission limits set forth in this permit with another engine regardless of manufacturer, model, and horsepower without modifying this permit. The permittee shall submit written notification to the Department within 15 days of the date of engine substitution according to condition B110.C(1).
    - (a) The potential emission rates of the replacement engine shall be determined using the replacement engine's manufacturer specifications and shall comply with the existing engine's permitted emission limits.
    - (b) The direction of the exhaust stack for the replacement engine shall be either vertical or the same direction as for the existing engine. The replacement engine's stack height and flow parameters shall be at least as

effective in the dispersion of air pollutants as the modeled stack height and flow parameters for the existing permitted engine. The following equation may be used to show that the replacement engine disperses pollutants as well as the existing engine. The value calculated for the replacement engine on the right side of the equation shall be equal to or greater than the value for the existing engine on the left side of the equation. The permitting page of the Air Quality Bureau website contains a spreadsheet that performs this calculation.

EXISTING ENGINEREPLACEMENT ENGINE

$$\frac{[(g) \times (h1)] + [(v1)^2/2] + [(c) \times (T1)]}{q1} \leq \frac{[(g) \times (h2)] + [(v2)^2/2] + [(c) \times (T2)]}{q2}$$

Where

g = gravitational constant = 32.2 ft/sec<sup>2</sup>

h1 = existing stack height, feet

v1 = exhaust velocity, existing engine, feet per second

c = specific heat of exhaust, 0.28 BTU/lb-degree F

T1 = absolute temperature of exhaust, existing engine = degree F + 460

q1 = permitted allowable emission rate, existing engine, lbs/hour

h2 = replacement stack height, feet

v2 = exhaust velocity, replacement engine, feet per second

T2 = absolute temperature of exhaust, replacement engine = degree F + 460

q2 = manufacturer's potential emission rate, replacement engine, lbs/hour

The permittee shall keep records showing that the replacement engine is at least as effective in the dispersion of air pollutants as the existing engine.

(c) Test measurement of NO<sub>x</sub> and CO emissions from the temporary replacement engine shall be performed in accordance with Section B111 with the exception of Condition B111A(2) and B111B for EPA Reference Methods Tests or Section B111C for portable analyzer test measurements. Compliance test(s) shall be conducted within fifteen (15) days after the unit begins operation, and records of the results shall be kept according to section B109.B. This test shall be performed even if the engine is removed prior to 15 days on site.

- i. These compliance tests are not required for an engine certified under 40CFR60, subparts III, or JJJ, or 40CFR63, subpart ZZZZ if the permittee demonstrates that one of these requirements causes such engine to comply with all emission limits of this permit. The permittee shall submit this demonstration to the Department within 48 hours of placing the new unit into operation. This submittal

- shall include documentation that the engine is certified, that the engine is within its useful life, as defined and specified in the applicable requirement, and shall include calculations showing that the applicable emissions standards result in compliance with the permit limits.
- ii. These compliance tests are not required if a test was conducted by portable analyzer or by EPA Method test (including any required by 40CFR60, subparts III and JJJJ and 40CFR63, subpart ZZZZ) within the last 12 months. These previous tests are valid only if conducted at the same or lower elevation as the existing engine location prior to commencing operation as a temporary replacement. A copy of the test results shall be kept according to section B109.B.
- (d) Compliance tests for NO<sub>x</sub> and CO shall be conducted if requested by the Department in writing to determine whether the replacement engine is in compliance with applicable regulations or permit conditions.
  - (e) Upon determining that emissions data developed according to B116.A.1(c) fail to indicate compliance with either the NO<sub>x</sub> or CO emission limits, the permittee shall notify the Department within 48 hours. Also within that time, the permittee shall implement one of the following corrective actions:
    - i. The engine shall be adjusted to reduce NO<sub>x</sub> and CO emissions and tested per B116.A.1(c) to demonstrate compliance with permit limits.
    - ii. The engine shall discontinue operation or be replaced with a different unit.
- (2) Short term replacement engines, whether of the same manufacturer, model, and horsepower, or of a different manufacturer, model, or horsepower, are subject to all federal and state applicable requirements, regardless of whether they are set forth in this permit (including monitoring and recordkeeping), and shall be subject to any shield afforded by this permit.
  - (3) The permittee shall maintain a contemporaneous record documenting the unit number, manufacturer, model number, horsepower, emission factors, emission test results, and serial number of any existing engine that is replaced, and the replacement engine. Additionally, the record shall document the replacement duration in days, and the beginning and end dates of the short term engine replacement.
  - (4) The permittee shall maintain records of a regulatory applicability determination for each replacement engine (including 40CFR60, subparts III and JJJJ and

40CFR63, subpart ZZZZ) and shall comply with all associated regulatory requirements.

- B. Additional requirements for replacement of engines at sources that are major as defined in regulation 20.2.74 NMAC, Permits – Prevention of Significant Deterioration, section 7.AG. For sources that are major under PSD, the total cumulative operating hours of the replacement engine shall be limited using the following procedure:
- (1) Daily, the actual emissions from the replacement engine(s) of each pollutant regulated by this permit for the existing engine shall be calculated and recorded.
  - (2) The sum of the total actual emissions since the commencement of operation of the replacement engine(s) shall not equal or exceed the significant emission rates in Table 2 of 20.2.74 NMAC, section 502 for the time that the replacement engine is located at the facility.
- C. All records required by this section shall be kept according to section B109.

**PART C MISCELLANEOUS****C100 Supporting On-Line Documents**

- A. Copies of the following documents can be downloaded from NMED's web site under Compliance and Enforcement or requested from the Bureau.
- (1) Excess Emission Form (for reporting deviations and emergencies)
  - (2) Universal Stack Test Notification, Protocol and Report Form and Instructions
  - (3) SOP for Use of Portable Analyzers in Performance Tests

**C101 Definitions**

- A. **"Daylight"** is defined as the time period between sunrise and sunset, as defined by the Astronomical Applications Department of the U.S. Naval Observatory. (Data for one day or a table of sunrise/sunset for an entire year can be obtained at <http://aa.usno.navy.mil/>. Alternatively, these times can be obtained from a Farmer's Almanac or from <http://www.almanac.com/rise/>).
- B. **"Exempt Sources"** and **"Exempt Activities"** is defined as those sources or activities that are exempted in accordance with 20.2.72.202 NMAC. Note; exemptions are only valid for most 20.2.72 NMAC permitting actions.
- C. **"Fugitive Emission"** means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.
- D. **"Insignificant Activities"** means those activities which have been listed by the department and approved by the administrator as insignificant on the basis of size, emissions or production rate. Note; insignificant activities are only valid for 20.2.70 NMAC permitting actions.
- E. **"Malfunction"** for the requirements under 20.2.7 NMAC, means any sudden and unavoidable failure of air pollution control equipment or process equipment beyond the control of the owner or operator, including malfunction during startup or shutdown. A failure that is caused entirely or in part by poor maintenance, careless operation, or any other preventable equipment breakdown shall not be considered a malfunction. (20.2.7.7.E NMAC)
- F. **"Natural Gas"** is defined as a naturally occurring fluid mixture of hydrocarbons that contains 20.0 grains or less of total sulfur per 100 standard cubic feet (SCF) and is either composed of at least 70% methane by volume or has a gross calorific value of between 950 and 1100 Btu per standard cubic foot. (40 CFR 60.631)

- G. **“Natural Gas Liquids”** means the hydrocarbons, such as ethane, propane, butane, and pentane, that are extracted from field gas. (40 CFR 60.631)
- H. **“National Ambient air Quality Standards”** means, unless otherwise modified, the primary (health-related) and secondary (welfare-based) federal ambient air quality standards promulgated by the US EPA pursuant to Section 109 of the Federal Act.
- I. **“Night”** is the time period between sunset and sunrise, as defined by the Astronomical Applications Department of the U.S. Naval Observatory. (Data for one day or a table of sunrise/sunset for an entire year can be obtained at <http://aa.usno.navy.mil/>. Alternatively, these times can be obtained from a Farmer’s Almanac or from <http://www.almanac.com/rise/>).
- J. **“Night Operation or Operation at Night”** is operating a source of emissions at night.
- K. **“NO<sub>2</sub>”** or "Nitrogen dioxide" means the chemical compound containing one atom of nitrogen and two atoms of oxygen, for the purposes of ambient determinations. The term **"nitrogen dioxide,"** for the purposes of stack emissions monitoring, shall include nitrogen dioxide (the chemical compound containing one atom of nitrogen and two atoms of oxygen), nitric oxide (the chemical compound containing one atom of nitrogen and one atom of oxygen), and other oxides of nitrogen which may test as nitrogen dioxide and is sometimes referred to as NO<sub>x</sub> or NO<sub>2</sub>. (20.2.2 NMAC)
- L. **“NO<sub>x</sub>”** see NO<sub>2</sub>
- M. **“Paved Road”** is a road with a permanent solid surface that can be swept essentially free of dust or other material to reduce air re-entrainment of particulate matter. To the extent these surfaces remain solid and contiguous they qualify as paved roads: concrete, asphalt, chip seal, recycled asphalt and other surfaces approved by the Department in writing.
- N. **“Potential Emission Rate”** means the emission rate of a source at its maximum capacity to emit a regulated air contaminant under its physical and operational design, provided any physical or operational limitation on the capacity of the source to emit a regulated air contaminant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its physical and operational design only if the limitation or the effect it would have on emissions is enforceable by the department pursuant to the Air Quality Control Act or the federal Act.
- O. **“Restricted Area”** is an area to which public entry is effectively precluded. Effective barriers include continuous fencing, continuous walls, or other continuous barriers approved by the Department, such as rugged physical terrain with a steep grade that would require special equipment to traverse. If a large property is completely

enclosed by fencing, a restricted area within the property may be identified with signage only. Public roads cannot be part of a Restricted Area.

- P. **"Shutdown"** for requirements under 20.2.72 NMAC, means the cessation of operation of any air pollution control equipment, process equipment or process for any purpose, except routine phasing out of batch process units.
- Q. **"SSM"** for requirements under 20.2.7 NMAC, means routine or predictable startup, shutdown, or scheduled maintenance.
  - (1) **"Shutdown"** for requirements under 20.2.7 NMAC, means the cessation of operation of any air pollution control equipment or process equipment.
  - (2) **"Startup"** for requirements under 20.2.7 NMAC, means the setting into operation of any air pollution control equipment or process equipment.
- R. **"Startup"** for requirements under 20.2.72 NMAC, means the setting into operation of any air pollution control equipment, process equipment or process for any purpose, except routine phasing in of batch process units.

**C102 Acronyms**

2SLB .....	2-stroke lean burn
4SLB .....	4-stroke lean burn
4SRB .....	4-stroke rich burn
acfm.....	actual cubic feet per minute
AFR.....	air fuel ratio
AP-42 .....	EPA Air Pollutant Emission Factors
AQB .....	Air Quality Bureau
AQCR .....	Air Quality Control Region
ASTM .....	American Society for Testing and Materials
Btu .....	British thermal unit
CAA .....	Clean Air Act of 1970 and 1990 Amendments
CEM.....	continuous emissions monitoring
cfh .....	cubic feet per hour
cfm .....	cubic feet per minute
CFR.....	Code of Federal Regulation
CI .....	compression ignition
CO.....	carbon monoxides
COMS .....	continuous opacity monitoring system
EIB .....	Environmental Improvement Board
EPA.....	United States Environmental Protection Agency
gr/100 cf .....	grains per one hundred cubic feet
gr/dscf .....	grains per dry standard cubic foot
GRI.....	Gas Research Institute



HAP.....	hazardous air pollutant
hp .....	horsepower
H <sub>2</sub> S .....	hydrogen sulfide
IC .....	internal combustion
KW/hr .....	kilowatts per hour
lb/hr.....	pounds per hour
lb/MMBtu .....	pounds per million British thermal unit
MACT .....	Maximum Achievable Control Technology
MMcf/hr.....	million cubic feet per hour
MMscf.....	million standard cubic feet
N/A.....	not applicable
NAAQS.....	National Ambient Air Quality Standards
NESHAP .....	National Emission Standards for Hazardous Air Pollutants
NG .....	natural gas
NGL .....	natural gas liquids
NMAAQs .....	New Mexico Ambient Air Quality Standards
NMAC.....	New Mexico Administrative Code
NMED.....	New Mexico Environment Department
NMSA.....	New Mexico Statues Annotated
NO <sub>x</sub> .....	nitrogen oxides
NSCR.....	non-selective catalytic reduction
NSPS.....	New Source Performance Standard
NSR.....	New Source Review
PEM .....	parametric emissions monitoring
PM.....	particulate matter (equivalent to TSP, total suspended particulate)
PM <sub>10</sub> .....	particulate matter 10 microns and less in diameter
PM <sub>2.5</sub> .....	particulate matter 2.5 microns and less in diameter
pph.....	pounds per hour
ppmv .....	parts per million by volume
PSD .....	Prevention of Significant Deterioration
RATA.....	Relative Accuracy Test Assessment
RICE .....	reciprocating internal combustion engine
rpm .....	revolutions per minute
scfm.....	standard cubic feet per minute
SI .....	spark ignition
SO <sub>2</sub> .....	sulfur dioxide
SSM.....	Startup Shutdown Maintenance (see SSM definition)
TAP .....	Toxic Air Pollutant
TBD.....	to be determined
THC.....	total hydrocarbons
TSP.....	Total Suspended Particulates
tpy .....	tons per year
ULSD .....	ultra low sulfur diesel
USEPA.....	United States Environmental Protection Agency

UTM..... Universal Transverse Mercator Coordinate system  
 UTMH..... Universal Transverse Mercator Horizontal  
 UTMV..... Universal Transverse Mercator Vertical  
 VHAP..... volatile hazardous air pollutant  
 VOC ..... volatile organic compounds

**C103 Appendix X – HAPs List**

CAS#	Chemical Name		CAS#	Chemical Name
75058	Acetonitrile		91203	Naphthalene
79107	Acrylic acid		98953	Nitrobenzene
62533	Aniline		92933	4-Nitrobiphenyl
71432	Benzene (including benzene from		100027	4-Nitrophenol
75252	Bromoform		684935	N-Nitroso-N-methylurea
106990	1,3-Butadiene		108952	Phenol
56235	Carbon tetrachloride		75445	Phosgene
7782505	Chlorine		7803512	Phosphine
67663	Chloroform		7723140	Phosphorus
1319773	Cresols/Cresylic acid (isomers and		85449	Phthalic anhydride
95487	o-Cresol		1120714	1,3-Propane sultone
108394	m-Cresol		78875	Propylene dichloride
106445	p-Cresol		75569	Propylene oxide
106467	1,4-Dichlorobenzene(p)		100425	Styrene
121697	N,N-Diethyl aniline (N,N-		96093	Styrene oxide
60117	Dimethyl aminoazobenzene		79345	1,1,2,2-Tetrachloroethane
131113	Dimethyl phthalate		7550450	Titanium tetrachloride
75003	Ethyl chloride (Chloroethane)		108883	Toluene
107062	Ethylene dichloride (1,2-Dichloroethane)		120821	1,2,4-Trichlorobenzene
107211	Ethylene glycol		79005	1,1,2-Trichloroethane
75218	Ethylene oxide		79016	Trichloroethylene
75343	Ethylidene dichloride (1,1-Dichloroethane)		121448	Triethylamine
50000	Formaldehyde		540841	2,2,4-Trimethylpentane
118741	Hexachlorobenzene		108054	Vinyl acetate
87683	Hexachlorobutadiene		75354	Vinylidene chloride
77474	Hexachlorocyclopentadiene		1330207	Xylenes (isomers and mixture)
67721	Hexachloroethane		95476	o-Xylenes
110543	Hexane		108383	m-Xylenes
7647010	Hydrochloric acid		106423	p-Xylenes
7664393	Hydrogen fluoride (Hydrofluoric acid)			Antimony Compounds
108316	Maleic anhydride			Arsenic Compounds
67561	Methanol			Chromium Compounds
74839	Methyl bromide (Bromomethane)			Cobalt Compounds
74873	Methyl chloride (Chloromethane)			Cyanide Compounds
71556	Methyl chloroform (1,1,1-Trichloroethane)			Glycol ethers
78933	Methyl ethyl ketone (2-Butanone)			Lead Compounds
74884	Methyl iodide (Iodomethane)			Manganese Compounds

108101	Methyl isobutyl ketone (Hexone)			Mercury Compounds
80626	Methyl methacrylate			Nickel Compounds
1634044	Methyl tert butyl ether			Polycyclic Organic Matter
75092	Methylene chloride (Dichloromethane)			Selenium Compounds