

**Table 2-A: Regulated Emission Sources**

Unit and stack numbering must correspond throughout the application package. If applying for a NOI under 20.2.73 NMAC, equipment exemptions under 2.72.202 NMAC do not apply.

Unit Number <sup>1</sup>	Source Description	Manufacturer	Model #	Serial #	Maximum or Rated Capacity <sup>3</sup> (Specify Units)	Requested Permitted Capacity <sup>3</sup> (Specify Units)	Date of Manufacture or Reconstruction <sup>2</sup>	Controlled by Unit #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB) <sup>4</sup>	Replacing Unit No.
							Date of Installation /Construction <sup>2</sup>	Emissions vented to Stack #				
HOBB-1	Combustion Turbine	Mitsubishi Heavy Industries	M501F-F4	T-488	189 MW nominal	189 MW nominal	2001	SCR-1 CAT-1	20200201	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input checked="" type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		N/A
							September 2008	1				
HOBB-2	Combustion Turbine	Mitsubishi Heavy Industries	M501F-F4	T-487	189 MW nominal	189 MW nominal	2001	SCR-2 CAT-2	20200201	<input type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input checked="" type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		N/A
							September 2008	2				
DB-1	Duct Burner	Forney	Standard	913864	330 MMBtu/hr	330 MMBtu/hr	2007	SCR-1 CAT-1	10200601	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		N/A
							August 2008	1				
DB-2	Duct Burner	Forney	Standard	913865	330 MMBtu/hr	330 MMBtu/hr	2007	SCR-2 CAT-2	10200601	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		N/A
							August 2008	2				
AC-1	Auxiliary Cooling Tower	Baltimore Air Cooler	FXV3-364-100	U014653101	1,780 gpm	1,780 gpm	2002	N/A	38500101	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		N/A
							August 2008	AC-1				
AC-2	Auxiliary Cooling Tower	Baltimore Air Cooler	FXV3-364-100	U014653102	1,780 gpm	1,780 gpm	2002	N/A	38500101	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		N/A
							August 2008	AC-2				
AC-3	Auxiliary Cooling Tower	Baltimore Air Cooler	FXV3-364-100	U014653103	1,780 gpm	1,780 gpm	2002	N/A	38500101	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		N/A
							August 2008	AC-3				
IC-1	Inlet Chiller	Baltimore Aircoil	331132A	U014283404	15,448 gpm	15,448 gpm	2002	N/A	38500101	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		N/A
							August 2008	IC-1				
IC-2	Inlet Chiller	Baltimore Aircoil	331132A	U014283405	15,448 gpm	15,448 gpm	2002	N/A	38500101	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		N/A
							August 2008	IC-2				
IC-3	Inlet Chiller	Baltimore Aircoil	331132A	U014283406	15,448 gpm	15,448 gpm	2002	N/A	38500101	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		N/A
							August 2008	IC-3				
FH-1	Fuel Gas Heater	Rheos	2400	A07193433	2.4 MMBtu/hr	2.4 MMBtu/hr	2008	N/A	39990003	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		N/A
							August 2008	FH-1				
FH-2	Fuel Gas Heater	Rheos	2400	A07193435	2.4 MMBtu/hr	2.4 MMBtu/hr	2008	N/A	39990003	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		N/A
							August 2008	FH-2				
FH-3	Fuel Gas Heater	Rheos	2400	A07193434	2.4 MMBtu/hr	2.4 MMBtu/hr	2008	N/A	39990003	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		N/A
							August 2008	FH-3				
G-1	Standby Generator	Volvo Penta	D1641GEP	D16*021102* C3*A	565 kW (758 hp)	565 kW (758 hp)	2008	N/A	20100102	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		N/A
							August 2008	G-1				
FP-1	Diesel Fire Pump	Detroit Diesel	DDFP06FA-11V	6VF-300006	443 hp	443 hp	2001	N/A	20100102	<input checked="" type="checkbox"/> Existing (unchanged) <input type="checkbox"/> To be Removed <input type="checkbox"/> New/Additional <input type="checkbox"/> Replacement Unit <input type="checkbox"/> To Be Modified <input type="checkbox"/> To be Replaced		N/A
							September 2008	FP-1				

<sup>1</sup> Unit numbers must correspond to unit numbers in the previous permit unless a complete cross reference table of all units in both permits is provided

<sup>2</sup> Specify dates required to determine regulatory applicability

<sup>3</sup> To properly account for power conversion efficiencies, generator set rated capacity shall be reported as the rated capacity of the engine in horsepower, not the kilowatt capacity of the generator set

<sup>4</sup> "4SLB" means four stroke lean burn engine, "4SRB" means four stroke rich burn engine, "2SLB" means two stroke lean burn engine, "CI" means compression ignition, and "SI" means spark ignition

**Table 2-E: Requested Allowable Emissions**

Unit & stack numbering must be consistent throughout the application package. Fill all cells in this table with the emission numbers or a "-" symbol. A "--" symbol indicates that emissions of this pollutant are not expected. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or 1.41E<sup>-4</sup>).

Unit No.	NOx		CO		VOC		SOx		TSP <sup>1</sup>		PM10 <sup>1</sup>		PM2.5 <sup>1</sup>		H <sub>2</sub> S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
HOBB-1*	14.5	118.7	8.8	72.3	2.5	12.4	8.7	48.2	12.0	95.2	12.0	95.2	12.0	95.2				
HOBB-2*	14.5		8.8		2.5		8.7		12.0		12.0		12.0					
HOBB-1* + DB-1	18.1		11.0		2.9		10.7		17.8		17.8		17.8					
HOBB-2* + DB-2	18.1		11.0		2.9		10.7		17.8		17.8		17.8					
IC-1, IC-2, IC-3									0.70	2.1	0.35	1.1	0.001	0.004				
FH-1, FH-2, FH-3	0.39	1.7	0.24	1.0	0.04	0.16	0.04	0.18	0.05	0.22	0.05	0.22	0.05	0.22				
FP-1	7.4	0.37	1.4	0.1	0.25	0.01	0.01	0.0003	0.18	0.01	0.18	0.01	0.18	0.01				
G-1	6.5	1.6	0.86	0.21	0.20	0.05	0.01	0.002	0.12	0.03	0.12	0.03	0.12	0.03				
AC-1, AC-2, AC-3									0.08	0.35	0.04	0.18	0.0002	0.001				
<b>Totals</b>	<b>50.5</b>	<b>122.4</b>	<b>24.5</b>	<b>73.6</b>	<b>6.3</b>	<b>12.7</b>	<b>21.5</b>	<b>48.4</b>	<b>36.6</b>	<b>97.9</b>	<b>36.3</b>	<b>96.6</b>	<b>35.9</b>	<b>95.4</b>				

<sup>1</sup> **Condensable Particulate Matter:** Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for TSP unless TSP is set equal to PM10 and PM2.5.

\* HOBB-1 and HOBB-2 will either run with the DB or without DB.

**Table 2-F: Additional Emissions during Startup, Shutdown, and Routine Maintenance (SSM)**

□ This table is intentionally left blank since all emissions at this facility due to routine or predictable startup, shutdown, or scheduled maintenance are no higher than those listed in Table 2-E and a malfunction emission limit is not already permitted or requested. If you are required to report GHG emissions as described in Section 6a, include any GHG emissions during Startup, Shutdown, and/or Scheduled Maintenance (SSM) in Table 2-P. Provide an

All applications for facilities that have emissions during routine or predictable startup, shutdown or scheduled maintenance (SSM)<sup>1</sup>, including NOI applications, must include in this table the Maximum Emissions during routine or predictable startup, shutdown and scheduled maintenance (20.2.7 NMAC, 20.2.72.203.A.3 NMAC, 20.2.73.200.D.2 NMAC). In Section 6 and 6a, provide emissions calculations for all SSM emissions reported in this table. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications ([https://www.env.nm.gov/aqb/permit/aqb\\_pol.html](https://www.env.nm.gov/aqb/permit/aqb_pol.html)) for more detailed instructions. Numbers shall be expressed to at least 2 decimal points (e.g. 0.41, 1.41, or 1.41E-4).

Unit No.	NOx		CO		VOC		SOx		TSP <sup>2</sup>		PM10 <sup>2</sup>		PM2.5 <sup>2</sup>		H <sub>2</sub> S		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
HOBB-1 + DB-1	193.2	35.7	2,060.0	106.4	591.0	42.6	-	2.51	-	4.2	-	4.2	-	4.2				
HOBB-2 + DB-2	193.2	35.7	2,060.0	106.4	591.0	42.6	-	2.51	-	4.2	-	4.2	-	4.2				
<b>Totals</b>	<b>386.3</b>	<b>71</b>	<b>4,120.0</b>	<b>212.8</b>	<b>1,182.0</b>	<b>85.2</b>	<b>-</b>	<b>5.0</b>	<b>-</b>	<b>8.3</b>	<b>-</b>	<b>8.3</b>	<b>-</b>	<b>8.3</b>				

<sup>1</sup> For instance, if the short term steady-state Table 2-E emissions are 5 lb/hr and the SSM rate is 12 lb/hr, enter 7 lb/hr in this table. If the annual steady-state Table 2-E emissions are 21.9 TPY, and the number of scheduled SSM events result in annual emission of 31.9 TPY, enter 10.0 TPY in the table below.

<sup>2</sup> **Condensable Particulate Matter:** Include condensable particulate matter emissions for PM10 and PM2.5 if the source is a combustion source. Do not include condensable particulate matter for TSP unless TSP is set equal to PM10 and PM2.5.

**Table 2-N: CEM Equipment**

Enter Continuous Emissions Measurement (CEM) Data in this table. If CEM data will be used as part of a federally enforceable permit condition, or used to satisfy the requirements of a state or federal regulation, include a copy of the CEM's manufacturer specification sheet in the Information Used to Determine Emissions attachment. Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary.

Stack No.	Pollutant(s)	Manufacturer	Model No.	Serial No.	Sample Frequency	Averaging Time	Range	Sensitivity	Accuracy
HOBB-1 and HOBB-1 + DB1	NOx/O <sub>2</sub>	Teledyne Monitor Labs	TML41-O2	NO169	15 min	1 hour	NOx: min 0 - 10ppm max 0 - 100ppm  CO: 0 - 25%	0 @ < 20ppb < 0.2% @ > 20ppm	0.5% of reading
HOBB-1 and HOBB-1 + DB1	CO - high	Teledyne Monitor Labs	TML30	CO238	15 min	1 hour	0 - 3,200ppm	0 @ < 20ppb < 0.5% @ > 20ppm	0.5% of reading
HOBB-1 and HOBB-1 + DB1	CO - low	Teledyne Monitor Labs	TML30	CO061	15 min	1 hour	0 - 10 ppm	0 @ < 20ppb < 0.5% @ > 20ppm	0.5% of reading
HOBB-2 and HOBB-2 + DB2	NOx/O <sub>2</sub>	Teledyne Monitor Labs	TML41-O2	NO268	15 min	1 hour	NOx: min 0 - 10ppm max 0 - 100ppm  CO: 0 - 25%	0 @ < 20ppb < 0.2% @ > 20ppm	0.5% of reading
HOBB-2 and HOBB-2 + DB2	CO - high	Thermo	48iQ	1180930111	15 min	1 hour	0 - 3,200ppm	0 @ < 20ppb < 0.5% @ > 20ppm	0.5% of reading
HOBB-2 and HOBB-2 + DB2	CO - low	Thermo	48iQ	1180930111	15 min	1 hour	0 - 10ppm	0 @ < 20ppb < 0.5% @ > 20ppm	0.5% of reading

# Section 3

## Application Summary

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The **Application Summary** shall include a brief description of the facility and its process, the type of permit application, the applicable regulation (i.e. 20.2.72.200.A.X, or 20.2.73 NMAC) under which the application is being submitted, and any air quality permit numbers associated with this site. If this facility is to be collocated with another facility, provide details of the other facility including permit number(s). In case of a revision or modification to a facility, provide the lowest level regulatory citation (i.e. 20.2.72.219.B.1.d NMAC) under which the revision or modification is being requested. Also describe the proposed changes from the original permit, how the proposed modification will affect the facility's operations and emissions, de-bottlenecking impacts, and changes to the facility's major/minor status (both PSD & Title V).

**Routine or predictable emissions during Startup, Shutdown, and Maintenance (SSM):** Provide an overview of how SSM emissions are accounted for in this application. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications ([http://www.env.nm.gov/aqb/permit/app\\_form.html](http://www.env.nm.gov/aqb/permit/app_form.html)) for more detailed instructions on SSM emissions.

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### INTRODUCTION

This application proposes a major modification to NSR Permit PSD 3449-M4 for Lea Power Partners, LLC (LPP) Hobbs Generating Station (HGS).

HGS is a natural gas fueled, nominal 604 MW net output power plant with two advanced firing temperature, Mitsubishi 501F combustion turbine generators (CTGs), each provided with its own heat recovery steam generator (HRSG) including duct burners, a single condensing, reheat steam turbine generator (STG), and an air cooled condenser serving the STG. The plant generates electricity for sale to Southwestern Public Service Company, its successors or assigns. The facility is located approximately 8 miles West of Hobbs, New Mexico in Lea County.

The site holds both a New Source Review (NSR)/Prevention of Significant Deterioration (PSD) and a Federal Title V Operating permit in the State of New Mexico: PSD3449-M4 and P244-R1/P244-AR2. Emissions for each unit are controlled using carbon monoxide (CO) catalyst and Selective Catalytic Reduction (SCR) with injection of 28% aqueous ammonia.

Mitsubishi Hitachi Power System Americas (MHPSA) proposes to upgrade the two combustion turbines to the F4+ compressor upgrade. The upgrade consists of replacing the Inlet Guide Vanes (IGVs) and first six stages of the compressor, resulting in increased air flow. The expected impact of the upgrade on performance is an increase of 5% in output, no change in heat rate, and a 6.7% increase in turbine exhaust flow.

### BACKGROUND

The subject units are three-pressure level reheat HRSG's originally designed for NEPCO in 2000 and then moved to the Hobbs site in 2007. The site consists of two triangular pitch, dual train, outdoor HRSGs. Combustion turbines are Mitsubishi 501F machines fueled by natural gas. The HRSG's supply steam to a single steam turbine and operate in floating pressure mode based on steam turbine conditions.

Each HRSG is triple pressure level with reheat, natural circulation, and equipped with auxiliary heat input via a Forney Corporation duct burner. The duct burner system is located between the secondary and primary stages of superheater and reheater heat transfer sections. The HRSG has been designed for duct firing with gas turbine near full load operation. The heat transfer sections are composed of extended surface, triangular pitched, finned tubes.

**PROPOSED PROJECT REVIEW**

The proposed project at LPP allows for an upgrade to both combustion turbine generators (CTGs), which is expected to increase power output by approximately 5% and increase the turbine flow rate by 6.7%. This change is expected to result in an increase in fuel consumption, exhaust flow rate, and temperature. The F4+ upgrade project is a completely stand-alone project, not tied in any way to previous projects that required a permit modification, including the permit modifications dated 9-23-2011 and 9-5-2014. It is our understanding that this compressor upgrade package has only been made available for commercial use by MHPSA since 2017.

Due to the increased exhaust flow rate, short term (lb/hr) and/or long term (tpy) emission rates for oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), volatile organic compounds (VOC), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), sulfuric acid mist (H<sub>2</sub>SO<sub>4</sub> mist), and carbon dioxide equivalent (CO<sub>2e</sub>) will increase. However, a review of anticipated emission rate changes shows that the currently permitted short term emission rates for NO<sub>2</sub> and CO will not have to be changed or increased. Stack exhaust NO<sub>x</sub> emissions will continue to be controlled to 2 parts per million volume dry basis corrected to 15 percent oxygen (ppmvdc) on a 24-hour average basis, using selective catalytic reduction (SCR) with aqueous ammonia (NH<sub>3</sub>). Stack exhaust CO and VOC emissions will continue to be controlled to 2 ppmvdc on a 1-hour average basis and to 1 ppmvdc on a 24-hour average basis, respectively, by means of oxidation catalyst. A preliminary evaluation of the existing CO catalyst showed that the condition of the existing CO catalyst is meeting the flow cell velocities and available areas for the existing GT performance, but the new performance following the GT compressor upgrades exceeds the CO catalyst capability to reduce CO to 2 ppmvdc. Therefore, the CO oxidation catalyst will be replaced during the compressor upgrade to assure that the 2 ppmvdc on a 1hour average basis and 1 ppmvdc on a 24-hour average basis are met. SO<sub>2</sub> emissions will continue to be controlled using pipeline quality natural gas.

In addition to the proposed compressor upgrade, LPP proposes to increase the annual operating hours from the currently permitted 8,400 hours per year to 8,760 hours per year. Since the PSD permit is being revised and the compressor upgrade project triggers a PSD review for TSP/PM<sub>10</sub>/PM<sub>2.5</sub> and CO<sub>2e</sub> anyway, increasing the operating hours to 8,760 hours per year would allow for operational flexibility without having to shut down the plant due to operational time restrictions. LPP will continue to operate under the Best Available Control Technologies (BACT), as discussed above and currently authorized.

Hobbs, NM is located in Lea County, an area that is classified by the US EPA as in attainment with the National Ambient Air Quality Standards (NAAQS) for all regulated pollutants. The facility is included as one of the 28-named sources under PSD rules and is a major source as defined by the PSD rules under 40 CFR §52.21. The estimated annual emission rate increases and PSD applicability analysis for the proposed compressor upgrade project are summarized in Table 1 below:

**Table 1: PSD Applicability Analysis Both Units Combined**

<b>Pollutant</b>	<b>Past Actuals (tpy)</b>	<b>Proposed Project Annual (tpy)</b>	<b>Proposed Project Increase (tpy)</b>	<b>PSD SER (tpy)</b>	<b>PSD Review Required?</b>
NO <sub>x</sub>	89.9	124.9	35.0	40	No
CO	9.5	76.0	66.5	100	No
VOC	3.9	13.1	9.2	40	No
SO <sub>2</sub>	17.2	50.7	33.5	40	No
H <sub>2</sub> SO <sub>4</sub> (mist)	2.6	7.77	5.1	7	No
TSP/PM <sub>10</sub>	48.7	95.2	46.5	15	Yes
PM <sub>2.5</sub>	48.7	95.2	46.5	10	Yes
CO <sub>2e</sub>	1,604,421	1,985,998	381,577	75,000	Yes

The above PSD applicability does not include Startup, shutdown, and maintenance (SSM) emissions because LPP is not proposing any change (increase or decrease) in permitted NO<sub>x</sub>, CO, VOC, or SO<sub>2</sub> SSM emission

rates, or as provided in the last application. These permitted SMM emission rates were estimated in the past including enough buffer for some operational flexibility.

The workbook tab "Table 106A GT Summary" has a SSM summary table at the end of the tab. This table clearly distinguishes between operating and SSM emissions. This turbine upgrade project does not increase the permitted NO<sub>x</sub>, CO, VOC, or SO<sub>2</sub> SSM limits and LPP wants to keep the SSM emission rates as permitted and previously presented (the SSM emission calculations are also included in the workbook). Since the units can reasonably accommodate all SSM emissions before and after the modification, the past actuals to future actuals for SSM equates to a zero increase. Given this clarification, the PSD applicability analysis was performed without NO<sub>x</sub>, CO, VOC, or SO<sub>2</sub> SSM emissions.

Since no emission rate decreases occurred during the contemporaneous period, the net emission rate increases are based on the proposed project emission rate increases. The PSD Significant Emission Rate (SER) is exceeded for TSP/PM<sub>10</sub>/PM<sub>2.5</sub> and CO<sub>2e</sub>. Therefore, this modification constitutes a major modification of the existing major source and a PSD review is required for the pollutants with significant emissions per 40 CFR §52.21(b)(23)(i) and New Mexico Administrative Code (NMAC) 20.2.74.302. The main reason why a PSD review for TSP/PM<sub>10</sub>/PM<sub>2.5</sub> and CO<sub>2e</sub> is being triggered, is because the actual emissions from the past five (5) years are much lower than the permitted emission rates, thus the delta between the post-project allowable and the pre-project actual emission rates are greater than the SER.

# Section 12

## Section 12.A

### PSD Applicability Determination for All Sources

(Submitting under 20.2.72, 20.2.74 NMAC)

**A PSD applicability determination for all sources.** For sources applying for a significant permit revision, apply the applicable requirements of 20.2.74.AG and 20.2.74.200 NMAC and to determine whether this facility is a major or minor PSD source, and whether this modification is a major or a minor PSD modification. It may be helpful to refer to the procedures for Determining the Net Emissions Change at a Source as specified by Table A-5 (Page A.45) of the EPA New Source Review Workshop Manual to determine if the revision is subject to PSD review.

A. This facility is:

- a minor PSD source before and after this modification (if so, delete C and D below).
- a major PSD source before this modification. This modification will make this a PSD minor source.
- an existing PSD Major Source that has never had a major modification requiring a BACT analysis.
- an existing PSD Major Source that has had a major modification requiring a BACT analysis
- a new PSD Major Source after this modification.

B. This facility is one of the listed 20.2.74.501 Table I – PSD Source Categories. The “project” emissions for this modification are significant as proposed project increases exceed the PSD Significant Emission Rate (SER) for TSP/PM<sub>10</sub>/PM<sub>2.5</sub> and GHG (CO<sub>2e</sub>) (refer to Table 12-1 below). The “project” emissions listed below do only result from changes described in this permit application, thus no emissions from other revisions or modifications, past or future to this facility. Also, specifically discuss whether this project results in “de-bottlenecking”, or other associated emissions resulting in higher emissions. The project emissions (before netting) for this project are as follows [see Table 2 in 20.2.74.502 NMAC for a complete list of significance levels]:

- a. NOx: 35.0 TPY
- b. CO: 66.5 TPY
- c. VOC: 9.2 TPY
- d. SOx: 33.5 TPY
- e. TSP (PM): 46.5 TPY
- f. PM<sub>10</sub>: 46.5 TPY
- g. PM<sub>2.5</sub>: 46.5 TPY
- h. Fluorides: N/A
- i. Lead: N/A
- j. Sulfur compounds (listed in Table 2): N/A
- k. GHG: 381,577 TPY CO<sub>2e</sub>

C. Netting - Applicant is submitting a PSD Major Modification and chooses not to net.

D. BACT is required, as this application is a major modification. List pollutants subject to BACT review and provide a full top down BACT determination. (See Table 12-1 below)

E. If this is an existing PSD major source, or any facility with emissions greater than 250 TPY (or 100 TPY for 20.2.74.501 Table 1 – PSD Source Categories), determine whether any permit modifications are related, or could be considered a single project with this action, and provide an explanation for your determination whether a PSD modification is triggered.



Hobbs is located in Lea County, an area that is classified by the U.S. EPA as attainment with the NAAQS for all regulated pollutants. The facility is included as one of the 28-named sources under PSD rules and is a major source as defined by the PSD rules (40 CFR §52.21). The estimated annual emission rate increases for the facility proposed upgrade are summarized in Table 12-1.

**Table 12-1: PSD Applicability Analysis Both Units Combined**

<b>Pollutant</b>	<b>Past Actuals (tpy)</b>	<b>Proposed Project Annual w/o SSM (tpy)</b>	<b>Proposed Project Increase (tpy)</b>	<b>PSD SER (tpy)</b>	<b>PSD Review Required?</b>
NO <sub>x</sub>	89.9	124.9	35.0	40	No
CO	9.5	76.0	66.5	100	No
VOC	3.9	13.1	9.2	40	No
SO <sub>2</sub>	17.2	50.7	33.5	40	No
H <sub>2</sub> SO <sub>4</sub> (mist)	2.6	7.77	5.1	7	No
TSP/PM <sub>10</sub>	48.7	95.2	46.5	15	Yes
PM <sub>2.5</sub>	48.7	95.2	46.5	10	Yes
CO <sub>2e</sub>	1,604,421	1,985,998	381,577	75,000	Yes

Since no emission rate decreases occurred during the contemporaneous period, the net emission rate increases are based on the proposed project emission rate increases, which exceed the PSD Significant Emission Rate (SER) for TSP, PM<sub>10</sub>, PM<sub>2.5</sub> and CO<sub>2e</sub>. Consequently, the proposed modification constitutes a major modification of an existing major source and PSD review is required for each regulated pollutant with significant emissions, as defined in 40 CFR 52 (§52.21(b)(23)).