

**Statement of Basis - Narrative**  
**Title V Permit**

**Company:** Intel Corporation  
**Facility:** Rio Rancho Facility  
**Permit No(s):** P-257 and 325M11R5  
**Tempo/IDEA ID No.:** 1103 - PRN20120001  
**Permit Writer:** Daren Zigich

<b>Permit Review</b>	<b>Date to Enforcement:</b>	<b>Inspector Reviewing:</b>
	<b>Date Enf. Review Completed:</b>	<b>Date of Reply:</b>
	<b>Date to Applicant:</b>	<b>Date of Reply:</b>
	<b>Date of Comments from EPA:</b>	<b>Date to EPA:</b>
	<b>Date to Supervisor:</b>	

**1.0 Plant Process Description:**

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), buildings containing the facility's natural gas fired boilers, control equipment, laboratories, and offices. The facility control equipment includes regenerative thermal oxidizers (RTOs) for control of VOC and VHAP solvent exhaust; acid gas and ammonia scrubbers for control of HCl and HF HAP and NH<sub>3</sub> TAP emissions; cooling tower/scrubber drift eliminators, limitation of total dissolved solids (TDS), and limitation of cooling tower/scrubber water recirculation rate for control of particulate emissions; ammonia treatment systems (ATS); and a bulk specialty solvent waste (BSSW) treatment system. The ATS and BSSW use catalytic oxidation to accomplish destruction of HAP and TAP compounds. The ATS also uses a secondary catalyst bed for conversion of NO<sub>x</sub> to N<sub>2</sub>. Both system types combust natural gas during the oxidation process.

The facility was permitted to operate the following emissions sources and/or stacks: thirty-three (33) cooling towers, eight (8) 54 MMBtu/hr boilers; four (4) 29.3 MMBtu/hr boilers; one (1) 8.37 MMBtu/hr boiler (Unit BCP Boiler 7); seventeen (17) rotary-concentrator regenerative thermal oxidizers (RTOs); forty-three (43) acid gas/ammonia scrubbers; four (4) ammonia treatment systems (ATS); one (1) bulk specialty solvent waste treatment system (BSSW). As of December 2009, the facility had 18 operational acid gas scrubbers and 7 operational ammonia scrubbers. The only federal regulation that was previously recognized as applicable to this facility was NSPS Subpart Dc, for industrial boilers ≥ 10 MMBtu/hr but ≤ 100 MMBtu/hr.

The facility became a PSD Non-Anyways Major Source for Greenhouse Gases (GHG) on July 1, 2011. The modification ("Project") allowed by permit 0325-M11 includes new construction in excess of the GHG PSD Significance Level of 75,000 tpy CO<sub>2</sub>e. However, Intel has chosen to not begin actual construction on any part of the Project until the permit is modified to assume sufficient GHG control devices such that the Project will not reach the GHG significance level.

The facility also became a Title V Major Source for GHG on July 1, 2011. The Title V Operating Permit application has been received and ruled complete; due date is Dec. 2013.

**2.0 Description of this Modification:**

P-257, Intel's initial Title V permit, includes all previous conditions found in NSR permit 325-M11 through R5 and enhances some of the monitoring, recordkeeping and reporting requirements. In addition P-257 includes a Greenhouse Gas (GHG) only Actual PAL that caps GHG emissions on a CO<sub>2</sub>e basis at 395,797 tons per year. The basis for this limit is the average of the facility's 2003 and 2004 GHG emissions plus an additional 75,000 ton per year "free" bump that is available when setting the initial PAL. The 2003 and 2004 data was initially considered to not be representative of current actual emissions that have been well below 100,000 tpy since 2008.

The 2003 and 2004 data still includes the processing of <200mm wafers, a technology that potentially has a higher emissions rate per wafer than the current 300mm-450mm technology that is now employed. The sub 200mm process also employed the use of large quantities of C<sub>2</sub>F<sub>6</sub> in the chamber cleaning process (2003 and 2004, C<sub>2</sub>F<sub>6</sub> accounted for over 100,000 tpy of CO<sub>2</sub>e). That process has been replaced by a new cleaning process that utilizes NF<sub>3</sub>, a chemical that is not currently counted as a GHG pollutant under the NSR/PSD regulation. Intel claims that the current facility can still employ the use of C<sub>2</sub>F<sub>6</sub> at the Rio Rancho facility and thus its past use and emissions are representative of current operations and emissions. This claim is not disputed at this time and any reset of the PAL to a lower level will be left to the eventual renewal in ten years.

Intel, has over the last ten years, installed Point of Use (POU) controls on many of their individual tools at the facility. These are GHG only abatement technologies and are not related to the large scrubbers and thermal oxidizers that are included in the permit. These controls have been installed as an industry wide voluntary agreement with EPA and thus are not considered in the past actual calculation. The control efficiency of these voluntary controls may be used in tracking actual emissions under the new PAL. Default control efficiencies are listed in Table I-16 of 40 CFR 98 Subpart I. Intel may choose to establish site specific control efficiencies through testing of individual POU controls and/or through stack testing (combined streams) as provided in 40 CFR 98 Subpart I. The wastewater pH adjustment is not a source of CO<sub>2</sub> emissions since calcium hydroxide and sodium hydroxide are the only basic pH adjustment chemicals used. Based on correspondence from Intel (September 23, 2013 email from Sarah Chavez), Calcium Carbonate is not used.

More detail is added to the specific NSPS and NESHAP requirements tables to clarify to compliance staff which compliance options have been selected by the permittee. A reanalysis of the cooling tower emissions (using the AQB cooling tower guidance, September 2013) show an approximate 70 percent increase in particulate emissions from the towers. Since the increase is mostly due to a calculated increase of TSP (particles greater than PM-10) and only the state ambient standard applies (NMAAQs is not an applicable requirement under Title V) no additional modeling is required until a new NSR action is initiated. Intel does not currently have hourly emissions limits on the towers to show compliance with short-term ambient standards, that decision was made many years ago and will not be readdressed in this action.

### 3.0 **Source Determination:**

1. The emission sources evaluated include: Intel – Rio Rancho Facility.

2. Single Source Analysis:

A. **SIC Code:** Do the facilities belong to the same industrial grouping (i.e., same two-digit SIC code grouping, or support activity)? Yes (no details)

B. **Common Ownership or Control:** Are the facilities under common ownership or control? Yes (no details)

C. **Contiguous or Adjacent:** Are the facilities located on one or more contiguous or adjacent properties? Yes (no details)

3. Is the source, as described in the application, the entire source for 20.2.70, 20.2.72, or 20.2.74 NMAC applicability purposes? Yes (no details)

4.0 **PSD Applicability:**

The facility is a Title V/PSD Major Source for GHG only, as established by the Tailoring Rule. This Initial Title V action establishes a GHG Actuals Plantwide Applicability Limit (PAL) for the facility which, if complied with and maintained, will maintain the facility's minor source status for the other criteria pollutants and will not subject the GHG to further regulation. The GHG Only PAL is developed in the Title V permit as allowed by both Federal and State regulations.

5.0 **History (In descending chronological order, showing NSR and TV):** \*The asterisk denotes the current active NSR and Title V permits that have not been superseded.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
P257		Initial Title V with GHG PAL	Initial Title V permit with an attached GHG PAL established to maintain the facility as a GHG only major source. The facility is not a PSD major source for all other pollutants. Minor changes to monitoring, recordkeeping and reporting.
325-M11-R5	4/26/13	Administrative Revision	Modified fuel sulfur limit to reflect actual commercially available natural gas used at the facility.
325-M11-R4	12/5/12	Technical Permit Revision	Changed permit to block-format; modified monitoring, recordkeeping, and reporting throughout.
325-M11-R3	8/13/12	Technical Permit Revision	Annual emission factor update (affecting Tables 3 and Z); Changed reporting at Condition 9.A.III.d and 9.A.iii.f to allow semi-annual reports to be non-CBI.
325-M11-R2*	2/10/12	Technical Permit Revision	Reduce maximum capacity of five (5) permitted boilers; modify boiler monitoring to be consistent with current protocol; deletion of Table 1; notation of exempt status of emergency generators and fire pump engines.
325-M11-R1	7-26-11	Technical Permit Revision	Expand operating temperature range for the four ATS (Condition 2.C.i.b); rename several of the RTOs in Attachment A.
325-M11	5-4-11	Significant Permit Revision	Addition of seven (7) RTOs, ten (10) cooling towers, one (1) boiler, three (3) ammonia treatment systems, and one (1) bulk specialty solvent waste treatment system.
325M10-R2	4-21-11	Technical Permit Revision	Annual emission factor update. Minor change to Conditions 3.B.i and 3.B.ii to reflect current operations. Minor update to stack IDs in Attachment A.
325-M10-R1	2-24-11	Technical Permit Revision	Reduction of TSP/PM10 emission limits for RTOs; relocation of three (3) RTOs, fifteen (15) scrubbers, five (5) cooling towers, and four (4) boilers to the new Fab 11Xe area. Removal of all references to Bead Activated Carbon (BAC) systems.
325-M10	12-17-10	Significant Permit Revision	Addition of five (5) Munters RTOs, increasing stack heights on all 10 RTOs from 30 to 40 m.
325-M9-R24	5-14-10	Technical Permit Revision	HAP & VOC emission factors - Pursuant to Condition 1.G this application requested a revision of the emission factors (EFs)

Permit Number	Issue Date	Action Type	Description of Action (Changes)
			<p>(Tables Z and 3) used to calculate the facility's Hazardous Air Pollutant (HAP) and VOC emissions.</p> <p>Changes were made to existing HAPs and VOCs emission factors and also HAPs and VOC emission factors for chemicals for which chemical-specific factors are not specified in the permit and that previously used an emission factor of one (1) were added. Pursuant to Condition 1.G of Intel's Air Quality Permit No. 325-M9, these revisions to Tables Z and 3 are allowed.</p> <p>Revise the thermal oxidizer (RTO) emission factor (EF) that is used to calculate the facility's NOx emissions from the combustion of natural gas.</p> <p>Evaluation of the NOx and CO emission factors for the 1250 HP boilers pursuant to Condition 2.C.ii.f. No changes to emission factors.</p> <p>Provide emission factors for miscellaneous combustion sources.</p> <p>Make minor revisions to the language in the permit for emergency generators, emission calculations, thermal oxidizers, testing, recordkeeping and reporting.</p> <p>Fix two typos:  1. Correct R23 chemical name  1. Correct CO EF for Ammonia Treatment System</p> <p>Change three scrubber source and stack designations.</p> <p>Add three exempt natural gas fired commercial water heaters.</p>
325-M9-R23	1/14/10	Technical Permit Revision	<p>HAP &amp; VOC emission factors - Pursuant to Condition 1.G this application requested a revision of the emission factors (EFs) (Tables Z and 3) used to calculate the facility's Hazardous Air Pollutant (HAP) and VOC emissions. VOC emission factors for chemicals for which chemical-specific factors are not specified in the permit and that previously used an emission factor of one (1) were added.</p> <p>Permit 0325M9 will be revised to include permit revisions R21-R22.</p>
325-M9-R22	8/13/09	Administrative Revision	<p>Administrative permit revision to rename scrubber and VOC stacks. Old scrubber numbers: SC-12-fb1-7, SC-12-fd1-1, SC-12-fb1-8, New scrubber numbers: RRFB-SC142-1, RRFB-SC142-3, RRFB-SC142-2. Old RTO stack numbers: VOC138-1-121-1s/VOC138-1-121-2s, VOC138-2-121-1s/VOC138-2-121-2s/VOC138-2-121-3s, New RTO numbers: VOC138-1-120-1s/VOC138-1-120-2s, VOC138-2-120-1s/VOC138-2-120-2s. Old RTO numbers: voc south (voc south primary, voc south bypass), New RTO number: VOC138-3-120 (VOC138-3-120-1s/VOC138-3-120-2s) Installation of 2 emergency generators for F11X. Correction in Tables 3 and Z of diethylene glycol monomethyl ether to diethylene glycol monoethyl ether.</p>

Permit Number	Issue Date	Action Type	Description of Action (Changes)
325-M9-R21	6/23/09	Administrative Revision	Administrative permit revision to rename scrubber stacks. Old numbers: sc-12-cb1-1/ sc-12-cb1-1s, New numbers: sc-40-np2-3/ sc-40-np2-3s.
325-M9-R20	4/16/09	Technical Permit Revision	<p>RTO Emission Factors-A revision of the thermal oxidizer (RTO) emission factors (EFs) used to calculate the facility's NOx and CO emissions from the combustion of natural gas.</p> <p>Natural Gas Fired Boilers emission factors - As required by Condition 2.C.ii.f, Intel submitted the required data for the twelve (12) 1250 BHP natural gas fired boilers. The test results and calculations support a change to the emission factor for CO.</p> <p>HAP &amp; VOC emission factors - Pursuant to Condition 1.G this application requested a revision of the emission factors (EFs) (Tables Z and 3) used to calculate the facility's Hazardous Air Pollutant (HAP) and VOC emissions. Changes were made to existing HAPs and VOCs emission factors and also VOC emission factors for chemicals for which chemical-specific factors are not specified in the permit and that previously used an emission factor of one (1) were added.</p> <p>Table 1 will be revised to add the emission factors for the Ammonia Treatment System.</p> <p>Permit language will be changed to modify the submission date listed in Condition 2.C.ii.f for boiler emission factors. The submission date will be changed from February 15 to March 15.</p> <p>Permit 0325M9 will be revised to include permit revisions R1-R20.</p>
325-M9-R19	2/6/09	Technical Permit Revision	Installation and operation of an ammonia treatment system.
325-M9-R18	11/21/08	Administrative Revision	Administrative permit revision to retire the North Energy Center 500 HP boilers (Units ecs-boi-91, ecs-boi-92, ecs-boi-93, ecs-boi-94) and making revisions to pertinent sections of the permit to reflect the removal of the boilers. Condition 2.C.i will be deleted. Conditions 7.B.ii and 7.B.iv will be revised and condition 7.B.iii will be deleted. All references to the North Energy Center 500 HP boilers in Table 1, Attachment A and Table CS will be deleted.
325-M9-R17	9/12/08	Administrative Revision	Administrative permit revision to correct a typographical error that left out the emission factor of 0.0017 for Methanol (gensolve) for process H in Table 3, Emission Factors for HAPs.
325-M9-R16	4/18/08	Technical Permit Revision	<p>RTO Emission Factors-A revision of the thermal oxidizer (RTO) emission factors (EFs) used to calculate the facility's NOx and CO emissions from the combustion of natural gas.</p> <p>Natural Gas Fired Boilers emission factors - As required by Condition 2.C.ii.f, Intel submitted the required data for the twelve (12) 1250 BHP natural gas fired boilers. The test results and calculations support a change to the emission factor for CO.</p> <p>HAP &amp; VOC emission factors - Pursuant to Condition 1.G this application requested a revision of the emission factors (EFs) (Tables Z and 3) used to calculate the facility's Hazardous Air Pollutant (HAP) and VOC emissions. Changes were made to existing HAPs and VOCs emission factors and also VOC emission factors for chemicals for which chemical-specific factors are not</p>

Permit Number	Issue Date	Action Type	Description of Action (Changes)
			<p>specified in the permit and that previously used an emission factor of one (1) were added.</p> <p>Attachment A <i>Air Emission Sources</i> was modified to incorporate new designations for sources and stacks.</p> <p>Table CS <i>Hourly Emission Limits for Combustion Sources</i> was revised to reflect the new designations for sources and stacks in Attachment A.</p> <p>Permit language was revised to accurately reflect the information that needs to be reported and clarify that the information is not being reported under 20.2.7 NMAC.</p>
325-M9-R15	1/8/08	Technical Permit Revision	Replace all five thermal oxidizer units and relocate the new units to a central location west of the Central Utilities Building. The existing Durr thermal oxidizers will be replaced with similar equipment manufactured by the Munters Corporation-Zeol Division.
325-M9-R14	4/17/07	Technical Permit Revision	<p>A revision of the thermal oxidizer (RTO) emission factors (EFs) used to calculate the facility's NO<sub>x</sub> and CO emissions from the combustion of natural gas.</p> <p>As required by Condition 2.C.ii.f, Intel submitted the required data for the twelve (12) 1250 BHP natural gas fired boilers. The test results and calculations support no change to the emission factors. The required boiler test data is from the preceding three (3) calendar years (2004-2006).</p> <p>Pursuant to Condition 1.G this application requested a revision of the emission factors (EFs) (Tables Z and 3) used to calculate the facility's Hazardous Air Pollutant (HAP) and VOC emissions. Changes were made to existing HAPs and VOCs emission factors and also VOC emission factors for chemicals for which chemical-specific factors are not specified in the permit and that previously used an emission factor of one (1) were added. Pursuant to Condition 1.G of Intel's Air Quality Permit No. 325-M9, these revisions to Tables Z and 3 are allowed.</p>
325-M9-R13	4/13/06	Technical Permit Revision	<p>A revision of the thermal oxidizer (RTO) emission factors (EFs) used to calculate the facility's NO<sub>x</sub> and CO emissions from the combustion of natural gas.</p> <p>As required by Condition 2.C.ii.f, Intel submitted the required data for the twelve (12) 1250 BHP natural gas fired boilers. The test results and calculations support no change to the emission factors. The required boiler test data is from the preceding three (3) calendar years (2003-2005).</p> <p>Pursuant to Condition 1.G this application requested a revision of the emission factors (EFs) (Tables Z and 3) used to calculate the facility's Hazardous Air Pollutant (HAP) and VOC emissions. Changes were made to existing HAPs and RTOs and an additional process (Process F) was added with this revision that uses existing chemicals previously identified in Table 3 of Intel's Air Quality Permit No. 325-M9. In addition, a new HAP (Bromoform) was added to Table 3 of Intel's Air Quality Permit No. 325-M9 this HAP was identified in the the CUB\NEC cooling tower test results and is formed by the use of sodium bromide used as a sterilization chemical for the cooling tower water. The addition of this HAP will trigger Conditions 5.D., 5.E.iii and 5.E.iv. and is subject to the PSEL</p>

Permit Number	Issue Date	Action Type	Description of Action (Changes)
			for HAPs.
325-M9-R12	5/6/05	Technical Permit Revision	Revision of the thermal oxidizer (RTO) emission factors (EFs) used to calculate the facility's NOx and CO emissions from the combustion of natural gas and to identify separate emission factors for the two sizes (4 MMBtu/hr and 2.5 MMBtu/hr) of RTOs at the facility (Table 1). Submitted data to support no change in the emission factors for the twelve (12) 1250 BHP natural gas fired boilers. Revision of the emission factors (EFs) used to calculate the facility's Hazardous Air Pollutant (HAP) and VOC emissions (Tables Z and 3). Changed the process used to derive those factors (by process EF's). Changed the thermal oxidizer removal efficiencies for VOC (non-methanol) and Methanol and changed the scrubbers' removal efficiency for HF.
325-M9-R11	4/13/04	Technical Permit Revision	Changed the NOx emission factor for the 1250 BHP Boilers in Table 1 from 0.05 lb/MMbtu to 0.04 lb/MMbtu.
325-M9-R10	4/25/03	Administrative Revision	Corrected two typographical errors related to 1,2-dichloroethylene in Table 3 of the permit.
325-M9-R9	3/12/03	Technical Permit Revision	Changed the NOx and CO emission factors for the 1250 BHP Boilers in Table 1 as follows: CO: From 0.07 lb/MMbtu to 0.01 lb/MMbtu; NOx: From 0.06 lb/MMbtu to 0.05 lb/MMbtu.
325-M9-R8	9/6/02	Technical Permit Revision	The revision updated Table 3 of the permit (Emission Factors for HAPs) and Table Z of the permit (Emission Factors for VOCs). The update consisted of modification of some factors and addition of new factors for some chemicals not previously listed.
325-M9-R7	3/12/02	Technical Permit Revision	The revision changed the CO emission factor for the 1250 BHP Boilers in Table 1 as follows: CO: From 0.10 lb/MMbtu to 0.07 lb/MMbtu.
325-M9-R6	10/11/01	Administrative Permit Revision	The revision consisted of the following: Relocating and installing eight previously approved scrubbers to service the Fab11X area. Relocating and installing two previously approved thermal oxidizers to service the Fab11X area. Increasing the maximum flow of the Fab9 thermal oxidizer from 50,000 cfm to 54,000 cfm. Increasing the stack height of the Fab11N scrubber by seven feet to meet EPA Method 1 sampling requirements.
325-M9-R5	5/16/01	Administrative Permit Revision	The revision consisted of adding 4 additional emergency generators (exempt) to Fab11.
325-M9-R4	3/6/01	Technical Permit Revision	Change the following: Emission factors for the 1250 BHP Boilers in Table 1 were changed: NOx: From 0.0567 lb/MMbtu to 0.06 lb/Mmbtu; From 0.0908 lb/MMbtu to 0.10 lb/MMbtu. Condition 1.G of the permit was modified to read, "Intel shall make any increase or decrease in an emission factor listed in Tables 1, 3, Y, or Z of Permit No. 325M9 through the technical permit revision process in 20 NMAC 2.72.219."
325-M9-R2 325-M9-R3	12/14/00	Administrative Permit Revisions	The revisions consisted of re-designating 2 acid gas scrubbers and relocating 2 other acid gas scrubbers.

Permit Number	Issue Date	Action Type	Description of Action (Changes)
325-M9-R1	9/25/00	Administrative Permit Revision	The revision consisted of adding 1 additional emergency generator (exempt) to Fab9.
325-M9	3/3/00	NSR Permit	The permit allows for flexibility in the operation of the facility under Plantwide Site Emission Limits (PSELs). Certain conditions of the permit allow or require technical or administrative permit revisions as part of the flexible permit

6.0 **Public Response/Concerns:** As of 9/19/13 the Department has not received any public comment.

7.0 **Compliance Testing:**

Unit No.	Compliance Test	Test Dates
FAB scrubbers and RTOs	Annual FTIR testing for various chemicals and fluorinated GHG if the facility uses the stack test option in the GHG PAL	Annually

8.0 **Startup and Shutdown:**

- A. If applicable, did the applicant indicate that a startup, shutdown, and emergency operational plan was developed in accordance with 20.2.70.300.D(5)(g) NMAC? Yes
- B. If applicable, did the applicant indicate that a malfunction, startup, or shutdown operational plan was developed in accordance with 20.2.72.203.A.5 NMAC? Yes.
- C. Did the applicant indicate that a startup, shutdown, and scheduled maintenance plan was developed and implemented in accordance with 20.2.7.14.A and B NMAC? Yes.
- D. Were emissions from startup, shutdown, and scheduled maintenance operations calculated and included in the emission tables? No. Steady-state + SSM emissions will not exceed the permitted PSELs.

9.0 **Compliance and Enforcement Status [Title V only]:** As of August 12, 2013, the Enforcement Section knows of no areas of concern regarding to this facility.

10.0 **Modeling:** Not required at this time. Future NSR actions will require remodeling for TSP from cooling towers.

11.0 **State Regulatory Analysis(NMAC/AOCR):**

20 NMAC	Title	Applies (Y/N)	Comments
2.1	General Provisions	Y	20.2.1.116 for Significant Figures is applicable.
2.3	Ambient Air Quality Standards	Y	20.2.3 NMAC is a SIP approved regulation that limits the maximum allowable concentration of Total Suspended Particulates, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide.

<b>20 NMAC</b>	<b>Title</b>	<b>Applies (Y/N)</b>	<b>Comments</b>
2.7	Excess Emissions	Y	Applies to all facilities' sources. Steady-state + SSM emissions do not exceed permitted Allowable emissions.
2.61	Smoke and Visible Emissions	Y	The boilers, RTOs, ATS, BSSW, and CI-RICE gensets are Stationary Combustion Equipment.
2.70	Operating Permits	Y	Source became subject to Title V for GHG on July 1, 2011. PTE GHGs > 100 tpy and PTE > 100,000 tpy CO <sub>2e</sub> . A Title V permit application must be submitted to the Department on or before July 1, 2012.
2.71	Operating Permit Fees	Y	Source will become subject to 20.2.70 NMAC as cited at 20.2.71.109 NMAC upon issuance of a Title V permit.
2.72	Construction Permits	Y	20.2.72.219.B.1.(a) NMAC
2.73	NOI & Emissions Inventory Requirements	Y	Applicable to all facilities that require a permit.
2.74	Permits-Prevention of Significant Deterioration	Y	Source became Non-Anyway PSD Major on July 1, 2011: PTE GHGs > 250 tpy (mass basis) and PTE > 100,000 tpy CO <sub>2e</sub> . This Title V permit established a GHG only PAL for the facility. The facility maintains the minor source status for other criteria pollutants.
2.75	Construction Permit Fees	Y	This facility is subject to 20.2.72 NMAC
2.77	New Source Performance	Y	Applies to any stationary source constructing or modifying and which is subject to the requirements of 40 CFR Part 60. 40 CFR 60, Subparts Dc and IIII are applicable for this facility.
2.78	Emissions Standards for HAPs	N	This regulation applies to all sources emitting hazardous air pollutants which are subject to the requirements of 40 CFR Part 61. There are no applicable subparts for operations at Intel-Rio Rancho facility.
2.79	Permits – Nonattainment Areas	N	This facility is not located in a non-attainment area.
2.82	MACT Standards for Source Categories of HAPs	Y	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63. All existing CI-RICE emergency gensets and Fire Pumps are subject to the RICE MACT as amended effective Jan. 14, 2013. The area source boiler NESHAP, Subpart JJJJJ, is potentially applicable for this facility as of 5/20/11.

12.0 **Federal Regulatory Analysis:**

<b>Air Programs Subchapter C (40 CFR 50)</b>	<b>National Primary and Secondary Ambient Air Quality Standards</b>	<b>Applies (Y/N)</b>	<b>Comments</b>
--	---	----------------------	-----------------

C	Federal Ambient Air Quality Standards	Y	Independent of permit applicability; applies to all sources of emissions for which there is a Federal Ambient Air Quality Standard.
---	---------------------------------------	---	---

<b>NSPS Subpart (40 CFR 60)</b>	<b>Title</b>	<b>Applies (Y/N)</b>	<b>Comments</b>
A	General Provisions	Y	Applies due to applicability of Subpart Dc.
40 CFR60.40a, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	Y	This regulation applies because all boilers, except Boiler Unit 14, have a maximum heat input between 10 MMBtu/hr and 100 MM Btu/hr as specified at 40 CFR 60.40c(a) and were constructed after June 9, 1989. Per 40 CFR 60.42c(d), the fuel oil burned in subject units may not contain more than 0.5% sulfur by weight.
40 CFR 60, Subpart III	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Y	Emergency Gen. Units 212 and 213 and Fire Pump 219 were manufactured after the applicability date of 4/6/06.

<b>NESHAP Subpart (40 CFR 61)</b>	<b>Title</b>	<b>Applies (Y/N)</b>	<b>Comments</b>
A	General Provisions	N	Applies only if any other subpart applies.

<b>MACT Subpart (40 CFR 63)</b>	<b>Title</b>	<b>Applies (Y/N)</b>	<b>Comments</b>
A	General Provisions	Y	Applies if any other subpart applies.
ZZZZ	National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE)	Y	All emergency gensets (except 212 and 213) and fire pump engines (except 219) are existing Compression Ignition (CI) -RICE. This Subpart, as amended effective 1/14/2013, is applicable to existing CI-RICE at an area source for HAPs. Per Subpart ZZZZ Table 2.d.4, periodic maintenance and inspections are required.
JJJJJ	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources	N	This NESHAP was promulgated on 3/21/11 and was effective as of 5/20/11. At the Intel facility, this Subpart could potentially apply to the eight dual-fuel 52.5 MMBtu/hr boilers as existing sources and the 4 new dual-fuel 29.3 MMBtu/hr boilers as new sources.

MACT Subpart (40 CFR 63)	Title	Applies (Y/N)	Comments
			However, if Intel can provide records that show each boiler is operated for 48 hours per year or less on liquid fuels, the boiler would meet the definition for "Gas-fired boiler" found at §63.11237 and therefore would not have any requirements under this Subpart. Note: The permit restricts non-emergency fuel oil usage to no more than 48 hours/year.

Miscellaneous	Title	Applies (Y/N)	Comments
40 CFR 64	CAM	N	CAM applicability will be evaluated during the first Title V permit renewal.
40 CFR 68	Chemical Accident Prevention	N	Intel does not store applicable chemicals in excess of applicable thresholds.

13.0 **Exempt and/or Insignificant Equipment that do not require monitoring:**

**Title V - INSIGNIFICANT ACTIVITIES** (Dated March 24, 2005) as defined by 20.2.70.7.P NMAC:

Unit ID	Description	Manufacturer/ Model	Serial Number	Capacity	Date of Manufacture/ Construction/ Modification/ Reconstruction	Exemption
Water Heater	Aerco KC	AERCO 35082	G-01-158	1.0 MMBtu/hr	2001	IA List Item #3
Water Heater	Aerco KC	AERCO 35150	G-01-195	1.0 MMBtu/hr	2001	IA List Item #3
Water Heater	Aerco KC	AERCO 35151	G-01-196	1.0 MMBtu/hr	2001	IA List Item #3
Lime Silos	Lime storage silos for wastewater pH adjustment	unknown	unknown	80 ft <sup>3</sup> /hr	unknown	IA List Item #1a

14.0 **New/Modified/Unique Conditions** (Format: Condition#: Explanation):

**MONITORING SPECIFICATIONS:** complex; see permit.

15.0 **Cross Reference Table between NSR Permit 0325-M1R5 and Title V Permit P257:**

NSR Condition #	(Title V Condition) #	Comments for modifications, addition or removal of conditions
N/A	Table A106.D Add emissions limits for units covered by NSPS subpart IIII	Add emissions limits for units covered by NSPS subpart IIII
A108	A108	Added PAL to paragraph B(1) and added paragraph E (PAL reference)
A109	A109	Modified slightly to reflect Title V reporting schedule. Semi-annual schedule stays the same as NSR.
A800.B	A800.B	Added additional language to clarify requirements based on equipment type, fuels used and options selected by permittee. Paragraph modified to reflect requirements only for existing boilers.
A800.B	A800.C	Added block C to clarify requirements for New boilers yet to be installed.
A802.A	A802.A	Added requirement to monitor and maintain makeup water flow in addition to recirculation flow. This controls the number of cycles and thus the concentration of pollutants in the water stream.
A805.A	A805.A	Added additional language to clarify requirements based on equipment type, operational use and options selected by permittee. Paragraph modified to reflect requirements only for new emergency generators
A805.A	A805.B	Added block B to reflect requirements only for new fire pump.

NSR Condition #	(Title V Condition) #	Comments for modifications, addition or removal of conditions
A805.B	A805.C	Added additional language to clarify requirements based on equipment type, operational use and options selected by permittee.
N/A	Attachment A	GHG Only PAL issued under this initial Title V permit.

**16.0 Permit specialist's notes to other NSR or Title V permitting staff concerning changes and updates to permit conditions:** See below and Section 2 and 15.

Questions have been asked regarding the use of process wastewater as makeup water for the cooling towers. Intel has submitted test information that was previously submitted to AQB in 2005. However, they continue to side-step the basic question of potential to emit. They claim the process wastewater that goes to the cooling tower is a dilute rinse stream that is not comparable to the wastewater going to the City of Albuquerque WWTP, yet they provide no evidence, (P&ID's, construction drawings, etc.) that the two waste streams do not mix. The piping system is the same for many tools and Intel reports that valves divert the clean waste to the towers and the dirty waste to the city. No evidence has been submitted showing the controls and safeguards for this system.

Upon further review of outside sources, the Fluoride concentrations in the cooling tower sump water samples from 2005 are in some cases 20 to 30 times higher than the wastewater concentrations going to the city WWTP (based on the Albuquerque Bernalillo County Water Utility Authority Industrial Pretreatment Program Local Limits Technical Analysis Report — 2013 Update, July 2013). This may indicate the recycled water has a higher gaseous fluoride concentration, prior to pH adjustment than the waste water going to the city. Ammonia was tested in the 2005 report but the testing was from the cooling tower basins and thus does not represent the actual makeup stream before it enters the ambient air.

On 9/25/13 Intel verified that the lower Fluoride concentration in the discharge to the WWTP is due to their pretreatment system that precipitates out much of the fluorides before discharge. It is not clear if a settling system exists for the cooling tower reclaim water.

The Intel 2012 TRI report estimates production quantities of two HAPs in question, HCL (74,605 lbs/yr) and HF (341,805 lbs/yr). Reported air emission of each HAP is 5,605 and 1,800 lbs/yr respectively. The rest is reported as being Treated Onsite. For HF that is over 99% treated onsite. The high level of Fluorides in the cooling tower sumps may be the outfall for that onsite treatment and thus the conversion of HF to Fluoride salts may be warranted.

Scrubber monitoring is pending. Intel claims water flow monitoring is not accurately monitored and therefore flowrate monitoring conditions or thresholds should not be imposed. In addition Intel argues that potential to emit of HAPs from all scrubbers is minimal. TRI reporting does not fully substantiate that argument. Although low values of HAPs have been recorded during past stack testing, given the large combined exhaust flowrate of the scrubbers (>900,000 cfm) a 1.0 ppm emission of any HAP at maximum operation would result in a major source of HAP emissions.