Chavez, Sarah T

From: Vaughn, Dennis
Sent: Tuesday, January 18, 2022 11:15 AM
To: eric.peters@state.nm.us; Mascarenas, Marvin, NMENV
Cc: Chavez, Sarah T; Gallegos, Frank E; Paul Wade (PWade@montrose-env.com)
Subject: Admin Permit Follow-up to 12-9-21 Submittal
Attachments: Intel RePositioning Model Report _011222.docx; Locations for Model Sources 2022-01-12.pdf

Eric and Marvin,

As we have discussed, during our review of the permit application in our December 15th Community Environmental Working Group (CEWG) meeting, a community member pointed out an error is Section 16S. The original report noted that the land cover data from 1992 was used but this was an error. The national land cover data used in the creation of the met data was the year 2016, which is the most recent version of the national land cover data AERSURFACE uses. The date has been updated in the attached modeling report.

Section 16J was also discussed during the CEWG meeting. The report was updated to include 10 sensitive location with approximately 1 mile of the facility. Since this permit application is an administrative revision and public notice and public hearings are not a part of the permitting process, we answered "no" to both questions. Given the comments in the CEWG, we have updated the section as well in the attached document.

While neither of the above changes impact the modeling results, we believe it would be important to have an accurate model report for the records.

As requested, below is an updated table that was include in the original cover letter of the permit application. The values reflect the information that was used in the modeling analysis to demonstration compliance with the NAAQS . There is no difference in the input pollutant emissions between the 2021 and the 2011 modeling.

Unit Number or Control Equipment Unit Number	Source or Control Equipment Description	Old Model Description	New Model Description	New Capacity Inputs	Old Capacity Inputs
40	Acid Gas Scrubber	PUB Scrubber 1s	New F11X EXSC	50 K CFM	20 K CFM*
41	Acid Gas Scrubber	PUB Scrubber 2s	New F11X EXAM	5 K CFM	20 K CFM*
42	Acid Gas Scrubber	PUB Scrubber 3s	F09 Scrubber 5s	1 K CFM	20 K CFM*
43	Acid Gas Scrubber	F11Xe Scrubber 1s	F09 Scrubber 1s	8 K CFM	25 K CFM*
44	Acid Gas Scrubber	F11Xe Scrubber 2s	F09 Scrubber 2s	8 K CFM	25 K CFM*

66	Acid Gas Scrubber	PUB Scrubber 1s	F09 Scrubber 3s	8 K CFM	25 K CFM*
67	Acid Gas Scrubber	PUB Scrubber 2s	F09 Scrubber 4s	8 K CFM	50 K CFM*
73	Acid Gas Scrubber	PUB Scrubber 4s	F09 Scrubber 6s	1K CFM	20 K CFM*
137	Cooling Tower	137.NEC.CT.Us	APCI New	6000 gpm (each cell)**	6000 gpm (each cell)
138	Cooling Tower	138.NEC.CT.Us	APCI New	6000 gpm (each cell)**	6000 gpm (each cell)
139	Cooling Tower	139.NEC.CT.Us	APCI New	6000 gpm (each cell)**	6000 gpm (each cell)
172	Thermal Oxidizer	F11Xe Munters 11s	Munters F09	2.4 MMBtu/hr	2.4 MMBtu/hr
173	Thermal Oxidizer	F11Xe Munters 12s	Munters F09	2.4 MMBtu/hr	2.4 MMBtu/hr
174	Thermal Oxidizer	F11Xe Munters 13s	Munters F09	2.4 MMBtu/hr	2.4 MMBtu/hr
184	Cooling Tower	BCP Cooling Tower 1s	205.CUB.CT.U	4,000 gpm	10,000 gpm
185	Cooling Tower	BCP Cooling Tower 2s	205.CUB.CT.U	4,000 gpm	10,000 gpm
186	Cooling Tower	BCP Cooling Tower 3s	205.CUB.CT.U	4,000 gpm	10,000 gpm
187	Cooling Tower	BCP Cooling Tower 4s	205.CUB.CT.U	4,000 gpm	10,000 gpm
188	Cooling Tower	BCP Cooling Tower 5s	205.CUB.CT.U	4,000 gpm	10,000 gpm
189	Cooling Tower	BCP Cooling Tower 6s	205.CUB.CT.U	4,000 gpm	10,000 gpm
190	Cooling Tower	BCP Cooling Tower 7s	205.CUB.CT.U	4,000 gpm	10,000 gpm
191	Cooling Tower	BCP Cooling Tower 8s	205.CUB.CT.U	4,000 gpm	10,000 gpm
192	Cooling Tower	BCP Cooling Tower 9s	205.CUB.CT.U	4,000 gpm	10,000 gpm
193	Cooling Tower	BCP Cooling Tower 10s	205.CUB.CT.U	4,000 gpm	10,000 gpm

* listed in NSR Permit 035M11R10 as TBD.

** Initial design, final capacity may change with final design. Modeling conducted using old capacity inputs.

Intel has also decided to add an additional thermal oxidizer to the site to further enhance site redundancy. That oxidizer has already been permitted, and the map has been updated to reflect the location of this additional oxidizer.

Sincerely,

Dennis R. Vaughn

Intel Corporation – Rio Rancho
EHS Environmental Engineer
Email: dennis.vaughn@intel.com
Mobile: 575-936-9640

Universal Application 4

Air Dispersion Modeling Report

Refer to and complete Section 16 of the Universal Application form (UA3) to assist your determination as to whether modeling is required. If, after filling out Section 16, you are still unsure if modeling is required, e-mail the completed Section 16 to the AQB Modeling Manager for assistance in making this determination. If modeling is required, a modeling protocol would be submitted and approved prior to an application submittal. The protocol should be emailed to the modeling manager. A protocol is recommended but optional for minor sources and is required for new PSD sources or PSD major modifications. Fill out and submit this portion of the Universal Application form (UA4), the "Air Dispersion Modeling Report", only if air dispersion modeling is required for this application submittal. This serves as your modeling report submittal and should contain all the information needed to describe the modeling. No other modeling report or modeling protocol should be submitted with this permit application.

16-A: Identification

1	Name of facility:	Albuquerque Plant
2	Name of company:	Intel Corporation
3	Current Permit number:	325M11R10
4	Name of applicant's modeler:	Paul Wade
5	Phone number of modeler:	(505) 830-9680 x6
6	E-mail of modeler:	pwade@montrose-env.com

16-B: Brief

1	Was a modeling protocol submitted and approved?	Yes☒	No☐
2	Why is the modeling being done?	Moving Equipment	
3	Describe the permit changes relevant to the modeling.		
	Administrative Permit Revision for Re-Positioning of Permitted Sources		
4	What geodetic datum was used in the modeling?	NAD83	
5	How long will the facility be at this location?	Permanent	
6	Is the facility a major source with respect to Prevention of Significant Deterioration (PSD)?	Yes☐	No☒
7	Identify the Air Quality Control Region (AQCR) in which the facility is located	152	

8	List the PSD baseline dates for this region (minor or major, as appropriate).		
	NO2	3/26/1997	
	SO2	5/14/1981	
	PM10	3/26/1997	
	PM2.5	2/11/2013	
9	Provide the name and distance to Class I areas within 50 km of the facility (300 km for PSD permits).		
	None		
10	Is the facility located in a non-attainment area? If so describe below	Yes☐	No☒
11	Describe any special modeling requirements, such as streamline permit requirements.		

16-C: Modeling History of Facility

Describe the modeling history of the facility, including the air permit numbers, the pollutants modeled, the National Ambient Air Quality Standards (NAAQS), New Mexico AAQS (NMAAQS), and PSD increments modeled. (Do not include modeling waivers).

1	Pollutant	Latest permit and modification number that modeled the pollutant facility-wide.	Date of Permit	Comments
	CO	0325-M11	05/04/2011	NAAQS
	NO_2	0325-M11	05/04/2011	NAAQS and Annual Increment
	SO_2	0325-M11	05/04/2011	NAAQS
	H_2S	None		
	PM2.5	0325-M11	05/04/2011	NAAQS
	PM10	0325-M11	05/04/2011	NAAQS and Increment
	Lead	None		
	Ozone (PSD only)	None		
	NM Toxic Air Pollutants (20.2.72.402 NMAC)	None		

16-D: Modeling performed for this application

For each pollutant, indicate the modeling performed and submitted with this application.
Choose the most complicated modeling applicable for that pollutant, i.e., culpability analysis assumes ROI and cumulative analysis were also performed.

1	Pollutant	ROI	Cumulative analysis	Culpability analysis	Waiver approved	Pollutant not emitted or not changed.
	CO	☒	☐	☐	☐	☐
	NO_2	☒	☒	☐	☐	☐
	SO_2	☒	☐	☐	☐	☐

	H_2S	☐	☐	☐	☐	☒
	PM2.5	☒	☒	☒	☐	☐
	PM10	☒	☒	☐	☐	☐
	Lead	☐	☐	☐	☐	☒
	Ozone	☐	☐	☐	☐	☒
	State air toxic(s) (20.2.72.402 NMAC)	☐	☐	☐	☐	☒

16-E: New Mexico toxic air pollutants modeling

1	List any New Mexico toxic air pollutants (NMTAPs) from Tables A and B in 20.2.72.502 NMAC that are modeled for this application.

2 List any NMTAPs that are emitted but not modeled because stack height correction factor. Add additional rows to the table below, if required.

Pollutant	Emission Rate (pounds/hour)	Emission Rate Screening Level (pounds/hour)	Stack Height (meters)	Correction Factor	Emission Rate/ Correction Factor

16-F: Modeling options

1	Was the latest version of AERMOD used with regulatory default options? If not explain below.	Yes☒	No☐

16-G: Surrounding source modeling

1	Date of surrounding source retrieval	10/13/2021

2 If the surrounding source inventory provided by the Air Quality Bureau was believed to be inaccurate, describe how the sources modeled differ from the inventory provided. If changes to the surrounding source inventory were made, use the table below to describe them. Add rows as needed.

AQB Source ID	Description of Corrections

16-H: Building and structure downwash

1	How many buildings are present at the facility?	39	
2	How many above ground storage tanks are present at the facility?	3	
	Was building downwash modeled for all buildings and tanks? If not explain why below.	Yes☒	No☐

3		
4	Building comments	

16-I: Receptors and modeled property boundary

1	"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. A Restricted Area is required in order to exclude receptors from the facility property. If the facility does not have a Restricted Area, then receptors shall be placed within the property boundaries of the facility. Describe the fence or other physical barrier at the facility that defines the restricted area.		
	Fencing and Security Patrols		
2	Receptors must be placed along publicly accessible roads in the restricted area. Are there public roads passing through the restricted area?	Yes☐	No☒
3	Are restricted area boundary coordinates included in the modeling files?	Yes☒	No☐

4 Describe the receptor grids and their spacing. The table below may be used, adding rows as needed.

Grid Type	Shape	Spacing	Start distance from restricted area or center of facility	End distance from restricted area or center of facility	Comments
Cartesian	Round	50	0	500	
Cartesian	Round	100	500	1000	
Cartesian	Round	250	1000	3000	
Cartesian	Round	500	3000	5000	
Cartesian	Round	1000	5000	10000	
Cartesian	Round	2000	10000	20000	

5	Describe receptor spacing along the fence line. 50 meter
6	Describe the PSD Class I area receptors. None

16-J: Sensitive areas

	Are there schools or hospitals or other sensitive areas near the facility? If so describe below.	Yes☒	No☐

	This information is optional (and purposely undefined) but may help determine issues related to public notice.		
1	**Day Care and Pre-school Locations** Covenant Schools of Rio Rancho 1601 Barbara Loop SE, Rio Rancho, NM 87124 Daycare and pre-school services Distance: ≈ 0.11 miles from North property line Children's Corner 1598 Sara Rd SE, Rio Rancho, NM 87124 Daycare and pre-school services Distance: ≈ 0.12 miles from North property line La Petite Academy of Rio Rancho 1501 Barbara Loop SE, Rio Rancho, NM 87124 Educational daycare services Distance: ≈ 0.16 miles from North property line Little House on the Mesa 2009 Grande Blvd SE, Rio Rancho, NM 87124 Educational services Distance: ≈ 0.21 miles from West property line Little Explorers Child Development Center 4031 Barbara Loop SE, Rio Rancho, NM 87124 Day care- baby/infant day care – preschool daycare services Distance: ≈ 0.34 miles Happy Days Christen Day Care 2001 Golf Course Rd SE, Rio Rancho, NM 87124 Day care- pre K school daycare services Distance: ≈ 1.0 miles Springstone Montessori School 2441 Grande Blvd SE, Rio Rancho, NM 87124 **Distance: ≈ 0.45 miles** **Senior and Assisted Living Centers** The Retreat Alzheimer's Specialty Care 4075 Jackie Rd SE, Rio Rancho, NM 87124 Alzheimer and dementia assisted living centers Distance: ≈ 0. 38 miles Buena Vista Senior Apartments 1355 Meadowlark Ln SE, Rio Rancho, NM 87124 Senior (55+) Living Community Distance: ≈ 0.50 miles **Hospitals** **Lovelace Westside Hospital** **10501 Golf Course Rd NW, Albuquerque, NM 87114** Distance: ≈1.2 miles		

3	The modeling review process may need to be accelerated if there is a public hearing. Are there likely to be public comments opposing the permit application?	Yes☒	No☐

16-K: Modeling Scenarios

1	Identify, define, and describe all modeling scenarios. Examples of modeling scenarios include using different production rates, times of day, times of year, simultaneous or alternate operation of old and new equipment during transition periods, etc. Alternative operating scenarios should correspond to all parts of the Universal Application and should be fully described in Section 15 of the Universal Application (UA3).		
	No alternative scenarios. All sources model at 8760 hour per year.		
2	Which scenario produces the highest concentrations? Why?		
	N/A		
3	Were emission factor sets used to limit emission rates or hours of operation? (This question pertains to the "SEASON", "MONTH", "HROFDY" and related factor sets, not to the factors used for calculating the maximum emission rate.)	Yes☐	No☒
4	If so, describe factors for each group of sources. List the sources in each group before the factor table for that group. (Modify or duplicate table as necessary. It's ok to put the table below section 16-K if it makes formatting easier.) Sources:		

5

Hour of Day	Factor	Hour of Day	Factor								
1		13									
2		14									
3		15									
4		16									
5		17									
6		18									
7		19									
8		20									
9		21									
10		22									
11		23									
12		24									

If hourly, variable emission rates were used that were not described above, describe them below.

6	Were different emission rates used for short-term and annual modeling? If so describe below.	Yes☐	No☒

16-L: NO_2 Modeling

1	Which types of NO_2 modeling were used? Check all that apply.

	☒	ARM2
	☐	100% NO_X to NO_2 conversion
	☒	PVMRM
	☐	OLM
	☐	Other:
2	Describe the NO_2 modeling.	
	ARM2 – ROI modeling ARM2 – Annual NAAQS and Increment modeling PVMRM – 1 hour NAAQS modeling	
3	Were default NO_2/NO_X ratios (0.5 minimum, 0.9 maximum or equilibrium) used? If not describe and justify the ratios used below.	Yes☒ No☐
4	Describe the design value used for each averaging period modeled.	
	1-hour: High eighth high Annual: Highest Annual Average of Three Years	

16-M: Particulate Matter Modeling

1	Select the pollutants for which plume depletion modeling was used.	
	☐	PM2.5
	☐	PM10
	☒	None
2	Describe the particle size distributions used. Include the source of information.	
3	Does the facility emit at least 40 tons per year of NO_X or at least 40 tons per year of SO_2? Sources that emit at least 40 tons per year of NO_X or at least 40 tons per year of SO_2 are considered to emit significant amounts of precursors and must account for secondary formation of PM2.5.	Yes☒ No☐
4	Was secondary PM modeled for PM2.5?	Yes☒ No☐

5 If MERPs were used to account for secondary PM2.5 fill out the information below. If another method was used describe below.

NO_X (ton/yr)	SO_2 (ton/yr)	$[PM2.5]_{annual}$	$[PM2.5]_{24\text{-hour}}$
95.7	95.0	0.014 µg/m3	0.61 µg/m3

$PM_{2.5}$ annual = ((NO_X emission rate (tpy)/3184 + (SO_2 emission rate (tpy)/2289)) x 0.2 µg/m^3

$PM_{2.5}$ annual = ((95.7/3184) + (95.0/2289)) x 0.2 µg/m^3 = **0.014 µg/m^3**

$PM_{2.5}$ 24 hour = ((NO_X emission rate (tpy)/1155 + (SO_2 emission rate (tpy)/225)) x 1.2 µg/m^3

$PM_{2.5}$ 24 hour = ((95.7/1155) + (95.0/225)) x 1.2 µg/m^3 = **0.61 µg/m^3**

16-N: Setback Distances

1	Portable sources or sources that need flexibility in their site configuration requires that setback distances be determined between the emission sources and the restricted area boundary (e.g. fence line) for both the initial location and future locations. Describe the setback distances for the initial location.
	N/A
2	Describe the requested, modeled, setback distances for future locations, if this permit is for a portable stationary source. Include a haul road in the relocation modeling.
	N/A

16-O: PSD Increment and Source IDs

1	The unit numbers in the Tables 2-A, 2-B, 2-C, 2-E, 2-F, and 2-I should match the ones in the modeling files. Do these match? If not, provide a cross-reference table between unit numbers if they do not match below.	Yes☐	No☐

Unit Number in UA-2	Unit Number in Modeling Files
N/A	N/A

2	The emission rates in the Tables 2-E and 2-F should match the ones in the modeling files. Do these match? If not, explain why below.	Yes☐	No☐
	N/A		
3	Have the minor NSR exempt sources or Title V Insignificant Activities" (Table 2-B) sources been modeled?	Yes☐	No☒

4 Which units consume increment for which pollutants?

Unit ID	NO_2	SO_2	PM10	PM2.5
14	X		X	
15	X		X	
22	X		X	
23	X		X	
40			X	
41			X	
42			X	
43			X	
66			X	
67			X	
68			X	
69			X	
70			X	
71			X	
72			X	
73			X	
75			X	
76			X	
159	X		X	

	165	X		X	
	166	X		X	
	167	X		X	
	168	X		X	
	169	X		X	
	170	X		X	
	171	X		X	
	172	X		X	
	173	X		X	
	174	X		X	
	175	X		X	
	176	X		X	
	177	X		X	
	178	X		X	
	179	X		X	
	180	X		X	
	181	X		X	
	182	X		X	
	183	X		X	
	184			X	
	185			X	
	186			X	
	187			X	
	188			X	
	189			X	
	190			X	
	191			X	
	192			X	
	193			X	
	194			X	
	195			X	
	196			X	

5	PSD increment description for sources. (for unusual cases, i.e., baseline unit expanded emissions after baseline date).	baseline unit expanded emissions after baseline date	
6	Are all the actual installation dates included in Table 2A of the application form, as required? This is necessary to verify the accuracy of PSD increment modeling. If not please explain how increment consumption status is determined for the missing installation dates below.	Yes☐	No☒
	Increment consuming sources from previous modeling		

16-P: Flare Modeling

1	For each flare or flaring scenario, complete the following			
	Flare ID (and scenario)	Average Molecular Weight	Gross Heat Release (cal/s)	Effective Flare Diameter (m)
	N/A			

16-Q: Volume and Related Sources

1	Were the dimensions of volume sources different from standard dimensions in the Air Quality Bureau (AQB) Modeling Guidelines? If not please explain how increment consumption status is determined for the missing installation dates below.	Yes☐	No☒
2	Describe the determination of sigma-Y and sigma-Z for fugitive sources.		
3	Describe how the volume sources are related to unit numbers. Or say they are the same.		
4	Describe any open pits.		
5	Describe emission units included in each open pit.		

16-R: Background Concentrations

1	Were NMED provided background concentrations used? Identify the background station used below. If non-NMED provided background concentrations were used describe the data that was used.	Yes☒	No☒
	CO: Del Norte High School (350010023)		
	NO_2: Del Norte High School from Albuquerque Environmental		
	PM2.5: Del Norte High School (350010023)		
	PM10: Jefferson (350010026)		
	SO_2: Del Norte High School (350010023)		
	Other:		
	Comments: NO2 background was generated by the City of Albuquerque Environmental Department from Del Norte Monitor Data.		

2	Were background concentrations refined to monthly or hourly values? If so describe below.	Yes☒	No☐

Monitored Seasonal NO_2 Background – 3rd Highest Hourly µg/m³

Hour	Winter	Spring	Summer	Fall
1	72.1	47.6	29.3	65.6
2	67.8	48.3	27.7	59.7
3	67.7	46.0	26.4	57.9
4	68.4	48.9	26.6	58.9

	5	69.1	51.7	32.7	58.0
	6	69.7	63.9	39.3	57.8
	7	72.8	70.7	46.4	63.5
	8	77.6	71.8	48.5	64.5
	9	80.0	61.1	34.2	65.9
	10	71.4	48.0	27.3	55.0
	11	62.0	28.6	24.3	47.3
	12	48.1	18.9	19.9	35.4
	13	36.9	17.6	17.0	28.2
	14	35.1	15.7	15.9	25.3
	15	33.6	14.8	17.4	24.2
	16	37.2	15.3	19.4	28.0
	17	48.4	17.1	20.4	38.0
	18	73.0	19.4	19.3	69.6
	19	79.3	38.5	21.7	79.1
	20	78.1	53.2	30.9	77.1
	21	77.3	48.0	34.1	73.4
	22	76.5	56.3	30.8	70.4
	23	75.0	58.8	34.9	69.7
	24	72.4	57.9	33.6	70.9
	Note: Aermod Version 21112 has a computing error with the NO_2 PVMRM mode of the model. Background input into the model is doubled at output. To resolve this error EPA recommends dividing by half the NO_2 background inputted in the model, which was done in this modeling analysis.				

16-S: Meteorological Data

1	Was NMED provided meteorological data used? If so select the station used.	Yes☐	No☒

2

If NMED provided meteorological data was not used describe the data set(s) used below. Discuss how missing data were handled, how stability class was determined, and how the data were processed.

Dispersion model meteorological input files were created for the years 2010 - 2012 from meteorological data collected at the Intel site in Rio Rancho, NM for the years 2010 - 2012. Figure 3 shows wind rose diagram of the meteorological wind speed versus direction data that has been collected for the years 2010 - 2012.

AERMET wind speed threshold for surface data will be 0.4 meters per second.

To reduce the high incidence of calms and variable wind conditions, AERMINUTE (Version 15272) was used to supplement hourly observed wind speed and direction for the Albuquerque surface data when processing with AERMET.

AERMET/AERMOD requires that several additional parameters be input during data processing in AERMET:

- Surface roughness length (m)
- Albedo
- Bowen Ratio

The surface roughness length influences the surface shear stress and is an important factor in determining the magnitude of mechanical turbulence and the stability of the boundary layer. The albedo is the fraction of total incident solar radiation reflected by the surface back to space without absorption. The daytime Bowen ratio, an indicator of surface moisture, is the

	ratio of sensible heat flux to latent heat flux and, together with albedo and other meteorological observations, is used for determining planetary boundary layer parameters for convective conditions driven by the surface sensible heat flux. These parameters would be obtained using AERSURFACE (Version 20060). AERSURFACE requires the input of land cover data from the U.S. Geological Survey (USGS) National Land Cover Data 2016 archives (NLCD 2016), which it uses to determine the land cover types for the user-specified location. AERSURFACE matches the NLCD 2016 land cover categories to seasonal values of albedo, Bowen ratio, and surface roughness. Values of surface characteristics are calculated based on the land cover data for the study area and output in a format for input into AERMET Stage 3. Site descriptive questions required by AERSURFACE include: • Meteorological data from airport • Continuous snowcover in winter • Arid climate • Dry climate For the Intel meteorological data, NO was checked for airport data, NO was checked for continuous snowcover, YES was checked for arid climate, and YES was checked for dry climate. For each parameter, data was extracted from land cover data for each month of the year and 12 equal sectors radiating from the Intel site. The meteorological data was processed using AERMET (Version 21112) and upper air from Albuquerque, NM for the same time period. The upper air and surface data are considered to be representative and comparable with the Intel site. The Intel meteorological data files; Albuquerque, NM upper air files; Albuquerque Airport surface air file, Albuquerque AERMINUTE files, and Intel meteorological data are included in this email submitted to the NMED-AQB Modeling Section for review. During AERMET processing, adjust U* was selected.

16-T: Terrain

1	Was complex terrain used in the modeling? If not, describe why below.	Yes☒	No☐
2	What was the source of the terrain data?		
	National Elevation Data (NED) 1/3 arc		

16-U: Modeling Files

Describe the modeling files:

	File name (or folder and file name)	Pollutant(s)	Purpose (ROI/SIA, cumulative, culpability analysis, other)
1	Intel ROI Model	NOx, CO, SO2, PM	ROI
	Intel CIA NO2 1hr Model	NO2	Cumulative
	Intel CIA NO2 Annual Model	NO2	Cumulative, Increment
	Intel CIA PM10 Model	PM10	Cumulative, Increment
	Intel CIA PM25 24Hr Model	PM2.5	Cumulative
	Intel CIA PM25 Annual Model	PM2.5	Cumulative

16-V: PSD New or Major Modification Applications

1	A new PSD major source or a major modification to an existing PSD major source requires additional analysis. Was preconstruction monitoring done (see 20.2.74.306 NMAC and PSD Preapplication Guidance on the AQB website)?	Yes☐	No☒
2	If not, did AQB approve an exemption from preconstruction monitoring?	Yes☐	No☒
3	Describe how preconstruction monitoring has been addressed or attach the approved preconstruction monitoring or monitoring exemption.		
	N/A		
4	Describe the additional impacts analysis required at 20.2.74.304 NMAC.		
	N/A		
5	If required, have ozone and secondary PM2.5 ambient impacts analyses been completed? If so describe below.	Yes☐	No☐
	N/A		

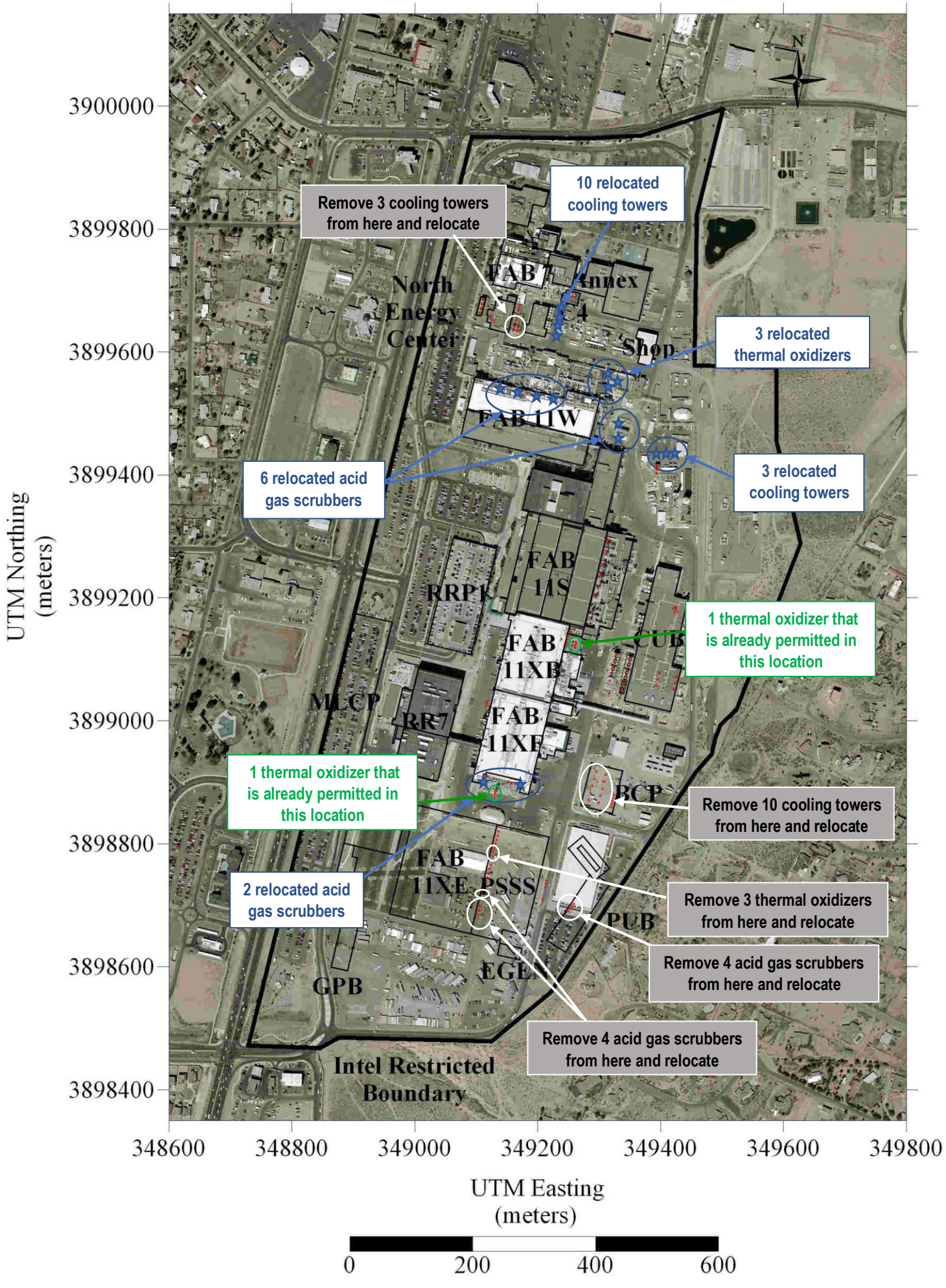
16-W: Modeling Results

1	If ambient standards are exceeded because of surrounding sources, a culpability analysis is required for the source to show that the contribution from this source is less than the significance levels for the specific pollutant. Was culpability analysis performed? If so describe below.	Yes☒	No☐
	For PM2.5 24-hour analysis the "MaxDCount" file was reviewed to show that the contribution from Intel was below the SILs at all receptors that exceeded the NAAQS and determine the highest concentration where Intel sources were significant.		
2	Identify the maximum concentrations from the modeling analysis. Rows may be modified, added and removed from the table below as necessary.		

Pollutant, Time Period and Standard	Modeled Facility Concentration (µg/m3)	Modeled Concentration with Surrounding Sources (µg/m3)	Secondary PM (µg/m3)	Background Concentration (µg/m3)	Cumulative Concentration (µg/m3)	Value of Standard (µg/m3)	Percent of Standard	Location		
								UTM E (m)	UTM N (m)	Elevation (ft)
NO2 1-Hr	114.0	N/A	N/A	68.5	182.5	188	97.1	349499.7	3899577.0	1598.15
NO2 Annual	21.4	N/A	N/A	20.2	41.6	99.66	41.7	349588.7	3899535.7	1593.16
NO2 Annual Increment	16.5	18.1	N/A	N/A	18.1	25	72.4	349274.2	3898638.3	1591.72
CO 1-Hr SIL	746	N/A	N/A	N/A	N/A	SIL - 2000	37.3	349588.7	3899535.7	1593.16
CO 8-Hr SIL	237	N/A	N/A	N/A	N/A	SIL - 500	47.4	349558.0	3899108.3	1584.55
SO2 1-Hr SIL	3.91	N/A	N/A	N/A	N/A	SIL – 7.8	50.1	349588.7	3899535.7	1593.16
PM10 24 -Hr NAAQS	5.0	70.3	N/A	74.0	144.3	150	96.2	351500.0	3901750.0	1578.78
PM10 24 Hr Increment		23.6	N/A	N/A	N/A	30	78.7	349248.1	3898598.7	1591.00
PM2.5 24-Hr	13.9	14.4	0.61	10.8	25.8	35	73.7	349248.1	3898598.7	1589.23
PM2.5 Annual	6.44	7.05	0.014	4.6	11.66	12	97.2	349445.7	3898916.0	1598.15

16-X: Summary/conclusions

1	A statement that modeling requirements have been satisfied and that the permit can be issued.
	No NAAQS or PSD Increment was exceeded and relocation of identified sources can be performed.


Remove 3 cooling towers from here and relocate
10 relocated cooling towers
3 relocated thermal oxidizers
6 relocated acid gas scrubbers
3 relocated cooling towers
1 thermal oxidizer that is already permitted in this location
1 thermal oxidizer that is already permitted in this location
2 relocated acid gas scrubbers
Remove 10 cooling towers from here and relocate
Remove 3 thermal oxidizers from here and relocate
Remove 4 acid gas scrubbers from here and relocate
Remove 4 acid gas scrubbers from here and relocate
North Energy Center
FAB 11W
FAB 11S
FAB 11XB
FAB 11XE
RRP1
RR7
MLCP
BCP
PUB
GPB
Intel Restricted Boundary
N
3900000
3899800
3899600
3899400
3899200
3899000
3898800
3898600
3898400
348600
348800
349000
349200
349400
349600
349800
UTM Northing (meters)
UTM Easting (meters)
0
200
400
600