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[1]	Source Description	Manufacturer	Model #	Serial #	Maximum or Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture or Reconstruction[2] / Date of Installation /Construction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
Silo 1	Cement product storage tank	Schlumberger	Custom Fabrication	N.A.	1,800	ft^3	New D/C, 2017 1975	DC 1 DC 1		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ■ To Be Modified ☐ To be Replaced	N/A	N/A
Silo 2	Cement product storage tank	Schlumberger	Custom Fabrication	N.A.	2,300	ft^3	New D/C, 2017 1975	DC 2 DC 2		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ■ To Be Modified ☐ To be Replaced	N/A	N/A
Silo 3	Cement product storage tank	Schlumberger	Custom Fabrication	N.A.	2,300	ft^3	New D/C, 2017 1975	DC 3 DC 3		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ■ To Be Modified ☐ To be Replaced	N/A	N/A
Silo 4	Cement product storage tank	Schlumberger	Custom Fabrication	N.A.	2,300	ft^3	New D/C, 2017 1975	DC 4 DC 4		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ■ To Be Modified ☐ To be Replaced	N/A	N/A
Silo 5	Cement product storage tank	Schlumberger	Custom Fabrication	N.A.	1,700	ft^3	New D/C, 2017 1975	DC 5 DC 5		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ■ To Be Modified ☐ To be Replaced	N/A	N/A
Silo 6	Cement product storage tank	Schlumberger	Custom Fabrication	N.A.	2,300	ft^3	New D/C, 2017 1975	DC 6 DC 6		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ■ To Be Modified ☐ To be Replaced	N/A	N/A
Silo 7	Cement product storage tank	Schlumberger	Custom Fabrication	N.A.	1,700	ft^3	New D/C, 2017 1975	DC 7 DC 7		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ■ To Be Modified ☐ To be Replaced	N/A	N/A
Silo 8	Cement product storage tank	Schlumberger	Custom Fabrication	N.A.	1,700	ft^3	New D/C, 2017 1975	DC 8 DC 8		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ■ To Be Modified ☐ To be Replaced	N/A	N/A
Silo 9	Cement product storage tank	Schlumberger	Custom Fabrication	N.A.	1,700	ft^3	New D/C, 2017 1975	DC 9 DC 9		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ■ To Be Modified ☐ To be Replaced	N/A	N/A
Silo 10	Cement product storage tank	Schlumberger	Custom Fabrication	N.A.	1,700	ft^3	New D/C, 2017 1975	DC 10 DC 10		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ■ To Be Modified ☐ To be Replaced	N/A	N/A
Silo 12	Cement product storage tank	Schlumberger	Custom Fabrication	N.A.	1,700	ft^3	New D/C, 2017 1975	DC 12 DC 12		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ■ To Be Modified ☐ To be Replaced	N/A	N/A
										☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		

[1] 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.

[2] Specify dates required to determine regulatory applicability.

[3] 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.

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[1]	Source Description	Manufacturer	Model #	Serial #	Maximum or Rated Capacity[3] (Specify Units)	Requested Permitted Capacity[3] (Specify Units)	Date of Manufacture or Reconstruction[2] / Date of Installation /Construction[2]	Controlled by Unit # / Emissions vented to Stack #	Source Classification Code (SCC)	For Each Piece of Equipment, Check One	RICE Ignition Type (CI, SI, 4SLB, 4SRB, 2SLB)[4]	Replacing Unit No.
TK-13	Pre-Blend Tank	Schlumberger	Custom Fabrication	N.A.	1,200	ft^3	1975	DC 13 / DC 13		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ■ To Be Modified ☐ To be Replaced	N/A	N/A
TK-14	Vent Tank	Schlumberger	Custom Fabrication	N.A.	1,200	ft^3	1975	DC 13 / DC 13		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ■ To Be Modified ☐ To be Replaced	N/A	N/A
TK-15	Weigh Batcher Tank	Schlumberger	Custom Fabrication	N.A.	650	ft^3	Mar 2017	DC 15 / DC 15		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ■ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	Existing TK-15
TK-16	Double Stack Tank	Schlumberger	Custom Fabrication	N.A.	(2) 250	ft^3	Mar 2017	DC 13 / DC 13		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ■ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	Existing TK-16
TK-17	Holding Tank	Schlumberger	Custom Fabrication	N.A.	1800	ft^3	Mar 2017	DC 13 / DC 13		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ■ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	Existing TK-17
HP-1	Additive Hopper	Schlumberger	Custom Fabrication	N.A.	N.A.	N.A.	Mar 2017	N.A. / Indoors		☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ■ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	Existing HP-1
Sand-1	Sand Storage Silo	Schlumberger	Custom Fabrication	N.A.	3,350	ft^3	1975	DC S1 / DC S1		■ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
Sand-2	Sand Storage Silo	Schlumberger	Custom Fabrication	N.A.	3,350	ft^3	1975			☐ Existing (unchanged) ■ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
Sand-3	Sand Storage Silo	Schlumberger	Custom Fabrication	N.A.	3,350	ft^3	1975			☐ Existing (unchanged) ■ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
Sand-4	Sand Storage Silo	Schlumberger	Custom Fabrication	N.A.	3,350	ft^3	1975			■ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced	N/A	N/A
Sand-5	Sand Loading System	Schlumberger	Custom Fabrication	N.A.	25	tph	1975			☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
Acid 1	Bulk Acid Blending/Loading System	Schlumberger	Acid Tanks	N.A.	(3) 12,000	gal	1975			☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
Acid 2		Schlumberger	Mix Tank	N.A.	(1) 8,500	gal	1975			☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
Gel 1	Gel Tank	Schlumberger	Pre-Mixed Gel Storage	N.A.	(1) 7,350	gal	2012			☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		
										☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced		

[3] 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.

Table 2-B: Insignificant Activities[1] (20.2.70 NMAC) OR Exempted Equipment (20.2.72 NMAC)

All 20.2.70 NMAC (Title V) applications must list all Insignificant Activities in this table. All 20.2.72 NMAC applications must list Exempted Equipment in this table. If equipment listed on this table is exempt under 20.2.72.202.B.5, include emissions calculations and emissions totals for 202.B.5 "similar functions" units, operations, and activities in Section 6, Calculations. Equipment and activities exempted under 20.2.72.202 NMAC may not necessarily be Insignificant under 20.2.70 NMAC (and vice versa). Unit & stack numbering must be consistent throughout the application package. Per Exemptions Policy 02-012.00 (see http://www.nmenv.state.nm.us/aqb/permit/aqb_pol.html), 20.2.72.202.B NMAC Exemptions do not apply, but 20.2.72.202.A NMAC exemptions do apply to NOI facilities under 20.2.73 NMAC. List 20.2.72.301.D.4 NMAC Auxiliary Equipment for Streamline applications in Table 2-A. The List of Insignificant Activities (for TV) can be found online at http://www.nmenv.state.nm.us/aqb/forms/InsignificantListTitleV.pdf . TV sources may elect to enter both TV Insignificant Activities and Part 72 Exemptions on this form.

Unit Number	Source Description	Manufacturer	Model No.	Max Capacity	List Specific 20.2.72.202 NMAC Exemption (e.g. 20.2.72.202.B.5)	Date of Manufacture /Reconstruction[2]	For Each Piece of Equipment, Check Onc
			Serial No.	Capacity Units	Insignificant Activity citation (e.g. IA List Item #1.a)	Date of Installation /Construction[2]	
HTR-1 to HTR-10	Truck Shop, Head Dock Space Heaters, Gas Fired, 10 units	Dayton	3E143E	90,000	202.2.72.202.B.1.a	Prior to 2000	■ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			Not Avail.	Btu/hr		Prior to 2000	
HTR-11 to HTR-15	Pump Shop Space Heaters - Gas Fired, 5 units	Space Ray	DK160-N5B	160,000	202.2.72.202.B.1.a	Prior to 2000	■ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			Not Avail.	Btu/hr		Prior to 2000	
HTR-16	Liquid Whse Space Heater - Gas Fired	Space Ray	LTU S130NS2	130,000	202.2.72.202.B.1.a	Prior to 2000	■ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			Not Avail.	Btu/hr		Prior to 2000	
HTR-17	Bulk Plant Space Heater - Gas Fired	Sun Star	SPSU100NS	100,000	202.2.72.202.B.1.a	Prior to 2000	■ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			Not Avail.	Btu/hr		Prior to 2000	
HTR-18 to HTR-21	Lab, Break Rm, ET Space Heaters - Gas Fired, 4 units	Comfort Maker	GNE 100F20G1	100,000	202.2.72.202.B.1.a	Prior to 2000	■ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			Not Avail.	Btu/hr		Prior to 2000	
HTR-22	HSE Office Space Heater - Gas Fired	Comfort Maker	E8MPN07561231	75,000	202.2.72.202.B.1.a	Prior to 2000	■ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			Not Avail.	Btu/hr		Prior to 2000	
HTR-23	Main Office Space Heater - Gas Fired	Comfort Maker	G8MSN90211A2	90,000	202.2.72.202.B.1.a	Prior to 2000	■ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			Not Avail.	Btu/hr		Prior to 2000	
Road	In-Plant Truck Traffic	Not Applicable	Not Applicable	24	202.2.72.B.5	Prior to 2000	☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
			Not Applicable	Trucks/day		Prior to 2000	
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced
							☐ Existing (unchanged) ☐ To be Removed ☐ New/Additional ☐ Replacement Unit ☐ To Be Modified ☐ To be Replaced

[1] Insignificant activities exempted due to size or production rate are defined in 20.2.70.300.D.6, 20.2.70.7.Q NMAC, and the NMED/AQB List of Insignificant Activities, dated September 15, 2008. Emissions from these insignificant activities do not need to be reported, unless specifically requested.

[2] Specify date(s) required to determine regulatory applicability.

Table 2-C: Emissions Control Equipment

Unit and stack numbering must correspond throughout the application package. Only list control equipment for TAPs if the TAP's maximum uncontrolled emissions rate is over its respective threshold as listed in 20.2.72 NMAC, Subpart V, Tables A and B.

Control Equipment Unit No.	Control Equipment Description	Date Installed	Controlled Pollutant(s)	Controlling Emissions for Unit Number(s)[1]	Efficiency (% Control by Weight)	Method used to Estimate Efficiency
DC 1	Silo Dust Collector, C&W Mfg. Co., Model LPR-8-S	2017	TSP, PM_{10}, $PM_{2.5}$	Silo 1	99.93%	Vendor/AP-42
DC 2	Silo Dust Collector, C&W Mfg. Co., Model LPR-8-S	2017	TSP, PM_{10}, $PM_{2.5}$	Silo 2	99.93%	Vendor/AP-42
DC 3	Silo Dust Collector, C&W Mfg. Co., Model LPR-8-S	2017	TSP, PM_{10}, $PM_{2.5}$	Silo 3	99.93%	Vendor/AP-42
DC 4	Silo Dust Collector, C&W Mfg. Co., Model LPR-8-S	2017	TSP, PM_{10}, $PM_{2.5}$	Silo 4	99.93%	Vendor/AP-42
DC 5	Silo Dust Collector, C&W Mfg. Co., Model LPR-8-S	2017	TSP, PM_{10}, $PM_{2.5}$	Silo 5	99.93%	Vendor/AP-42
DC 6	Silo Dust Collector, C&W Mfg. Co., Model LPR-8-S	2017	TSP, PM_{10}, $PM_{2.5}$	Silo 6	99.93%	Vendor/AP-42
DC 7	Silo Dust Collector, C&W Mfg. Co., Model LPR-8-S	2017	TSP, PM_{10}, $PM_{2.5}$	Silo 7	99.93%	Vendor/AP-42
DC 8	Silo Dust Collector, C&W Mfg. Co., Model LPR-8-S	2017	TSP, PM_{10}, $PM_{2.5}$	Silo 8	99.93%	Vendor/AP-42
DC 9	Silo Dust Collector, C&W Mfg. Co., Model LPR-8-S	2017	TSP, PM_{10}, $PM_{2.5}$	Silo 9	99.93%	Vendor/AP-42
DC 10	Silo Dust Collector, C&W Mfg. Co., Model LPR-8-S	2017	TSP, PM_{10}, $PM_{2.5}$	Silo 10	99.93%	Vendor/AP-42
DC 12	Silo Dust Collector, C&W Mfg. Co., Model LPR-8-S	2017	TSP, PM_{10}, $PM_{2.5}$	Silo 12	99.93%	Vendor/AP-42
DC 13	Cylcone Filter Dust Collector, M-Plex, Model CF-600	2017	TSP, PM_{10}, $PM_{2.5}$	TK 13, TK 14, TK 16, TK 17	99.93%	Vendor/AP-42
DC 15	Cylcone Filter Dust Collector, M-Plex, Model CF-600	2017	TSP, PM_{10}, $PM_{2.5}$	TK 15	99.93%	Vendor/AP-42
DC S1	Cylcone Filter Dust Collector, M-Plex, Model CF-600	2012	TSP, PM_{10}, $PM_{2.5}$	Sand Plant Silo	99.93%	Vendor/AP-42

[1] List each control device on a separate line. For each control device, list all emission units controlled by the control device.

Table 2-D: Maximum Emissions (under normal operating conditions)

☐ **This Table was intentionally left blank because it would be identical to Table 2-E.**

Maximum Emissions are the emissions at maximum capacity and prior to (in the absence of) pollution control, emission-reducing process equipment, or any other emission reduction. Calculate the hourly emissions using the worst case hourly emissions for each pollutant. For each pollutant, calculate the annual emissions as if the facility were operating at maximum plant capacity without pollution controls for 8760 hours per year, unless otherwise approved by the Department. List Hazardous Air Pollutants (HAP) & Toxic Air Pollutants (TAPs) in Table 2-I. 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 with a minimum of two significant figures[1]. If there are any significant figures to the left of a decimal point, there shall be no more than one significant figure to the right of the decimal point.

Unit No.	NO_X		CO		VOC		SO_X		TSP[2]		PM_{10}[2]		$PM_{2.5}$[2]		H_2S		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
1- Bulk Cement Plant (See Note 1)	--	--	--	--	--	--	--	--	503.7	642.4	324.3	413.6	324.3	413.6	--	--	--	--
2 - Sand Plant	--	--	--	--	--	--	--	--	0.18	0.79	0.085	0.37	0.034	0.15	--	--	--	--
4- Gel Tank	--	--	--	--	Negl.	Negl.	--	--	--	--	--	--	--	--	--	--	--	--
DC 1	--	--	--	--	--	--	--	--	36.5	36.5	23.5	23.5	23.5	23.5				
DC 2	--	--	--	--	--	--	--	--	36.5	36.5	23.5	23.5	23.5	23.5				
DC 3	--	--	--	--	--	--	--	--	36.5	36.5	23.5	23.5	23.5	23.5				
DC 4	--	--	--	--	--	--	--	--	36.5	36.5	23.5	23.5	23.5	23.5				
DC 5	--	--	--	--	--	--	--	--	36.5	36.5	23.5	23.5	23.5	23.5				
DC 6	--	--	--	--	--	--	--	--	36.5	36.5	23.5	23.5	23.5	23.5				
DC 7	--	--	--	--	--	--	--	--	36.5	36.5	23.5	23.5	23.5	23.5				
DC 8	--	--	--	--	--	--	--	--	36.5	36.5	23.5	23.5	23.5	23.5				
DC 9	--	--	--	--	--	--	--	--	36.5	36.5	23.5	23.5	23.5	23.5				
DC 10	--	--	--	--	--	--	--	--	36.5	36.5	23.5	23.5	23.5	23.5				
DC 12	--	--	--	--	--	--	--	--	36.5	36.5	23.5	23.5	23.5	23.5				
DC 13	--	--	--	--	--	--	--	--	36.5	80.3	23.5	23.5	23.5	23.5				
DC 15	--	--	--	--	--	--	--	--	36.5	80.3	23.5	23.5	23.5	23.5				
DC-S1	--	--	--	--	--	--	--	--	0.18	0.079	0.085	0.37	0.034	0.150				
Totals									474.68	562.18	305.59	305.87	305.53	305.65				

[1] **Significant Figures Examples:** One significant figure – 0.03, 3, 0.3. Two significant figures – 0.34, 34, 3400, 3.4

[2] **Condensables:** Include condensable particulate matter emissions in particulate matter calculations.

Note 1 - The emissions for Bulk Cement Plant storage tanks (Silos 1 through Silo 12, TK 13 to TK 17) assume equal throughput on an annual average basis for the group of tanks. Individual silos will operate intermittently and throughput will vary, however, the throughput for the Cement Plant on an annual period is a reasonable basis for emission tracking.

"Maximum Emissions" can only be evaluated for the Bulk Plant in total (line 1 of this form). The maximum throughput can deviate from the calculation basis. Because actual throughput will deviate from the calculation basis of equal throughput for each tank, the individual tank emissions will vary.

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 at least 2 decimal points (e.g. 0.41, 1.41, or 1.41E-4).

Unit No.	NO_X		CO		VOC		SO_X		TSP^2		$PM_{10}{}^2$		$PM_{2.5}{}^2$		H_2S		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
1- Bulk Cement Plant (See Note 1)	--	--	--	--	--	--	--	--	<1.0	<1.0	<0.50	<0.50	<0.50	<0.50	--	--	--	--
2 - Sand Plant	--	--	--	--	--	--	--	--	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--
4- Gel Tank	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DC 1	--	--	--	--	--	--	--	--	0.026	0.026	0.016	0.016	0.016	0.016				
DC 2	--	--	--	--	--	--	--	--	0.026	0.026	0.026	0.016	0.016	0.016				
DC 3	--	--	--	--	--	--	--	--	0.026	0.026	0.016	0.016	0.016	0.016				
DC 4	--	--	--	--	--	--	--	--	0.026	0.026	0.026	0.016	0.016	0.016				
DC 5	--	--	--	--	--	--	--	--	0.026	0.026	0.016	0.016	0.016	0.016				
DC 6	--	--	--	--	--	--	--	--	0.026	0.026	0.026	0.016	0.016	0.016				
DC 7	--	--	--	--	--	--	--	--	0.026	0.026	0.016	0.016	0.016	0.016				
DC 8	--	--	--	--	--	--	--	--	0.026	0.026	0.026	0.016	0.016	0.016				
DC 9	--	--	--	--	--	--	--	--	0.026	0.026	0.016	0.016	0.016	0.016				
DC 10	--	--	--	--	--	--	--	--	0.026	0.026	0.026	0.016	0.016	0.016				
DC 12	--	--	--	--	--	--	--	--	0.026	0.026	0.016	0.016	0.016	0.016				
DC 13	--	--	--	--	--	--	--	--	0.037	0.08	0.024	0.052	0.024	0.052				
DC 15	--	--	--	--	--	--	--	--	0.037	0.080	0.024	0.052	0.024	0.052				
DC-S1	--	--	--	--	--	--	--	--	0.018	0.079	0.0085	0.037	0.0034	0.015				
Totals									0.38	0.53	0.28	0.32	0.23	0.30				

[1] **Condensables:** Include condensable particulate matter emissions in particulate matter calculations.

Note 1 - The emissions for Unit 1 Bulk Cement Plant are for the totals for the group of silos and dust collectors. There is uncertainty in the distribution of emissions among dust collector units. Individual silos will operate intermittently, however, the level of activity for the Cement Plant on a total daily or annual basis is a reasonable basis for emission tracking.

Note 1 - The emissions for Bulk Cement Plant tanks (Silos 1 through Silo 12, TK 13 to TK 17) assume equal throughput on an annual average basis for the group of tanks. Individual silos will operate intermittently and throughput will vary, however, the throughput total for the Cement Plant on an annual period is a reasonable basis for emission tracking.

"Requested Emissions" can only be evaluated for the Bulk Plant in total (line 1 of this form). The actual throughput will deviate from the calculation basis. Because actual throughput will deviate from the calculation basis of equal throughput for each tank, the individual tank emissions will vary.

Note 2 - Source ID "Road" is the fugitive emissions from in-plant truck traffic path, refer to Table 6-5.

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 scehduled 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 explanations of SSM emissions in Section 6 and 6a.

All applications for facilities that have emissions during routine our predictable startup, shutdown or scheduled maintenance (SSM)[1], 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) 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.	NO_X		CO		VOC		SO_X		TSP[2]		PM_{10}[2]		$PM_{2.5}$[2]		H_2S		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
Totals																		

[1] **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 the table below. If the annual steady-state Table 2-E emissions are 21.9 TPY, and the number of scheduled SSM events result in annual emissions of 31.9 TPY, enter 10.0 TPY in the table below.

[2] **Condensables**: Include condensable particulate matter emissions in particulate matter calculations.

Table 2-G: Stack Exit and Fugitive Emission Rates for Special Stacks

☐ I have elected to leave this table blank because this facility does not have any stacks/vents that split emissions from a single source or combine emissions from more than one source listed in table 2-A. Additionally, the emission rates of all stacks match the Requested allowable emission rates stated in Table 2-E.

Use this table to list stack emissions (requested allowable) from split and combined stacks. List Toxic Air Pollutants (TAPs) and Hazardous Air Pollutants (HAPs) in Table 2-I. List all fugitives that are associated with the normal, routine, and non-emergency operation of the facility. Unit and stack numbering must correspond throughout the application package. Refer to Table 2-E for instructions on use of the "-" symbol and on significant figures.

Stack No.	Serving Unit Number(s) from Table 2-A	NO_X		CO		VOC		SO_X		TSP[2]		PM_{10}[2]		$PM_{2.5}$[2]		☐ H_2S or ☐ 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
DC 13	TK 13, TK 14, TK 16, TK 17	--	--	--	--	--	--	--	--	0.037	0.080	0.024	0.052	0.024	0.052	--	--
DC S1	Sand 1, Sand 2, Sand 3, Sand 4, Sand 5	--	--	--	--	--	--	--	--	0.018	0.079	0.0085	0.037	0.0034	0.015	--	--
Totals:		0	0	0	0	0	0	0	0	0.055	0.159	0.0325	0.089	0.0274	0.067	0	0

Table 2-H: Stack Exit Conditions

Unit and stack numbering must correspond throughout the application package.

Stack Number	Serving Unit Number(s) from Table 2-A	Orientation (H-Horizontal V=Vertical)	Rain Caps (Yes or No)	Height Above Ground (ft)	Temp. (F)	Flow Rate		Moisture by Volume (%)	Velocity (ft/sec)	Inside Diameter or L x W (ft)
						(acfs)	(dscfs)			
DC 1	Silo 1	Down (Perimeter slot, see Fig 4-1)	N	30	75	40		0.04	40	Perimeter x 1"
DC 2	Silo 2	Down (Perimeter slot, see Fig 4-1)	N	30	75	40		0.04	40	Perimeter x 1"
DC 3	Silo 3	Down (Perimeter slot, see Fig 4-1)	N	30	75	40		0.04	40	Perimeter x 1"
DC 4	Silo 4	Down (Perimeter slot, see Fig 4-1)	N	30	75	40		0.04	40	Perimeter x 1"
DC 5	Silo 5	Down (Perimeter slot, see Fig 4-1)	N	30	75	40		0.04	40	Perimeter x 1"
DC 6	Silo 6	Down (Perimeter slot, see Fig 4-1)	N	30	75	40		0.04	40	Perimeter x 1"
DC 7	Silo 7	Down (Perimeter slot, see Fig 4-1)	N	30	75	40		0.04	40	Perimeter x 1"
DC 8	Silo 8	Down (Perimeter slot, see Fig 4-1)	N	30	75	40		0.04	40	Perimeter x 1"
DC 9	Silo 9	Down (Perimeter slot, see Fig 4-1)	N	30	75	40		0.04	40	Perimeter x 1"
DC 10	Silo 10	Down (Perimeter slot, see Fig 4-1)	N	30	75	40		0.04	40	Perimeter x 1"
DC 12	Silo 12	Down (Perimeter slot, see Fig 4-1)	N	30	75	40		0.04	40	Perimeter x 1"
DC 13	TK 13, TK 14, TK 16, TK 17	Down	N	30	75	42		0.04	30	0.8 x 1.5
DC 15	TK 15	Down	N	30	75	42		0.04	30	0.8 x 1.5
DC S1	Unit 2	Down	N	30	75	25		0.04	30	0.8 x 1.5
DC S1	Sand 1, Sand 2, Sand 3, Sand 4, Sand 5	Down	N	30	75	25		0.04	30	0.8 x 1.5

Table 2-I: Stack Exit and Fugitive Emission Rates for HAPs and TAPs

In the table below, report the Potential to Emit for each HAP from each regulated emission unit listed in Table 2-A, only if the entire facility emits the HAP at a rate greater than or equal to one (1) ton per year For each such emission unit, HAPs shall be reported to the nearest 0.1 tpy. Each facility-wide Individual HAP total and the facility-wide Total HAPs shall be the sum of all HAP sources calculated to the nearest 0.1 ton per year. Per 20.2.72.403.A.1 NMAC, facilities not exempt [see 20.2.72.402.C NMAC] from TAP permitting shall report each TAP that has an uncontrolled emission rate in excess of its pounds per hour screening level specified in 20.2.72.502 NMAC. TAPs shall be reported using one more significant figure than the number of significant figures shown in the pound per hour threshold corresponding to the substance. Use the HAP nomenclature as it appears in Section 112 (b) of the 1990 CAAA and the TAP nomenclature as it listed in 20.2.72.502 NMAC. Include tank-flashing emissions estimates of HAPs in this table. For each HAP or TAP listed, fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected or the pollutant is emitted in a quantity less than the threshold amounts described above.

Stack No.	Unit No.(s)	Total HAPs		Provide Pollutant Name Here ☐ HAP or ☐TAP		Provide Pollutant Name Here ☐ HAP or ☐TAP		Provide Pollutant Name Here ☐ HAP or ☐TAP		Provide Pollutant Name Here ☐ HAP or ☐TAP		Provide Pollutant Name Here ☐ HAP or ☐TAP		Provide Pollutant Name Here ☐ HAP or ☐TAP		Provide Pollutant Name Here ☐ HAP or ☐TAP		Provide Pollutant Name Here ☐ HAP or ☐ TAP	
		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
NO HAP SOURCES		--	--																
		--	--																
Totals:																			

Table 2-J: Fuel

Specify fuel characteristics and usage. Unit and stack numbering must correspond throughout the application package.

Unit No.	Fuel Type (low sulfur Diesel, ultra low sulfur diesel, Natural Gas, Coal, …)	Fuel Source: purchased commercial, pipeline quality natural gas, residue gas, raw/field natural gas, process gas (e.g. SRU tail gas) or other	Specify Units				
			Lower Heating Value	Hourly Usage	Annual Usage	% Sulfur	% Ash
HTR-1 through HTR-23	Natural Gas (@50% max. hourly capacity factor, 25% annual capacity factor)	Purchased commercial pipeline quality natrual gas	1,020	1,200 scfh	2.7 MMscf	Negl.	Negl.

Table 2-K: Liquid Data for Tanks Listed in Table 2-L

For each tank, list the liquid(s) to be stored in each tank. If it is expected that a tank may store a variety of hydrocarbon liquids, enter "mixed hydrocarbons" in the Composition column for that tank and enter the corresponding data of the most volatile liquid to be stored in the tank. If tank is to be used for storage of different materials, list all the materials in the "All Calculations" attachment, run the newest version of TANKS on each, and use the material with the highest emission rate to determine maximum uncontrolled and requested allowable emissions rate. The permit will specify the most volatile category of liquids that may be stored in each tank. Include appropriate tank-flashing modeling input data. Use additional sheets if necessary. Unit and stack numbering must correspond throughout the application package.

Tank No.	SCC Code	Material Name	Composition	Liquid Density (lb/gal)	Vapor Molecular Weight (lb/lb*mol)	Average Storage Conditions		Max Storage Conditions	
						Temperature (°F)	True Vapor Pressure (psia)	Temperature (°F)	True Vapor Pressure (psia)
5		Gel (Guar Gum/Diesel)	Guar Gum (30 - 60%), Diesel (30 - 60%)	7.1 lb/gal @ 60 ^{o}F	130	Ambient 70 - 80 ^{o}F	0.009 @ 70 oF	Ambient 100 ^{o}F	0.022 @ 100 °F
6		Gel (Guar Gum/Diesel)							
7		Diesel	Diesel, No. 2	7.1 lb/gal @ 60 ^{o}F	130	Ambient 70 - 80 ^{o}F	0.009 @ 70 oF	Ambient 100 ^{o}F	0.022 @ 100 °F

Table 2-L: Tank Data

Include appropriate tank-flashing modeling input data. Use an addendum to this table for unlisted data categories. Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary. See reference Table 2-L2. Note: 1.00 bbl = 10.159 M3 = 42.0 gal

Tank No.	Date Installed	Materials Stored	Seal Type (refer to Table 2-LR below)	Roof Type (refer to Table 2-LR below)	Capacity		Diameter (M)	Vapor Space (M)	Color (from Table VI-C)		Paint Condition (from Table VI-C)	Annual Throughput (gal/yr)	Turn-overs (per year)
					(bbl)	(M^3)			Roof	Shell			
5	2007	Gel (Guar Gum/Diesel		FX	160	25.4	3.51		OT	OT	Good	30,000	4.5
6	2007	Gel (Guar Gum/Diesel		FX	23	3.8	2.44		OT	OT	Good	25,000	26
7	2007	Diesel, No. 2		FX	24	3.8	3.29		OT	OT	Good	21,000	21

Table 2-L2: Liquid Storage Tank Data Codes Reference Table

Roof Type	Seal Type, Welded Tank Seal Type		Seal Type, Riveted Tank Seal Type		Roof, Shell Color	Paint Condition
FX: Fixed Roof	**Mechanical Shoe Seal**	**Liquid-mounted resilient seal**	**Vapor-mounted resilient seal**	**Seal Type**	**WH**: White	Good
IF: Internal Floating Roof	**A**: Primary only	**A**: Primary only	**A**: Primary only	**A**: Mechanical shoe, primary only	**AS**: Aluminum (specular)	Poor
EF: External Floating Roof	**B**: Shoe-mounted secondary	**B**: Weather shield	**B**: Weather shield	**B**: Shoe-mounted secondary	**AD**: Aluminum (diffuse)	
P: Pressure	**C**: Rim-mounted secondary	**C**: Rim-mounted secondary	**C**: Rim-mounted secondary	**C**: Rim-mounted secondary	**LG**: Light Gray	
					MG: Medium Gray	
					BL: Black	
					OT: Other (specify)	

Note: 1.00 bbl = 0.159 M^3 = 42.0 gal

Table 2-M: Materials Processed and Produced (Use additional sheets as necessary.)

Material Processed				Material Produced			
Description	**Chemical Composition**	**Phase (Gas, Liquid, or Solid)**	**Quantity (specify units)**	**Description**	**Chemical Composition**	**Phase**	**Quantity (specify units)**
Cement and Additive Products	Inorganic salts, Portland Cement, limestone	Solid Powder	220,000 tons/yr	Cement and Additive Products	Inorganic salts, Portland Cement, limestone	Solid Powder	220,000 tons/yr
Gel	Guar Gum (30 - 60%) Diesel (30 - 60%)	Liquid Slurry	76,000 gal/yr	Gel	Guar Gum (30 - 60%) Diesel (30 - 60%)	Liquid Slurry	76,000 gal/yr

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
NO CEM EQUIPMENT USED AT THE SITE									

Table 2-O: Parametric Emissions Measurement Equipment

Unit and stack numbering must correspond throughout the application package. Use additional sheets if necessary.

Unit No.	Parameter/Pollutant Measured	Location of Measurement	Unit of Measure	Acceptable Range	Frequency of Maintenance	Nature of Maintenance	Method of Recording	Averaging Time
DC 13	Differential Pressure	Across Filter Elements	inches H2O	0.5 - 6 inches	Monthly	Inspections	Manual Reading	Daily
DC 15	Differential Pressure	Across Filter Elements	inches H2O	0.5 - 6 inches	Monthly	Inspections	Manual Reading	Daily

Table 2-P: Green House Gas Emissions

Applications submitted under 20.2.70, 20.2.72, & 20.2.74 NMAC that are Major for GHGs as determined in Section 22 of this application are required to complete this Table if so directed in Section 22 or are major for GHGs and have an existing GHG BACT. Applicants must report potential emission rates in short tons per year. Include GHG emissions during Startup, Shutdown, and Scheduled Maintenance in this table.

		CO_2 ton/yr	N_2O ton/yr	CH_4 ton/yr	SF_6 ton/yr	PFC/HFC ton/yr[2]									Total GHG Mass Basis ton/yr[4]	Total CO_2e ton/yr[5]
Unit No.	GWPs [1]	1	298	25	22,800	footnote 3										
	mass GHG	NO PROCESS EQUIPMENT GHG EMISSIONS, COMFORT HEATING ONLY														
	CO_2e															
	mass GHG															
	CO_2e															
	mass GHG															
	CO_2e															
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	CO_2e															
	mass GHG															
	CO2e															
	mass GHG															
	CO_2e															
Total	mass GHG															
	CO_2e															

[1] **GWP** (Global Warming Potential): Applicants must use the most current GWPs codified in Table A-1 of 40 CFR part 98. GWPs are subject to change, therefore, applicants need to check 40 CFR 98 to confirm GWP values.

[2] For **HFCs** or **PFCs** describe the specific HFC or PFC compound and use a separate column for each individual compound.

[3] For each new compound, enter the appropriate GWP for each HFC or PFC compound from Table A-1 in 40 CFR 98.

[4] Green house gas emissions on a **mass basis** is the ton per year green house gas emission before adjustment with its GWP.

[5] **CO_2e** means Carbon Dioxide Equivalent and is calculated by multiplying the TPY mass emissions of the green house gas by its GWP.

Table 6-1
EMISSION CALCULATIONS - TSP / PM_{10} / $PM_{2.5}$: Bulk Cement Plant - Controlled

Permit No. 2715-R8 NSR Permit Revision Application
Schlumberger Technology Corp. - Hobbs District

Bulk Cement Plant: **Storage Silos, Truck/Railcar receiving, Truck loadout, Dust Collectors**
Storage Silo Controls: Silo Dust Collectors (DC 1 - 12) C&W Manufacturing Co., 2,340 cfm (typical), 8-cartidge filters, pulse-jet cleaning
Control Efficiency %: 99.93% is used for emissions estimates, vendor specifications (without reference to particle size) is 99.99% control.
and other tank controls: Cyclone-Filter Dust Collectors (DC 13 and DC 15) Metroplex, 2,000 - 3,000 cfm (typical), fabric filters, pulse-jet cleaning
Control Efficiency: 99.0% is used for emissions estimates, vendor specifications (without reference to particle size) is 99.9% control.

Max. Hourly Transfer: 50 tons per hour per truck load/unload pipe (pneumatic loading capacity)
Annual Production: Assume PTE scenario for maximum hourly emissions, and requested maximum annual throughput of 100,000 tons/yr per silo for annual emissions.

Emission Factors: AP-42, Chapter 11.12, (June 2006) Table 11.12-2. Emission factors: Cement unloading to elevated storage silo (pneumatic).

Unit No.	Emission Point Description	Process Description, Emissions Basis	PTE Process Rates [1]		Control Efficiency % [2]	AP-42 Emission Factor [3]	TSP PTE Emissions		AP-42 Emission Factor [3]	PM_{10} PTE Emissions		AP-42 Emission Factor [3]	$PM_{2.5}$ PTE Emissions	
			(ton/hr)	(ton/yr)	(%)	(lb/ton)	(lb/hr)	(ton/yr)	(lb/ton)	(lb/hr)	(ton/yr)	(lb/ton)	(lb/hr)	(ton/yr)
DC 1	Silo 1 Dust Collector (DC 1)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	99.93%	0.73	0.026	0.026	0.47	0.016	0.016	0.47	0.016	0.016
DC 2	Silo 2 Dust Collector (DC 2)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	99.93%	0.73	0.026	0.026	0.47	0.016	0.016	0.47	0.016	0.016
DC 3	Silo 3 Dust Collector (DC 3)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	99.93%	0.73	0.026	0.026	0.47	0.016	0.016	0.47	0.016	0.016
DC 4	Silo 4 Dust Collector (DC 4)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	99.93%	0.73	0.026	0.026	0.47	0.016	0.016	0.47	0.016	0.016
DC 5	Silo 5 Dust Collector (DC 5)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	99.93%	0.73	0.026	0.026	0.47	0.016	0.016	0.47	0.016	0.016
DC 6	Silo 6 Dust Collector (DC 6)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	99.93%	0.73	0.026	0.026	0.47	0.016	0.016	0.47	0.016	0.016
DC 7	Silo 7 Dust Collector (DC 7)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	99.93%	0.73	0.026	0.026	0.47	0.016	0.016	0.47	0.016	0.016
DC 8	Silo 8 Dust Collector (DC 8)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	99.93%	0.73	0.026	0.026	0.47	0.016	0.016	0.47	0.016	0.016
DC 9	Silo 9 Dust Collector (DC 9)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	99.93%	0.73	0.026	0.026	0.47	0.016	0.016	0.47	0.016	0.016
DC 10	Silo 10 Dust Collector (DC 10)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	99.93%	0.73	0.026	0.026	0.47	0.016	0.016	0.47	0.016	0.016
DC 12	Silo 12 Dust Collector (DC 12)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	99.93%	0.73	0.026	0.026	0.47	0.016	0.016	0.47	0.016	0.016
DC 13	TK 13, 14, 16,17 Cyclone-Filter Dust Coll. (DC 13)	Transfer to Pre Blend, Vent/Holding Tank, and Double Stack Tanks [4]	50	220,000	99.90%	0.73	0.037	0.080	0.47	0.024	0.052	0.47	0.024	0.052
DC 15	Cyclone-Filter Dust Coll. (DC 15)	Transfer to Weigh Batcher Tank (TK 15) [4]	50	220,000	99.90%	0.73	0.037	0.080	0.47	0.024	0.052	0.47	0.024	0.052
		Total Emissions					**0.35**	**0.44**		**0.23**	**0.28**		**0.23**	**0.28**

1 - The total facility maximum process rate is 2,200 tons per day, and 803,000 tons per year. These throughputs are distributed across 5 truck unload/load points, each capable of 50 tons per hour. The 220,000 tons/yr is conservatively represented as 100,000 tons/yr maximum throughput for each of the 11 Silos.

2 - The control efficiency conservatively assumed for estimates is lower than specified by vendor (C&W), but matches the PM10 control efficiency used in Table 11.12-2 for cement loading (SCC 3-05-011-07) The vendor also does not specify control efficiency dependency on particle size.

3 - Uncontrolled emissions fractors from Document AP-42, Chapter 11.12, (June 2006) Table 11.12-1. Emission factors: Cement unloading to elevated storage silo (pneumatic). The $PM_{2.5}$ factor is conservatively assumed to be equal to PM_{10} factor.

4 - Transfer operations consist of pneumatic conveying of product materials from silos to the tank vessels, vented emissions are controlled by M-Plex cyclone-filter units. It is assumed the full annual throughput is transferred though these tanks.

5 - Loading of trucks is via pneumatic conveying, with vented are from truck vessel returned to the Vent tank, and controlled by a dust collector. It is assumed the full annual throughput is transferred to trucks.

Table 6-2
EMISSION CALCULATIONS - TSP / PM_{10} / $PM_{2.5}$: Sand Plant - Controlled

Permit No. 2715-R8 NSR Permit Revision Application
Schlumberger Technology Corp. - Hobbs District

Sand Plant: **Storage Silos, Truck/Railcar receiving, Truck loadout, Dust Collector DC-S1**
Controls: Metro-Plex Cyclone-Filter Dust Collector
Control Efficiency: 90% Conservatively reduced from 99.9% filter efficiency quoted by vendor, to account for uncertainty in capture efficiency

Max. Hourly Transfer: 25 tons per hour - Loading to silos
25 tons per hour - Truck Loadout

Annual Production:
Assume PTE scenario of 8,760 hours per year at Max. Hourly Transfer rate for controlled truck/railcar delivery and truck loadout. Actual throughput anticipated to be less than 100,000 tons/yr

Emission Factors: AP-42, Chapter 11.12, June 2006, Table 11.12-2. (PM and PM_{10} emission factors)
AP-42, Chapter 13.2.4, Aggregate Handling and Storage Piles, Equation 1,November 2006 ($PM_{2.5}$ emission factors)

Unit No.	Emission Point Description	Process Description, Emissions Basis	PTE Process Rates		Control Efficiency	AP-42 Emission Factor [1]	TSP PTE Emissions		AP-42 Emission Factor [1]	PM_{10} PTE Emissions		AP-42 Emission Factor [1, 2]	$PM_{2.5}$ PTE Emissions	
			(ton/hr)	(ton/yr)	(%)	(lb/ton)	(lb/hr)	(ton/yr)	(lb/ton)	(lb/hr)	(ton/yr)	(lb/ton)	(lb/hr)	(ton/yr)
DC S1	Cyclone-Filter Dust Collector	Transfer to Sand Plant Silos from railcar/truck	25	219,000	90.0%	0.0021	0.0053	0.023	0.00099	0.0025	0.0108	0.00099	0.0025	0.0108
Sand 5	Truck Loading - controlled by DC S1	Transfer pneumatically to truck	25	219,000	90.0%	0.0051	0.013	0.056	0.0024	0.0060	0.0263	0.00037	0.00093	0.0041
		Total Emissions					**0.018**	**0.079**		**0.0085**	**0.037**		**0.0034**	**0.015**

1 - The emission factor in Table 11.12.-2 for Sand Transfer to elevated silo, uncontrolled. For truck loading, AP-42 batch drop Equation 1 (below) was used with a mean moisture of 4.17%.

3 - $PM_{2.5}$ emission factor not provided in AP-42, Chapter 11.12 for sand transfer. However as footnoted in Table 11.12-2, the emission factors for PM and PM_{10} were each derived from the the AP-42 Aggegate Handling and Storage Pile (Equation1). Refering to AP-42, Chapter 13.2.4, a separate $PM_{2.5}$ emission factor can be calculated from Equation 1.

AP-42 13.2.4-3 (Eq. 1) $E=(k(0.0032)(U/5)^{1.3})/(m/2)^{1.4}$
WHERE:
E = emission factor (lb/ton)
k = particle size multiplier = 0.74 for PM, 0.35 for PM_{10}, 0.053 for $PM_{2.5}$
U = mean wind speed in miles per hour (mph)
M = material moisture content (%)

Sand - As received and loaded
E (PM) = 0.00513 lb/ton
E (PM_{10}) = 0.00243 lb/ton
E ($PM_{2.5}$) = 0.00037 lb/ton
U for exposed handling areas = 20 mph (assumed conservative annual average).
M is estimated at 4.17%, based on average of "sand" materials provided in AP-42 Table 11.12-2 footnote b.

Table 6-3
EMISSION CALCULATIONS - TSP / PM_{10} / $PM_{2.5}$: Bulk Cement Plant - Uncontrolled

Permit No. 2715-R8 NSR Permit Revision Application
Schlumberger Technology Corp. - Hobbs District

Bulk Cement Plant: **Storage Silos, Truck/Railcar receiving, Truck loadout, Dust Collectors Neglected**

Max. Hourly Transfer: 50 tons per hour per truck load/unload pipe (pneumatic loading capacity)
Annual Production: Assume PTE scenario for maximum hourly emissions, and requested maximum annual throughput of 100,000 tons/yr per silo for annual emissions.

Emission Factors: AP-42, Chapter 11.12, (June 2006) Table 11.12-2. Emission factors: Cement unloading to elevated storage silo (pneumatic).

Unit No.	Emission Point Description	Process Description, Emissions Basis	PTE Process Rates [1]		Control Efficiency % [2]	AP-42 Emission Factor [3]	TSP PTE Uncontrolled Emissions		AP-42 Emission Factor [3]	PM_{10} PTE Uncontrolled Emissions		AP-42 Emission Factor [3]	$PM_{2.5}$ PTE Uncontrolled Emissions	
			(ton/hr)	(ton/yr)	(%)	(lb/ton)	(lb/hr)	(ton/yr)	(lb/ton)	(lb/hr)	(ton/yr)	(lb/ton)	(lb/hr)	(ton/yr)
DC 1	Silo 1 Dust Collector (DC 1)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	0.0%	0.73	36.5	36.5	0.47	23.5	23.5	0.47	23.5	23.5
DC 2	Silo 2 Dust Collector (DC 2)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	0.0%	0.73	36.5	36.5	0.47	23.5	23.5	0.47	23.5	23.5
DC 3	Silo 3 Dust Collector (DC 3)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	0.0%	0.73	36.5	36.5	0.47	23.5	23.5	0.47	23.5	23.5
DC 4	Silo 4 Dust Collector (DC 4)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	0.0%	0.73	36.5	36.5	0.47	23.5	23.5	0.47	23.5	23.5
DC 5	Silo 5 Dust Collector (DC 5)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	0.0%	0.73	36.5	36.5	0.47	23.5	23.5	0.47	23.5	23.5
DC 6	Silo 6 Dust Collector (DC 6)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	0.0%	0.73	36.5	36.5	0.47	23.5	23.5	0.47	23.5	23.5
DC 7	Silo 7 Dust Collector (DC 7)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	0.0%	0.73	36.5	36.5	0.47	23.5	23.5	0.47	23.5	23.5
DC 8	Silo 8 Dust Collector (DC 8)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	0.0%	0.73	36.5	36.5	0.47	23.5	23.5	0.47	23.5	23.5
DC 9	Silo 9 Dust Collector (DC 9)	Solids transfer to Silo, PTE schedule and throughput	50	100,000	0.0%	0.73	36.5	36.5	0.47	23.5	23.5	0.47	23.5	23.5
DC 10	Silo 10 Dust Collector (DC 10	Solids transfer to Silo, PTE schedule and throughput	50	100,000	0.0%	0.73	36.5	36.5	0.47	23.5	23.5	0.47	23.5	23.5
DC 12	Silo 12 Dust Collector (DC 12	Solids transfer to Silo, PTE schedule and throughput	50	100,000	0.0%	0.73	36.5	36.5	0.47	23.5	23.5	0.47	23.5	23.5
DC 13	TK 13, 14, 16,17 Cyclone-Filter Dust Coll. (DC 13)	Transfer to Pre Blend, Vent/Holding Tank, and Double Stack Tanks [4]	50	220,000	0.0%	0.73	36.5	80.3	0.47	23.5	51.7	0.47	23.5	51.7
DC 15	Cyclone-Filter Dust Coll. (DC 15)	Transfer to Weigh Batcher Tank (TK 15) [4]	50	220,000	0.0%	0.73	36.5	80.3	0.47	23.5	51.7	0.47	23.5	51.7
		Total Emissions					**474.5**	**562.1**		**305.5**	**361.9**		**305.5**	**361.9**

1 - The total facility maximum process rate is 2,200 tons per day, and 803,000 tons per year. These throughputs are distributed across 5 truck unload/load points, each capable of 50 tons per hour. The 803,000 tons/yr is conservatively represented as 100,000 tons/yr maximum throughput for each of the 11 Silos.

2 - The control efficiency of the installed dust collectors is neglected for the uncontrolled case.

3 - Uncontrolled emissions fractors from Document AP-42, Chapter 11.12, (June 2006) Table 11.12-1. Emission factors: Cement unloading to elevated storage silo (pneumatic). The $PM_{2.5}$ factor is conservatively assumed to be equal to PM_{10} factor.

4 - Transfer operations consist of pneumatic conveying of product materials from silos to the tank vessels. It is assumed the full annual throughput is transferred though these tanks.

5 - Loading of trucks is via pneumatic conveying, with vented are from truck vessel returned to the Vent tank. It is assumed the full annual throughput is transferred to trucks.

Table 6-4
EMISSION CALCULATIONS - TSP / PM_{10} / $PM_{2.5}$: Sand Plant - Controlled

Permit No. 2715-R8 NSR Permit Revision Application
Schlumberger Technology Corp. - Hobbs District

Sand Plant: **Storage Silos, Truck/Railcar receiving, Truck loadout, Dust Collector Neglected**

Max. Hourly Transfer: 25 tons per hour - Loading to silos
25 tons per hour - Truck Loadout

Annual Production: Assume PTE scenario of 8,760 hours per year at Max. Hourly Transfer rate for controlled truck/railcar delivery and truck loadout. Actual throughput anticipated to be less than 100,000 tons/yr

Emission Factors: AP-42, Chapter 11.12, June 2006, Table 11.12-2. (PM and PM_{10} emission factors)
AP-42, Chapter 13.2.4, Aggregate Handling and Storage Piles, Equation 1,November 2006 ($PM_{2.5}$ emission factors)

Unit No.	Emission Point Description	Process Description, Emissions Basis	PTE Process Rates		Control Efficiency [2]	AP-42 Emission Factor [3]	TSP PTE Emissions		AP-42 Emission Factor [3]	PM_{10} PTE Emissions		AP-42 Emission Factor [1, 3]	$PM_{2.5}$ PTE Emissions	
			(ton/hr)	(ton/yr)	(%)	(lb/ton)	(lb/hr)	(ton/yr)	(lb/ton)	(lb/hr)	(ton/yr)	(lb/ton)	(lb/hr)	(ton/yr)
DC S1	Cyclone-Filter Dust Collector	Transfer to Sand Plant Silos from railcar/truck	25	219,000	0.0%	0.0021	0.0525	0.230	0.00099	0.0248	0.1084	0.00099	0.0248	0.1084
Sand 5	Truck Loading - controlled by DC S1	Transfer pneumatically to truck	25	219,000	0.0%	0.0051	0.128	0.558	0.0024	0.0600	0.2628	0.00037	0.00925	0.0405
		Total Emissions					**0.180**	**0.788**		**0.0848**	**0.371**		**0.0340**	**0.149**

1 - The emission factor in Table 11.12.-2 for Sand Transfer to elevated silo, uncontrolled. For truck loading, AP-42 batch drop Equation 1 (below) was used with a mean moisture of 4.17%.
2 - For the uncontrolled case, the control efficiency of the installed dust collector is neglected.
3 - $PM_{2.5}$ emission factor not provided in AP-42, Chapter 11.12 for sand transfer. However as footnoted in Table 11.12-2, the emission factors for PM and PM_{10} were each derived from the the AP-42 Aggegate Handling and Storage Pile (Equation1). Refering to AP-42, Chapter 13.2.4, a separate $PM_{2.5}$ emission factor can be calculated from Equation 1.

AP-42 13.2.4-3 (Eq. 1) E=(k(0.0032)(U/5)^1.3)/(m/2)^1.4
WHERE:
E = emission factor (lb/ton)
k = particle size multiplier = 0.74 for PM, 0.35 for PM_{10}, 0.053 for $PM_{2.5}$
U = mean wind speed in miles per hour (mph)
M = material moisture content (%)

Sand - As received and loaded
E (PM) = 0.00513 lb/ton
E (PM_{10}) = 0.00243 lb/ton
E ($PM_{2.5}$) = 0.00037 lb/ton

U for exposed handling areas = 20 mph (assumed conservative annual average).
M is estimated at 4.17%, based on average of "sand" materials provided in AP-42 Table 11.12-2 footnote b.

Table 6-5
EMISSION CALCULATIONS - TSP / PM_{10} / $PM_{2.5}$: Fugitive Dust from Paved Haul Road Inside Facility

Permit No. 2715-R8 NSR Permit Revision Application
Schlumberger Technology Corp. - Hobbs District

Fugitive Dust from Paved Haul Road Inside Facility
Controls: roadway paving, limited truck speed
Control Efficiency: Included in emissions factor at speed < 10 mph

Max. Hourly Transfer: 24 Trucks per Day
690 meters/truck trip = 0.429 miles/trip. For the truck route from primary entrance, to cement plant load station, and back to entrance

Annual Production: Assume maximum annual production corresponding to 24 trucks per day, 365 days per year, combined load, unload and blending operations

Emission Factors: AP-42, Chapter 13.2.1-5 (January 2011), Background Documentation, pgs. 4-36 to 4-54, and Figure "PM10 Emissions Factor by Vehicle Speed"
AP-42, Chapter 13.2.1-5 Equation 2, ($PM_{2.5}$, PM and PM_{10} size weighting factors)

Emission Source Description	Process Description, Emissions Basis	PTE Process Rates		Control Efficiency	AP-42 Emission Factor [1]	TSP PTE Emissions		AP-42 Emission Factor [1]	PM_{10} PTE Emissions		AP-42 Emission Factor [1]	$PM_{2.5}$ PTE Emissions	
		trips /day	VMT/trip	(%)	(lb/VMT)	(lb/hr)	(ton/yr)	(lb/VMT)	(lb/hr)	(ton/yr)	(lb/VMT)	(lb/hr)	(ton/yr)
Truck Traffic on Paved Interior Haul Roads	Paved Roads, Limited Speed, Truck Wt 37 tons	24	0.429	0.0%	0.270	0.12	0.50	0.220	0.094	0.41	0.054	0.02	0.10
	Total Emissions					**0.12**	**0.50**		**0.094**	**0.41**		**0.023**	**0.10**

1 = The emission factor calculated using supporting AP-42 data at vehicle speed < 10 mph, from Background Documentation, reference noted above.

Paved Road Emission Factors (see Section 6)	**E (PM) =**	**0.270 lb/VMT**
	E (PM_{10}) =	**0.220 lb/VMT**
	E ($PM_{2.5}$) =	**0.054 lb/VMT**