Elam Construction Kirtland Sand Gravel Aggregate Plants Allowable Emission Rates

Haul Road Quarry Trucks AP-42 13.2 (ver 11/06) "Unpaved Road" Sand and Gravel Conditions - NMED Equation Equation: $E = k(s/12)^a * (W/3)^b * [(365-p)/365]$			
k TSP k PM10	4.9 1.5		
k PM2.5	0.15		
a TSP	0.7		
a PM10	0.9		
a PM2.5	0.9		
b TSP	0.45		
b PM10	0.45		
b PM2.5	0.45		
% Silt Content = s	4.8 %	Sand and Gravel	(AP-42 13.2.2-1)
precipitation days/yr	80 days	AP-42 Figure 13	.2.2-1
Hours per year	2000 hrs		
Vehicle control		80 %	water and base course
Aggregate Truck VMT		130.00 meters one way 0.16159105 miles/vehicle	
Max. Aggregate Truck/hr		7.142857143 truck/hr 14285.71429 truck/yr	70 tons/loa 500 tons/hr
Aggregate Truck VMT		1.154 miles/hr	
		2308.444 miles/yr	
Aggregate Truck weight		66 tons	
		TSP Cor	ntrolled
Max. Aggregate Truck Emissions	Base Course and Water	2.39 lbs/hr	1.87 tons/yr
		PM10Co	ntrolled
Max. Aggregate Truck Emissions	Base Course and Water	0.61 lbs/hr	0.48 tons/yr
		PM2.5 Co	ontrolled
Max. Aggregate Truck Emissions	Base Course and Water	0.06 lbs/hr	0.05 tons/yr

0.05 tons/yr

70 tons/load 500 tons/hr

Mix Ratios							-		
Aggregate	57.50%	230	tons/hr		230000) tons/yr	4		
RAP Minoral Filler	35.00%	140	tons/hr		140000	tons/yr	4		
Asphalt Cement	6.00%	24	tons/hr		24000	tons/yr	-		
Aggregate Total	0.0070	376	tons/hr		376000	tons/yr	1		
	Total	400	tons/hr		400000) tons/yr]		
Plant Hourly Average			400.0 1000.0	0 tons/hr 0 hrs/yr		Based on Annual	l and Hourly Productio	n Rates. Not a requested P	ermit Condition.
Uncontrolled hrs/yr of operation Exhaust Stack Temperature Exhaust Stack Moisture Exhaust Stack Flowrate Exhaust Stack Flowrate NSPS Annual tons per year			8760.0 275.0 21.7 60000 18652 0.0 400000	0 hrs/yr 0 deg F 7 % 0 ACFM 2 DSCFM 4 gr/dscf 0 tpy				n requested i	
Aggregate/RAP Handling Storage Piles									
AP-42 Section 13.2.4 "Aggregate Handling" Ver 11/2006		E(TSP) = E(PM10) = E(PM2.5) = E(TSP) = E(PM10) = E(PM2.5) =	0.00660 0.00312 0.0004 0.00462 0.00220 0.00032 370.0	0 lbs/ton 2 lbs/ton 7 lbs/ton 5 lbs/ton 0 lbs/ton 3 lbs/ton 0 tph		AP-42 13.2.4 (11 Max tph k(tsp) k(pm10) k(pm2.5) U Maximum U Annual M	L/06) E = k	c x (0.0032) x (U/5)^1.3 / (1 370.0 tph 0.74 0.35 0.053 11.0 MPH 8.4 MPH 2 %	M/2)^1.4 lbs/ton NMED Default 1996-2006 Farmington Ave MPH NMED Default
E(tsp) Uncontrolled E(pm10) Uncontrolled E(pm2.5) Uncontrolled		lb/hr 2.44193 1.15497 0.17489	tons/yr 7.53 3.56 0.54					Model lbs/br	
E(tsp) Controlled E(pm10) Controlled E(pm2.5) Controlled		2.44193 1.15497 0.17489	0.86 0.41 0.06	Annual E Annual E Annual E	Emissions are Control Emissions are Control Emissions are Control	lled by Limiting Au lled by Limiting Au lled by Limiting Au	nnual Production nnual Production nnual Production	1.71983 0.81343 0.12318	
Aggregate Feed Bin Loading (Cold)									
AP-42 Section 13.2.4 "Aggregate Handling" Ver 11/2006		E(TSP) = E(PM10) = E(PM2.5) =	0.00660 0.00312 0.00047	0 lbs/ton 2 lbs/ton 7 lbs/ton		AP-42 13.2.4 (11 Max tph k(tsp)	E = k	c x (0.0032) x (U/5)^1.3 / (1 230.0 tph 0.74	M/2)^1.4 lbs/ton
		E(TSP) = E(PM10) = E(PM2.5) =	0.0046 0.0022 0.0003 230.0	5 lbs/ton 0 lbs/ton 3 lbs/ton 0 tph		k(pm10) k(pm2.5) U Maximum U Annual M		0.35 0.053 11.0 MPH 8.4 MPH 2 %	NMED Default 1996-2006 Farmington Ave MPH NMED Default
E(tsp) Uncontrolled E(pm10) Uncontrolled E(pm2.5) Uncontrolled		lb/hr 1.51796 0.71795 0.10872	tons/yr 4.68 2.21 0.34					Model lbs/br	
E(tsp) Controlled E(pm10) Controlled E(pm2.5) Controlled		1.51796 0.71795 0.10872	0.53 0.25 0.04	Annual E Annual E Annual E	Emissions are Control Emissions are Control Emissions are Control	lled by Limiting An lled by Limiting An lled by Limiting An	nnual Production nnual Production nnual Production	1.71983 0.81343 0.12318	
Aggregate Feed Bin Unloading AP-42 Table 11.19.2-2 "Conveyor Transfer Po Ver 8/2004	int Uncontrolled"	E(TSP) = E(PM10) = E(PM2.5) =	0.00300 0.00110 0.00017	lbs/ton lbs/ton lbs/ton					
AP-42 Table 11.19.2-2 "Conveyor Transfer Po Ver 8/2004	int Controlled"	E(TSP) = E(PM10) = E(PM2.5) =	0.00014 0.000046 0.000013	lbs/hr lbs/ton lbs/ton		95.3:	3 % Control Efficiency	AP-42 Table 11.	19.2-2
Throughput			230.0	0 tph					
E(tsp) Uncontrolled E(pm10) Uncontrolled E(pm2.5) Uncontrolled		lb/hr 0.69000 0.25300 0.03910	tons/yr 3.022 1.108 0.171						
E(tsp) Controlled E(pm10) Controlled E(pm2.5) Controlled		0.03220 0.01058 0.00299	0.016 0.005 0.001						
Scalping Screen AP-42 Table 11.19.2-2 "Screening Uncontrolle Ver 8/2004	ad"	E(TSP) = E(PM10) = E(PM2.5) =	0.02500 0.00870 0.00132	lbs/ton lbs/ton lbs/ton					
AP-42 Table 11.19.2-2 "Screening Controlled" Ver 8/2004		E(TSP) = E(PM10) = E(PM1	0.00220 0.00074	lbs/hr lbs/ton		91.20	0 % Control Efficiency	AP-42 Table 11.	19.2-2
Throughput		E(PM2.5) =	0.00005 230.0	1bs/ton 0 tph					
E(tsp) Uncontrolled E(pm10) Uncontrolled E(pm2.5) Uncontrolled		lb/hr 5.75000 2.00100 0.30360	tons/yr 25.185 8.764 1.330						
E(tsp) Controlled E(pm10) Controlled E(pm2.5) Controlled		0.50600 0.17020 0.01150	0.253 0.085 0.006						

Scalping Screen Unloading					
AP-42 Table 11.19.2-2 "Conveyor Transfer Point Uncontrolled"	E(TSP) =	0.00300	lbs/ton		
Ver 8/2004	E(PM10) =	0.00110	lbs/ton		
	E(PM2.5) =	0.00017	lbs/ton		
AD 42 Table 11 10 2 2 "Conveyor Transfer Doint Controlled"	$\mathbf{E}(\mathbf{TSD}) =$	0.00014	lba/br	95.33 % Control Efficiency	AP-42 Table 11.19.2-2
AP-42 Table 11.19.2-2 Conveyor Transfer Point Controlled	E(ISP) = E(DM10) = E(DM1	0.00014	IDS/III lhs/top		
V CI 8/2004	E(FW10) = E(DW2.5) = 0.000	0.000040	lbs/ton		
Throughput	E(FM2.5) =	230.0	tph		
Inoughput		200.0	- thu		
	lb/hr	tons/yr			
E(tsp) Uncontrolled	0.69000	3.022			
E(pm10) Uncontrolled	0.25300	1.108			
E(pm2.5) Uncontrolled	0.03910	0.171			
E(tsp) Controlled	0.03220	0.016			
E(tsp) Controlled	0.05220	0.010			
E(pm10) Controlled	0.00200	0.005			
E(pin2.5) Controlled	0.00299	0.001			
Pug Mill					
AP-42 Table 11.19.2-2 "Conveyor Transfer Point Uncontrolled"	E(TSP) =	0.00300	lbs/ton		
Ver 8/2004	E(PM10) =	0.00110	lbs/ton		
	E(PM2.5) =	0.00017	lbs/ton		
				95.33 % Control Efficiency	AP-42 Table 11.19.2-2
AP-42 Table 11.19.2-2 "Conveyor Transfer Point Controlled"	E(TSP) =	0.00014	lbs/hr		
Ver 8/2004	E(PM10) =	0.000046	lbs/ton		
	E(PM2.5) =	0.000013	lbs/ton		
Throughput		236.0) tph		
	lb/hr	tons/yr			
E(tsp) Uncontrolled	0.70800	3.101			
E(pm10) Uncontrolled	0.25960	1.137			
E(pm2.5) Uncontrolled	0.04012	0.176			
E(tsp) Controlled	0.03304	0.017			
E(pm10) Controlled	0.01086	0.005			
E(pm2.5) Controlled	0.00307	0.002			
Pug Mill Unloading to Scale Conveyor		0.00200	11 //		
AP-42 Table 11.19.2-2 "Conveyor Transfer Point Uncontrolled"	E(1SP) =	0.00300	Ibs/ton		
Ver 8/2004	E(PM10) =	0.00110	lbs/ton		
	E(PM2.5) =	0.00017	lbs/ton	05.23 % Control Efficiency	AD 42 Table 11 10 2 2
AP-42 Table 11.19.2-2 "Conveyor Transfer Point Controlled"	E(TSP) =	0.00014	lbs/hr	95.55 % Control Enterency	Ar-42 Table 11.19.2-2
Ver 8/2004	F(PM10) =	0.000046	lbs/ton		
	F(PM2 5) =	0.000013	lbs/ton		
Throughput	D(1112.5) -	236.0) tph		
			1		
	lb/hr	tons/yr			
E(tsp) Uncontrolled	0.70800	3.101			
E(pm10) Uncontrolled	0.25960	1.137			
E(pm2.5) Uncontrolled	0.04012	0.176			
E(tsp) Controlled	0.03304	0.017			
E(pp) Controlled	0.03304	0.017			
E(pm2.5) Controlled	0.01000	0.003			
Equin2.5) Controlled	0.00507	0.002			

Scale Conveyor Transfer to Slinger Conveyor

AP-42 Table 11.19.2-2 "Conveyor Transfer Point Uncontrolled"	E(TSP) =	0.00300	lbs/ton			
Ver 8/2004	E(PM10) =	0.00110	lbs/ton			
	E(PM2.5) =	0.00017	lbs/ton			
				95.33 % Control Effic	iency AP-42 Table 11.	19.2-2
AP-42 Table 11.19.2-2 "Conveyor Transfer Point Controlled"	E(TSP) =	0.00014	lbs/hr			
Ver 8/2004	E(PM10) =	0.000046	lbs/ton			
	E(PM2.5) =	0.000013	lbs/ton			
Throughput		236.	0 tph			
	lb/hr	tons/vr				
E(tsp) Uncontrolled	0.70800	3.101				
E(nm10) Uncontrolled	0.25960	1 137				
E(pm2.5) Uncontrolled	0.04012	0.176				
	0.00004	0.015				
E(tsp) Controlled	0.03304	0.017				
E(pm10) Controlled	0.01086	0.005				
E(pm2.5) Controlled	0.00307	0.002				
RAP Feed Bin Loading						
AP-42 Section 13.2.4 "Aggregate Handling"	E(TSP) =	0.0019	8 lbs/ton	AP-42 13.2.4 (11/06)	$E = k x (0.0032) x (U/5)^{1.3} / (1)$	M/2)^1.4 lbs/ton
Ver 11/2006	E(PM10) =	0.00094	4 lbs/ton	Max tph	140.0 tph	
	E(PM2.5) =	0.0001	4 lbs/ton	k(tsp)	0.74	
				k(pm10)	0.35	
	E(TSP) =	0.0013	9 lbs/ton	k(pm2.5)	0.053	
	E(PM10) =	0.0006	6 lbs/ton	U Maximum	11.0 MPH	NMED Default
	E(PM2.5) =	0.0001	0 lbs/ton	U Annual	8.4 MPH	1996-2006 Farmington Ave MPH
		140.	0 tph	М	2 %	NMED Default
						"EIIP – Preferred and Alternative Methods
				RAP Inherent Material		for Estimating Air Emissions from Hot-Mix-
				Properties	70 % Reduction	Asphalt Plants, Final Report, July 1996,
				Topontos		Table 3.2-1 Fugitive Dust – Crushed RAP
						material"EPA
	lb/hr	tons/yr				
E(tsp) Uncontrolled	0.27719	0.86				
E(pm10) Uncontrolled	0.13110	0.40				
E(pm2.5) Uncontrolled	0.01985	0.06				
					Model lbs/hr	
E(tsp) Controlled	0.27719	0.10	Annual Emissions are Contr	rolled by Limiting Annual Production	0.19522	
E(pm10) Controlled	0.13110	0.05	Annual Emissions are Contr	rolled by Limiting Annual Production	0.09234	
E(pm2.5) Controlled	0.01985	0.01	Annual Emissions are Contr	rolled by Limiting Annual Production	0.01398	

<u>RAP Feed Bin Unloading</u> AP-42 Table 11.19.2-2 "Conveyor Transfer Point Uncontrolled"	E(TSP) =	0.00300 lbs/ton		
Ver 8/2004	E(PM10) = E(PM2.5) =	0.00110 lbs/ton 0.00017 lbs/ton		
AP-42 Table 11 19 2-2 "Conveyor Transfer Point Controlled"	F(TSP) =	0.00014 lbs/br	95.33 % Control Efficiency	AP-42 Table 11.19.2-2
Ver 8/2004	E(PM10) =	0.000046 lbs/ton		
	E(PM2.5) =	0.000013 lbs/ton		
Throughput	_()	140.0 tph		
	lb/hr	tons/yr		
E(tsp) Uncontrolled	0.42000	1.840		
E(pm10) Uncontrolled	0.15400	0.675		
E(pm2.5) Uncontrolled	0.02380	0.104		
E(tsp) Controlled	0.01960	0.010		
E(pm10) Controlled	0.00644	0.003		
E(pm2.5) Controlled	0.00182	0.001		
RAP Scalping Screen		0.00500 11 /		
AP-42 Table 11.19.2-2 "Screening Uncontrolled"	E(ISP) =	0.02500 lbs/ton		
ver 8/2004	E(PM10) = E(PM25) = 0	0.008/0 Ibs/ton		
	E(PM2.5) =	0.00132 Ibs/ton	91.20 % Control Efficiency	AP-42 Table 11.19.2-2
AP-42 Table 11.19.2-2 "Screening Controlled"	E(TSP) =	0.00220 lbs/hr		
Ver 8/2004	E(PM10) =	0.00074 lbs/ton		
	E(PM2.5) =	0.00005 lbs/ton		
Throughput		140.0 tph		
	lb/hr	tons/yr		
E(tsp) Uncontrolled	3.50000	15.330		
E(pm10) Uncontrolled	1.21800	5.335		
E(pm2.5) Uncontrolled	0.18480	0.809		
E(tsp) Controlled	0.30800	0.154		
E(pm10) Controlled	0.10360	0.052		
E(pm2.5) Controlled	0.00700	0.004		
RAP Sscalping Screen Unloading				
AP-42 Table 11.19.2-2 "Conveyor Transfer Point Uncontrolled"	E(TSP) =	0.00300 lbs/ton		
Ver 8/2004	E(PM10) =	0.00110 lbs/ton		
	E(PM2.5) =	0.00017 lbs/ton	95.33 % Control Efficiency	ΔP-42 Table 11 19 2-2
AP-42 Table 11.19.2-2 "Conveyor Transfer Point Controlled"	E(TSP) =	0.00014 lbs/hr	5.55 % Control Enfecting	711 42 10010 11.19.2 2
Ver 8/2004	E(PM10) =	0.000046 lbs/ton		
	E(PM2.5) =	0.000013 lbs/ton		
Throughput		140.0 tph		
	lb/hr	tons/yr		
E(tsp) Uncontrolled	0.42000	1.840		
E(pm10) Uncontrolled	0.15400	0.675		
E(pm2.5) Uncontrolled	0.02380	0.104		
E(tsp) Controlled	0.01960	0.010		
E(pm10) Controlled	0.00644	0.003		
E(pm2.5) Controlled	0.00182	0.001		

RAP Transfer Conveyor to Conveyor

AP-42 Table 11.19.2-2 "Conveyor Transfer Point Uncontrolled" Ver 8/2004	E(TSP) = E(PM10) = E(PM2.5) =	0.00300 0.00110 0.00017	lbs/ton lbs/ton lbs/ton
AP-42 Table 11.19.2-2 "Conveyor Transfer Point Controlled" Ver 8/2004	E(TSP) = E(PM10) = E(PM2.5) =	0.00014 0.000046 0.000013	lbs/hr lbs/ton lbs/ton
Throughput		140.0	J tpi
E(tsp) Uncontrolled E(pm10) Uncontrolled E(pm2.5) Uncontrolled	lb/hr 0.42000 0.15400 0.02380	tons/yr 1.840 0.675 0.104	
E(tsp) Controlled E(pm10) Controlled E(pm2.5) Controlled	0.01960 0.00644 0.00182	0.010 0.003 0.001	
RAP Transfer Conveyor to Drum AP-42 Table 11.19.2-2 "Conveyor Transfer Point Uncontrolled" Ver 8/2004	E(TSP) = E(PM10) = E(PM2.5) =	0.00300 0.00110 0.00017	lbs/ton lbs/ton lbs/ton
AP-42 Table 11.19.2-2 "Conveyor Transfer Point Controlled" Ver 8/2004 Throughput	E(TSP) = E(PM10) = E(PM2.5) =	0.00014 0.000046 0.000013 140.0	lbs/hr lbs/ton lbs/ton 0 tph
E(tsp) Uncontrolled E(pm10) Uncontrolled E(pm2.5) Uncontrolled	lb/hr 0.42000 0.15400 0.02380	tons/yr 1.840 0.675 0.104	
E(tsp) Controlled E(pm10) Controlled E(pm2.5) Controlled	0.01960 0.00644 0.00182	0.010 0.003 0.001	

95.33 % Control Efficiency AP-42 Table 11.19.2-2

95.33 % Control Efficiency AP-42 T

AP-42 Table 11.19.2-2

Mineral Filler Silo

E(TSP) =0.72 lbs/onUncontrolled Cement Silo Loading TSPE(PM10) =0.46 lbs/onUncontrolled Cement Silo Loading PM10E(PM2.5) =0.036 lbs/onUncontrolled Cement Silo Loading PM2.5 (TSP $* 0.5025$; Tabe $11.12-3$ Uncontrolled 6000.00 tons/yr uncontrolled 6000.00 tons/yr controlled 25 lph Max6 lph Ave52560.00 tons/yr uncontrolled 6000.00 tons/yr controlled 6000.00 tons/yr controlled 6000.00 tons/yr controlled 2.76000Max tph Mineral Filler1b/hrlb/hr Avetons/yrE(tsp) uncontrolled cement E(pm10) uncontrolled cement18.000004.3200018.922E(pm10) uncontrolled cement E(pm2.5) uncontrolled cement99.0Engineering Judgement based on AP-42 Section 11.12 "Concrete Batching" Table 11.12-2 "Cement Unoder E(TSP) =0.0072 lbs/onControlled Cement Silo Loading TSPE(TSP) =0.0072 lbs/onControlled Cement Silo Loading TSP E(PM10) =0.00046 lbs/tonControlled Cement Silo Loading PM10 E(PM2.5) =South Silo Loading TSPE(TSP) =0.00036 lbs/tonControlled Cement Silo Loading TSP E(PM10) =Controlled lbs/tonControlled Cement Silo Loading TSPE(PM2.5) =0.00036 lbs/tonControlled Cement Silo Loading PM10 Controlled Cement Silo Loading PM10Controlled K factors)
E(PM10) = E(PM2.5) =0.46 lbs/cnUncontrolled Cement Silo Loading PM10 Uncontrolled Cement Silo Loading PM2.5 (TSP * 0.5025; Table 1.1.2-3 Uncontrolled 6000.00 tons/yr uncontrolled 600000E(pm10) uncontrolled cement E(PM10) = E(PM10) = E(PM10) = (E(PM2.5) =0.0072 lbs/cn 0.0006 lbs/cnControlled Cement Silo Loading TSP Controlled Cement Silo Loading TSP Controlled Cement Silo Loading PM10 Controlled Cement Silo Loading P
E(PM2.5) =0.036 lbs/tonUncontrolled Cement Silo Loading PM2.5 (TSP * 0.05025; Table 11.12-3 Uncontrolled)Max tph Mineral Filler25 tph Max6 tph Ave52560.00 tons/yr uncontrolled comot cons/yrE(tsp) uncontrolled cement18.00004.3200018.922E(tsp) uncontrolled cement11.500002.7600012.089E(pm10) uncontrolled cement0.900000.216000.946E(pm2.5) uncontrolled cement90. %Ragineering Judgement based on Judgement based on AP-42 Section 11.12 "Concrete Batching" Table LI-L2-2" Cement Silo Loading TSP E(TSP) =0.0072 lbs/ton 0.0046 lbs/tonControlled Cement Silo Loading TSP E(PM10) =E(TSP) =E(TSP) =0.0072 lbs/ton 0.0046 lbs/tonControlled Cement Silo Loading TSP E(PM10) =E(TSP) =0.0036 lbs/tonE(TSP) =0.0036 lbs/tonControlled Cement Silo Loading TSP E(PM10) =E(TSP) =0.0036 lbs/tonControlled Cement Silo Loading TSP E(PM10) =E(TSP) =0.0036 lbs/tonControlled Cement Silo Loading TSP E(PM10) =E(TSP) =Controlled Cement Silo Loading TSP E(PM10) =E(TSP) =0.0036 lbs/tonControlled Cement Silo Loading TSP E(PM10) =E(TSP) =E(TSP) =0.0036 lbs/tonControlled Cement Silo Loading TSP E(PM10) =E(PM2.5) =0.0036 lbs/tonControlled Cement Silo Loading PM10
Max tph Mineral Filler 6 ± Max 5 250.00 ton s/yr uncontrolled conset/ c000.00 ton s/yr controlled conset/ 18.0000 10 10 10 10 10 10 10 10 10 10 10 10 10 1
Ibhr Ibhr Ave tons/r E(tsp) uncontrolled cement 18.0000 4.32000 18.922 E(pm10) uncontrolled cement 11.5000 2.76000 12.089 E(pm2.5) uncontrolled cement 0.9000 0.21600 0.946 Equation AP-42 Section 11.12 "Concrete Batching" Table 11.12-2" Crement Uncontrolled temissions based on AP-42 Section 11.12 "Concrete Batching" Table 11.12-2" Crement Uncontrolled temission Exerct Uncontrolled Equation 11.12" Concrete Batching" Table 11.12-2" Crement Uncontrolled Exerct Uncontrolled Equation 11.12" Concrete Batching" Table 11.12-2" Crement Uncontrolled Exerct Uncontrole
E(tsp) uncontrolled cement18.00004.3200018.922E(pm10) uncontrolled cement11.50002.7600012.089E(pm2.5) uncontrolled cement0.90000.216000.946Baghouse Control Efficiency99. %Engineering Judgement based on AP-42 Section 11.12 "Concrete Batching" Table 11.12-2 "Cement Unloading TSPE(TSP) =0.0072 lbs/tonControlled Cement Silo Loading TSPE(PM10) =0.0046 lbs/tonControlled Cement Silo Loading PM10E(PM2.5) =0.00036 lbs/tonControlled Cement Silo Loading PM2.5 (TSP * 0.06; Table 11.12-3 Controlled K factors)
E(pm10) uncontrolled cement11.50002.7600012.089E(pm2.5) uncontrolled cement0.90000.216000.946Baghouse Control Efficiency99.0 %Engineering Judgement based on lower end of Baghouse ControlsE(TSP) = 0.0072 lbs/tonControlled Cement Silo Loading TSPE(PM10) =0.0046 lbs/tonControlled Cement Silo Loading PM10E(PM2.5) =0.00036 lbs/tonControlled Cement Silo Loading PM2.5 (TSP * 0.06; Table 11.12-3 Controlled K factors)
E(pm2.5) uncontrolled cement 0.9000 0.21600 0.946 Baghouse Control Efficiency 99.0 % Engineering Judgement based on AP-42 Section 11.12 "Concrete Batching" Table 11.12-2 "Cement Utbodie Everate Silo" and %CE E(TSP) = 0.0072 lbs/ton Controlled Cement Silo Loading TSP E(PM10) = 0.0046 lbs/ton Controlled Cement Silo Loading PM10 E(PM2.5) = 0.00036 lbs/ton Controlled Cement Silo Loading PM2.5 (TSP * 0.06; Table 11.12-3 Controlled K factors)
Baghouse Control Efficiency 99. % Engineering Judgement based on lower end of Baghouse Controls Uncontrolled emissions based on AP-42 Section 11.12 "Concrete Batching" Table 11.12-2 "Cement Unloading to Elevated Storage Silo" and %CE Evated Storage Silo" and %CE E(TSP) = 0.0072 lbs/ton Controlled Cement Silo Loading TSP E(PM10) = 0.0046 lbs/ton Controlled Cement Silo Loading PM10 E(PM2.5) = 0.00036 lbs/ton Controlled Cement Silo Loading PM2.5 (TSP * 0.06; Table 11.12-3 Controlled K factors)
Uncontrolled emissions based on AP-42 Section 11.12 "Concrete Batching" Table 11.12-2 "Cement Unloading to Elevated Storage Silo" and %CE $E(TSP) =$ 0.0072 lbs/tonControlled Cement Silo Loading TSP $E(PM10) =$ 0.0046 lbs/tonControlled Cement Silo Loading PM10 $E(PM2.5) =$ 0.00036 lbs/tonControlled Cement Silo Loading PM2.5 (TSP * 0.06; Table 11.12-3 Controlled K factors)
E(TSP) =0.0072 lbs/tonControlled Cement Silo Loading TSPE(PM10) =0.0046 lbs/tonControlled Cement Silo Loading PM10E(PM2.5) =0.00036 lbs/tonControlled Cement Silo Loading PM2.5 (TSP * 0.06; Table 11.12-3 Controlled K factors)
E(PM10) =0.0046 lbs/tonControlled Cement Silo Loading PM10E(PM2.5) =0.00036 lbs/tonControlled Cement Silo Loading PM2.5 (TSP * 0.06; Table 11.12-3 Controlled K factors)
E(PM2.5) = 0.00036 lbs/ton Controlled Cement Silo Loading PM2.5 (TSP * 0.06; Table 11.12-3 Controlled K factors)
lb/hr lb/hr Ave tons/yr
E(tsp) controlled 0.18000 0.04320 0.022
E(pm10) controlled 0.02760 0.014
E(pm2.5) controlled 0.00900 0.00216 0.001
Aspahlt Cement Storage Tank
TANKS 4.0.9d
Tank capacity 20000 gallons
Tons Per Hour 24 tons
Tons Per Year 24000 tons
Density 9.22 lbs/gallon
Gallons Per Hour 5206.1 gal/hr
Gallons Per Year 5206073.8 gal/yr
Tank Temperature325 degrees f
Turnovers260.3036876 per year
Working Loss TOC 123.42 lbs/yr
Breathing Loss TOC 0 lbs/yr
Total TOC 123.42 lbs/yr
Total TOC 0.014 lbs/hr
Total TOC 0.062 tpy
Total Asphalt Fumes 0.00018 lbs/hr 1.3% of VOC
Total Asphalt Fumes0.00080 tpy1.3% of VOC

Drum Mixer Emissions

Uncontrolled emissions based on AP-42 Section 11.1 "Hot Mix Asphalt Plants" Table 11.1-3, -4, -7, -8, -14

E(NOx) =

E(CO) =

E(CO2) =

E(TSP) =	28.000 lbs/ton	Uncontrolled Drum Mixer	
E(PM10) =	6.500 lbs/ton	Uncontrolled Drum Mixer	
E(PM2.5) =	1.565 lbs/ton	Uncontrolled Drum Mixer	Table 11.1-4 plus condensable
E(NOx) =	0.055 lbs/ton	Uncontrolled Drum Mixer	
E(CO) =	0.130 lbs/ton	Uncontrolled Drum Mixer	
E(SO2) =	0.058 lbs/ton	Uncontrolled Drum Mixer	
E(VOC) =	0.032 lbs/ton	Uncontrolled Drum Mixer	
E(Asphalt Fumes) =	0.012 lbs/ton	Uncontrolled Drum Mixer	Table 11.1-3 Organic Condensable
E(CO) Silo Filling =	0.001179981 lbs/ton	Uncontrolled Drum Unloading CO	-
E(TOC) Silo Filling =	0.012186685 lbs/ton	Uncontrolled Drum Unloading TOC	
E(Asphalt Fumes) Silo Filling =	0.000188603 lbs/ton	Uncontrolled Drum Unloading PM	
E(TSP) Silo Filling =	0.000585889 lbs/ton	Uncontrolled Drum Unloading PM	
E(PM10) Silo Filling =	0.000585889 lbs/ton	Uncontrolled Drum Unloading PM	
E(PM2.5) Silo Filling =	0.000585889 lbs/ton	Uncontrolled Drum Unloading PM	
E(CO) Plant Unloading =	0.001349240 lbs/ton	Uncontrolled Silo Loading CO	
E(TOC) Plant Unloading =	0.004158948 lbs/ton	Uncontrolled Silo Loading TOC	
E(Asphalt Fumes) Plant Unloading =	0.000087048 lbs/ton	Uncontrolled Silo Loading PM Organic	
E(TSP) Plant Unloading =	0.000521937 lbs/ton	Uncontrolled Silo Loading PM	
E(PM10) Plant Unloading =	0.000521937 lbs/ton	Uncontrolled Silo Loading PM	
E(PM2.5) Plant Unloading =	0.000521937 lbs/ton	Uncontrolled Silo Loading PM	
E(CO) Yard =	0.000352000 lbs/ton	Uncontrolled Yard CO	
E(TOC) Yard =	0.001100000 lbs/ton	Uncontrolled Yard TOC	
TSP	11200.00 lbs/hr	49056.00 tons/yr	
PM10	2600.00 lbs/hr	11388.00 tons/yr	
PM2.5	626.00 lbs/hr	2741.88 tons/yr	
NOx	22.00 lbs/hr	96.36 tons/yr	
СО	52.00 lbs/hr	227.76 tons/yr	
SO2	23.20 lbs/hr	101.62 tons/yr	
VOC	12.80 lbs/hr	56.06 tons/yr	
Asphalt Fumes	4.80 lbs/hr	21.02 tons/yr	
CO Silo Filling	0.47 lbs/hr	2.07 tons/yr	
TOC Silo Filling	4.87 lbs/hr	21.4 tons/yr	
Asphalt Fumes Silo Filling	0.075 lbs/hr	0.33 tons/yr	
TSP Silo Filling	0.23 lbs/hr	1.03 tons/yr	
PM10 Silo Filling	0.23 lbs/hr	1.03 tons/yr	
PM2.5 Silo Filling	0.23 lbs/hr	1.03 tons/yr	
CO Plant Unloading	0.54 lbs/hr	2.36 tons/yr	
TOC Plant Unloading	1.66 lbs/hr	7.29 tons/yr	
Asphalt Fumes Plant Unloading	0.03 lbs/hr	0.15 tons/yr	
TSP Plant Unloading	0.21 lbs/hr	0.91 tons/yr	
PM10 Plant Unloading	0.21 lbs/hr	0.91 tons/yr	
PM2.5 Plant Unloading	0.21 lbs/hr	0.91 tons/yr	
CO Yard	0.14 lbs/hr	0.62 tons/yr	
TOC Yard	0.44 lbs/hr	1.93 tons/yr	
Asphalt Fumes Yard	0.01 lbs/hr	0.03 tons/yr	1.5% of TOC
Controlled emissions based on AP-42 Section 11	1 "Hot Mix Asphalt Plants" Table 11.1-3, -7, -8, -14		
E(TSP) =	0.033 lbs/ton	Controlled Drum Mixer	99.88 % Control Efficie
E(PM10) =	0.023 lbs/ton	Controlled Drum Mixer	
E(PM2.5) =	0.023 lbs/ton	Controlled Drum Mixer	

0.055 lbs/ton

0.130 lbs/ton

33.000 lbs/ton

Controlled Drum Mixer

Controlled Drum Mixer

Controlled Drum Mixer

AP-42 Section 11.1

ciency

E(CH4) =	0.012 lbs/ton	Controlled Drum Mixer	
E(SO2) =	0.058 lbs/ton	Controlled Drum Mixer	
E(VOC) =	0.032 lbs/ton	Controlled Drum Mixer	
E(Asphalt Fumes) =	0.012 lbs/ton	Controlled Drum Mixer	Table 11.1-3 Organic Condensable
E(CO) Silo Filling =	0.001179981 lbs/ton	Controlled Drum Unloading CO	
E(TOC) Silo Filling =	0.012186685 lbs/ton	Controlled Drum Unloading TOC	
E(Asphalt Fumes) Silo Filling =	0.000188603 lbs/ton	Controlled Drum Unloading TOC	
E(TSP) Silo Filling =	0.000585889 lbs/ton	Controlled Drum Unloading PM	
E(PM10) Silo Filling =	0.000585889 lbs/ton	Controlled Drum Unloading PM	
E(PM2.5) Silo Filling =	0.000585889 lbs/ton	Controlled Drum Unloading PM	
E(CO) Plant Unloading =	0.001349240 lbs/ton	Controlled Silo Loading CO	
E(TOC) Plant Unloading =	0.004158948 lbs/ton	Controlled Silo Loading TOC	
E(Asphalt Fumes) Plant Unloading =	0.000087048 lbs/ton	Controlled Silo Loading PM Organic	
E(TSP) Plant Unloading =	0.000521937 lbs/ton	Controlled Silo Unloading PM	
E(PM10) Plant Unloading =	0.000521937 lbs/ton	Controlled Silo Unloading PM	
E(PM2.5) Plant Unloading =	0.000521937 lbs/ton	Controlled Silo Unloading PM	
E(CO) Yard =	0.000352000 lbs/ton	Controlled Yard CO	
E(TOC) Yard =	0.001100000 lbs/ton	Controlled Yard TOC	
TSP	13.20 lbs/hr	6.60 tons/yr	AP-42 11.1
PM10	9.20 lbs/hr	4.60 tons/yr	
PM2.5	9.20 lbs/hr	4.60 tons/yr	
NOx	22.00 lbs/hr	11.00 tons/yr	
СО	52.00 lbs/hr	26.00 tons/yr	
CO2	13200.00 lbs/hr	6600.00 tons/yr	
CH4	4.80 lbs/hr	2.40 tons/yr	
SO2	23.20 lbs/hr	11.60 tons/yr	
VOC	12.80 lbs/hr	6.40 tons/yr	
Asphalt Fumes	4.80 lbs/hr	2.40 tons/yr	
CO Silo Filling	0.47 lbs/hr	0.24 tons/yr	
TOC Silo Filling	4.87 lbs/hr	2.44 tons/yr	
Asphalt Fumes Silo Filling	0.075 lbs/hr	0.04 tons/yr	
TSP Silo Filling	0.23 lbs/hr	0.12 tons/yr	
PM10 Silo Filling	0.23 lbs/hr	0.12 tons/yr	
PM2.5 Silo Filling	0.23 lbs/hr	0.12 tons/yr	
CO Plant Unloading	0.54 lbs/hr	0.27 tons/yr	
TOC Plant Unloading	1.66 lbs/hr	0.83 tons/yr	
Asphalt Fumes Plant Unloading	0.035 lbs/hr	0.02 tons/yr	
TSP Plant Unloading	0.21 lbs/hr	0.10 tons/yr	
PM10 Plant Unloading	0.21 lbs/hr	0.10 tons/yr	
PM2.5 Plant Unloading	0.21 lbs/hr	0.10 tons/yr	
CO Yard	0.14 lbs/hr	0.070 tons/yr	
TOC Yard	0.44 lbs/hr	0.22 tons/yr	
Asphalt Fumes Yard	0.0066 lbs/hr	0.003 tons/yr	1.5% of TOC

		400 11 11			
Haul Road Traffic					
AP-42 13.2 Unpaved Road (11/06)					
Equation:					
$E = k(s/12)^{a*}(W/3)^{b*}[(365-p)/365]$	An	nual emissions only include p factor			
k TSP	4.9				
k PM10	1.5				
k PM25	0.15				
a TSP	0.7				
a PM10	0.9				
a PM25	0.9				
b TSP	0.45				
b PM10	0.45				
b PM25	0.45				
% Silt Content = s	4.8 %	Sand and Gravel (AP-42 I	3.2.2-1)		
p = days with precipitation over 0.01 inches	/0				
Vehicle control		90.0 %	Surfactants/millings and water		
Mineral Filler Truck VMT Unpaved		769.5 meter/one way vehicle	25 tons/load	6 tons/hr	0.95652 miles/vehicle
Asphalt Cement Truck VMT Unpaved		769.5 meter/one way vehicle	25 tons/load	24 tons/hr	0.95652 miles/vehicle
Asphalt Truck VMT Unpaved		769.5 meter/one way vehicle	25 tons/load	400 tons/hr	0.95652 miles/vehicle
RAP Truck VMTUnpaved		769.5 meter/one way vehicle	25 tons/load	140 tons/hr	0.95652 miles/vehicle
Max. Mineral Filler Truck/hr		0.2 truck/hr			
Max. Asphalt Cement Truck/hr		1.0 truck/hr			
Max. Asphalt Truck/hr		16.0 truck/hr			
Max. RAP Truck/hr		5.6 truck/hr			
Max. Total Truck into Site		22.8 truck/hr			
Mineral Filler Truck VMT Unpaved		0.22956 miles/hr	229.5645652	229.5645652	
Asphalt Cement Truck VMT Unpaved		0.91826 miles/hr	918.2582609	918.2582609	
Asphalt Truck VMT Unpaved		15.30430 miles/hr	15304.30435	15304.30435	
RAP Truck VMTUnpaved		5.35651 miles/hr	5356.506522	5356.506522	
		21.809 miles/hr	21808.634	21808.634	
Mineral Filler Truck weight		27.5 tons			
Asphalt Cement Truck weight		27.5 tons			
Asphalt Truck weight		27.5 tons			
RAP Truck weight		27.5 tons			
		TSP Uncor	ntrolled		TSP Control
Max. Mineral Filler Truck Emissions Unpaved		1.61 lbs/hr	0.65 tons/yr	0.16 lbs/	hr 0.065 tons/yr
Max. Asphalt Cement Truck Emissions Unpaved		6.42 lbs/hr	2.59 tons/yr	0.64 lbs/	hr 0.26 tons/yr
Max. Asphalt Truck Emissions Unpaved		107.02 lbs/hr	43.25 tons/yr	10.70 lbs/	hr 4.32 tons/yr
Max. RAP Truck Emissions Unpaved		37.46 lbs/hr	15.14 tons/yr	3.75 lbs/	hr 1.51 tons/yr
	total traffic	152.50 lbs/hr	61.63 tons/yr	15.25 lbs/	hr 6.16 tons/yr
		PM10 Unco	ontrolled		PM10 Control
Max. Mineral Filler Truck Emissions Unpaved		0.41 lbs/hr	0.17 tons/yr	0.041 lbs/	hr 0.017 tons/yr
Max. Asphalt Cement Truck Emissions Unpaved		1.64 lbs/hr	0.66 tons/yr	0.16 lbs/	hr 0.066 tons/yr
Max. Asphalt Truck Emissions Unpaved		27.27 lbs/hr	11.02 tons/yr	2.73 lbs/	hr 1.10 tons/yr
Max. RAP Truck Emissions Unpaved		9.55 lbs/hr	3.86 tons/yr	0.95 lbs/	hr 0.39 tons/yr
	total traffic	38.87 lbs/hr	15.71 tons/yr	3.89 lbs/	hr 1.57 tons/yr

		F	PM2.5 Uncontrolled	PM2.5 Control	
Max. Mineral Filler Truck Emissions Unpaved		0.041 lbs/hr	0.017 tons/yr	0.0041 lbs/hr	0.0017 tons/yr
Max. Asphalt Cement Truck Emissions Unpaved		0.16 lbs/hr	0.066 tons/yr	0.016 lbs/hr	0.0066 tons/yr
Max. Asphalt Truck Emissions Unpaved		2.73 lbs/hr	1.10 tons/yr	0.27 lbs/hr	0.11 tons/yr
Max. RAP Truck Emissions Unpaved		0.95 lbs/hr	0.39 tons/yr	0.095 lbs/hr	0.039 tons/yr
	total traffic	3.89 lbs/hr	1.57 tons/yr	0.39 lbs/hr	0.16 tons/yr

Elam Construction - NSR Asphalt Mixing Plant Emission Summary Generator Emissions

Main Plant GeneratorCAT 3512 DITA				Plant Standby Generator				
Manufacturer Spe	ecification NOx, CO, V	OC, and PM Emissions	Tier 3	NOx, CO, VOC, and PM Emissions				
Engine Size	1000 kW	horsepower	1429	Engine Size	118 kW	horsepower	158	
	72.6 gal/hr	%sulfur	0.05 %		6.1 gal/hr	% sulfur	0.05 %	
Uncontrolled Hou	urs 8760			Uncontrolled Hours	876	0		
Controlled Hours	4800			Controlled Hours	396	0		
Emission Factors				Emission Factors				
NOx	33.30 lbs/hr			NOx	4.00 gram/hp-hr	NMHC+NOx Emission Factor		
CO	5.00 lbs/hr			CO	5.00 gram/hp-hr			
VOC	1.10 lbs/hr			VOC	0.40 gram/hp-hr	10% of NMHC+NOx NMHC+NOx	Υ.	
SO2	0.52 lbs/hr	SO2 emissions ba	sed on fuel usage	SO2	0.043 lbs/hr	SO2 emissions based on fuel usage	gal/hr	
TSP	0.31 lbs/hr	gal/hr times 7.0 lb	s/gal times fuel %	TSP	0.30 gram/hp-hr	times 7.0 lbs/gal times fuel % sulfur	r content	
PM10	0.31 lbs/hr	sulfur content time	es a factor of 2.	PM10	0.30 gram/hp-hr	times a factor of 2.		
PM2.5	0.31 lbs/hr			PM2.5	0.30 gram/hp-hr			
CO2	1599.40 lbs/hr			CO2	1.08 lbs/hp-hr			
CH4	0.000705 lbs/hp-hr			CH4 (0.000705 lbs/hp-hr			
Calculated Uncon	trolled Emissions			Calculated Uncontro	llad Emissions			
	33 30 lbs/br	145.85 tons/ur			1 04 lbs/br	1.56 tons/ur		
NOX CO	5.30 lbs/hr	21.90 tons/yr		CO	1.04 lbs/hr	5.70 tons/yr		
VOC	1.10 lbs/hr	4.82 tons/yr		VOC	0.10 lbs/br	0.46 tons/yr		
502	0.52 lbs/hr	2.26 tons/yr		V0C S02	0.10 lbs/hr	0.19 tons/yr		
TSP	0.32 lbs/hr	1.36 tons/yr		TSP	0.043 lbs/hr	0.34 tons/yr		
PM10	0.31 lbs/hr	1.36 tons/yr		PM10	0.078 lbs/hr	0.34 tons/yr		
PM2 5	0.31 lbs/hr	1.36 tons/yr		PM2 5	0.078 lbs/hr	0.34 tons/yr		
CO2	1509.40 lbs/hr	7005 37 tons/yr		CO2	170.6 lbs/hr	7.74 tons/yr		
CH4	1000000000000000000000000000000000000	$\frac{1}{1} \frac{1}{1} \frac{1}$		CH4	0.11 lbs/br	0.49 tons/yr		
	1.01 105/11	4.41 tons/yi			0.11 105/11	0.+9 tons/yr		
Calculated Contro	olled Emissions			Calculated Controlle	d Emissions			
NOx	33.30 lbs/hr	79.92 tons/yr		NOx	1.04 lbs/hr	2.06 tons/yr		
CO	5.00 lbs/hr	12.00 tons/yr		CO	1.30 lbs/hr	2.58 tons/yr		
VOC	1.10 lbs/hr	2.64 tons/yr		VOC	0.10 lbs/hr	0.21 tons/yr		
SO2	0.52 lbs/hr	1.24 tons/yr		SO2	0.04 lbs/hr	0.086 tons/yr		
TSP	0.31 lbs/hr	0.74 tons/yr		TSP	0.078 lbs/hr	0.15 tons/yr		
PM10	0.31 lbs/hr	0.74 tons/yr		PM10	0.078 lbs/hr	0.15 tons/yr		
PM2.5	0.31 lbs/hr	0.74 tons/yr		PM2.5	0.078 lbs/hr	0.15 tons/yr		
CO2	1599.40 lbs/hr	3838.56 tons/yr		CO2	170.64 lbs/hr	337.9 tons/yr		
CH4	1.01 lbs/hr	2.42 tons/yr		CH4	0.11 lbs/hr	0.22 tons/yr		

Elam Construction - NSR Asphalt Mixing Plant Emission Summary Hot Oil Heater Emissions

Asphalt Heater #1 AP-42 1.3 (5/10)

AP-42 1.5 (7/08)

Heater Siz	ze		Diesel				Natural	Gas or Propane	
	1000000) BTU/hr	Heat Rate	128000 BTU/gal		100000) BTU/hr	Heat Rate	91500 BTU/gal
7.8 gal/hr		%sulfur	0.05	10.9 gal/hr					
**		07.00			.		07.00		
Uncontrol	led Hours	8760			Uncontro	lled Hours	8760		
Controlled	1 Hours	8760			Controlle	d Hours	8760		
Emission	Factors				Emission	Factors			
EIIIISSIOII I NOv	20.00	$1b_{c}/1000$ col			NOv	12	$1b_{c}/1000$ col		
CO	20.00	105/1000 gal			CO	15	10s/1000 gal		
VOC	0.34	105/1000 gal			VOC	1.5	10s/1000 gal		
VUC	1429	10s/1000 gal	$\mathbf{S} = 0/$ outfur		soc	1	10s/1000 gal		
302 DM	2.00	105/1000 gal	S = 70 Sultur		502 DM	0.018	105/1000 gal		
	2.00	105/1000 gai				12500	10s/1000 gai		
	22300.00	10s/1000 gal				0.200	10s/1000 gal		
СП4 N2O	0.210	10s/1000 gal			СП4 N2O	0.200	10s/1000 gal		
N20	0.20	105/1000 gai			N20	0.90	105/1000 gai		
Calculated Uncontrolled Emissions				Calculate	d Uncontrol	led Emissions			
NOx	0.156	5 lbs/hr	0.684 tpy		NOx	0.14	1 lbs/hr	0.6 tpy	
CO	0.039) lbs/hr	0.171 tpy		CO	0.08	8 lbs/hr	0.36 tpy	
VOC	0.0027	7 lbs/hr	0.012 tpy		VOC	0.01	l lbs/hr	0.05 tpy	
SOx	0.055	5 lbs/hr	0.243 tpy		SOx	0.00020) lbs/hr	0.0009 tpy	
PM	0.016	5 lbs/hr	0.068 tpy		PM	0.008	8 lbs/hr	0.034 tpy	
CO2	174.2	2 lbs/hr	763.1 tpy		CO2	136.0	5 lbs/hr	598.4 tpy	
CH4	0.0017	7 lbs/hr	0.0074 tpy		CH4	0.0022	2 lbs/hr	0.0096 tpy	
N2O	0.0020) lbs/hr	0.0089 tpy		N2O	0.0098	3 lbs/hr	0.0431 tpy	
Calculated Controlled Emissions				Calculate	d Controlled	Emissions			
NOx	0.16	5 lbs/hr	0.68 tpy		NOx	0.14	4 lbs/hr	0.62 tpy	
CO	0.039	9 lbs/hr	0.17 tpy		CO	0.082	2 lbs/hr	0.36 tpy	
VOC	0.0027	7 lbs/hr	0.012 tpy		VOC	0.01	l lbs/hr	0.048 tpy	
SOx	0.055	5 lbs/hr	0.24 tpy		SOx	0.00020) lbs/hr	0.00086 tpy	
PM	0.016	5 lbs/hr	0.068 tpy		PM	0.007	7 lbs/hr	0.034 tpy	
CO2	174.2	2 lbs/hr	763.1 tpy		CO2	136.0	5 lbs/hr	598.4 tpy	
CH4	0.0017	7 lbs/hr	0.0074 tpy		CH4	0.0022	2 lbs/hr	0.0096 tpy	
N2O	0.0020) lbs/hr	0.0089 tpy		N2O	0.0098	3 lbs/hr	0.043 tpy	

							Uncontroll	ed Emission	Totals								
		N	Ox	С	0	S	02	V	OC	Т	SP	PN	410	PM	12.5	Aspha	lt Fumes
		lbs/hr	tons/vr	lbs/hr	tons/vr	lbs/hr	tons/vr	lbs/hr	tons/vr	lbs/hr	tons/vr	lbs/hr	tons/vr	lbs/hr	tons/vr	lbs/hr	tons/vr
52	Cold Aggregate/RAP Storage Pile									2.44	7.53	1.15	3.56	0.17	0.54		
53	Feed Bin Loading									1.52	4.68	0.72	2.21	0.11	0.34		
54	Feed Bin Unloading									0.69	3.02	0.25	1 11	0.04	0.17		
55	Scalning Screen									5.75	25.19	2.00	8 76	0.30	1 33		
56	Scalping Screen Unloading									0.69	3.02	0.25	1 11	0.039	0.17		
57	Pug Mill Load									0.07	3.02	0.25	1.11	0.035	0.17		
59	Pug Mill Unload									0.71	3.10	0.20	1.14	0.040	0.18		
50	Convoyor Tronsfer to Slinger Convoyor									0.71	3.10	0.20	1.14	0.040	0.18		
59	DAD Din Loading									0.71	0.86	0.20	0.40	0.040	0.18		
60	RAP Din Lulading									0.28	0.80	0.15	0.40	0.020	0.001		
61										0.42	1.04	0.13	5.22	0.024	0.10		
62	RAP Screen									3.30	15.55	0.15	5.55	0.18	0.81		
63	RAP Screen Unloading									0.42	1.84	0.15	0.67	0.024	0.10		
64	RAP Transfer Conveyor									0.42	1.84	0.15	0.67	0.024	0.10		
65	RAP Transfer Conveyor									0.42	1.84	0.15	0.67	0.024	0.10		
66	Mineral Filler Silo Loading						101			18.00	18.92	11.50	12.09	0.90	0.95		
68	Drum Dryer	22.0	96.4	52.0	227.8	23.2	101.6	12.8	56.1	11200	49056	2600	11388	626	2742	4.8	21
70	Drum Mixer Unloading			0.47	2.07			4.87	21.4	0.23	1.03	0.23	1.03	0.23	1.03	0.075	0.33
71	Asphalt Silo Unloading			0.54	2.36			1.66	7.29	0.21	0.91	0.21	0.91	0.21	0.91	0.035	0.15
72	Asphalt Heater	0.16	0.68	0.082	0.36	0.055	0.24	0.011	0.048	0.016	0.068	0.016	0.068	0.016	0.068		
73	Asphalt Cement Storage Tank			***	***			0.014	0.062							0.00018	0.00080
74	HMA Main Plant Generator	33.3	145.9	5.00	21.9	0.52	2.26	1.10	4.82	0.31	1.36	0.31	1.36	0.31	1.36		
75	HMA Standby Generator	1.04	4.56	1.30	5.70	0.043	0.19	0.10	0.46	0.078	0.34	0.078	0.34	0.078	0.34		
76	Haul Road Traffic									152.5	61.6	38.9	15.7	3.89	1.57		
77	Yard			0.14	0.62			0.44	1.93							0.0066	0.029
	Total	56	247	60	261	24	104	21	92	11390	49217	2658	11448	633	2752	4.9	22
			•						-	18.67	76.29	7.12	28.61	1.09	4.36		
							Controlle	d Emission '	Totals								
		N	Ox	С	0	S	02	V	OC	Т	SP	PN	410	PM	12.5	Aspha	lt Fumes
		lbs/hr	tons/vr	lbs/hr	tons/vr	lbs/hr	tons/vr	lbs/hr	tons/vr	lbs/hr	tons/vr	lbs/hr	tons/vr	lbs/hr	tons/vr	lbs/hr	tons/vr
52	Cold Aggregate/RAP Storage Pile									2.44	0.86	1.15	0.41	0.17	0.062		
53	Feed Bin Loading									1.52	0.53	0.72	0.25	0.11	0.038		
54	Feed Bin Unloading									0.032	0.016	0.011	0.0053	0.0030	0.0015		
55	Scalning Screen									0.51	0.25	0.17	0.085	0.012	0.0058		
56	Scalping Screen Unloading									0.032	0.25	0.011	0.0053	0.0030	0.0015		
57	Pug Mill Load									0.032	0.017	0.011	0.0053	0.0030	0.0015		
59	Pug Mill Unload									0.033	0.017	0.011	0.0054	0.0031	0.0015		
50	r ug Will Olload									0.033	0.017	0.011	0.0034	0.0031	0.0015		
J7 20	DAD Bin Loading									0.035	0.017	0.011	0.0034	0.0031	0.0013		
00	RAF DIII LUQUIIIg									0.28	0.10	0.0064	0.040	0.020	0.0070		
01	NAF DIII UIII0ading									0.020	0.010	0.0004	0.0032	0.0018	0.00091		
62	KAr Screen									0.31	0.15	0.10	0.052	0.0070	0.0035		
63	KAP Screen Unloading									0.020	0.010	0.0064	0.0032	0.0018	0.00091		
64	RAP Transfer Conveyor									0.020	0.010	0.0064	0.0032	0.0018	0.00091		
65	RAP Transfer Conveyor									0.020	0.010	0.0064	0.0032	0.0018	0.00091		
67	Mineral Filler Silo Baghouse									0.18	0.022	0.12	0.014	0.0090	0.0011		
69	Drum Dryer Baghouse	22.0	11.0	52.0	26.0	23.2	11.6	12.8	6.40	13.2	6.60	9.20	4.60	9.20	4.60	4.80	2.40
70	Drum Mixer Unloading			0.47	0.24			4.87	2.44	0.23	0.12	0.23	0.12	0.23	0.12	0.075	0.038
71	Asphalt Silo Unloading			0.54	0.27			1.66	0.83	0.21	0.10	0.21	0.10	0.21	0.10	0.035	0.017
72	Asphalt Heater	0.16	0.68	0.082	0.36	0.055	0.24	0.011	0.05	0.016	0.068	0.016	0.068	0.016	0.068		
73	Asphalt Cement Storage Tank			***	***			0.014	0.062							0.00018	0.00080
74	HMA Main Plant Generator	33.3	79.9	5.00	12.0	0.52	1.24	1.10	2.64	0.31	0.74	0.31	0.74	0.31	0.74		
75	HMA Standby Generator	1.04	2.06	1.30	2.58	0.043	0.086	0.10	0.21	0.078	0.15	0.078	0.15	0.078	0.15		
76	Haul Road Traffic									15.25	6.16	3.89	1.57	0.39	0.16		
77	Yard			0.14	0.070			0.44	0.22							0.0066	0.0033
	Total	56.5	93.7	59.5	41.5	23.8	13.2	21.0	12.8	34.8	16.0	16.4	8.26	10.8	6.07	4.92	2.46

Insignificant - "***"

Section 8 Map(s)

<u>A map</u> such as a 7.5 minute topographic quadrangle showing the exact location of the source. The map shall also include the following:

The UTM or Longitudinal coordinate system on both axes	An indicator showing which direction is north
A minimum radius around the plant of 0.8km (0.5 miles)	Access and haul roads
Topographic features of the area	Facility property boundaries
The name of the map	The area which will be restricted to public access
A graphical scale	



Figure 8-1: Aerial view of site and surrounding terrain

Section 9

Proof of Public Notice

(for NSR applications submitting under 20.2.72 or 20.2.74 NMAC) (This proof is required by: 20.2.72.203.A.14 NMAC "Documentary Proof of applicant's public notice")

□ I have read the AQB "Guidelines for Public Notification for Air Quality Permit Applications" This document provides detailed instructions about public notice requirements for various permitting actions. It also provides public notice examples and certification forms. Material mistakes in the public notice will require a re-notice before issuance of the permit.

Unless otherwise allowed elsewhere in this document, the following items document proof of the applicant's Public Notification. Please include this page in your proof of public notice submittal with checkmarks indicating which documents are being submitted with the application.

New Permit and Significant Permit Revision public notices must include all items in this list.

Technical Revision public notices require only items 1, 5, 9, and 10.

Per the Guidelines for Public Notification document mentioned above, include:

- 1. A copy of the certified letter receipts with post marks (20.2.72.203.B NMAC)
- 2. A list of the places where the public notice has been posted in at least four publicly accessible and conspicuous places, including the proposed or existing facility entrance. (e.g: post office, library, grocery, etc.)
- 3. A copy of the property tax record (20.2.72.203.B NMAC).
- 4. A sample of the letters sent to the owners of record.
- 5. A sample of the letters sent to counties, municipalities, and Indian tribes.
- 6. A sample of the public notice posted and a verification of the local postings.
- 7. A table of the noticed citizens, counties, municipalities and tribes and to whom the notices were sent in each group.
- 8. A copy of the public service announcement (PSA) sent to a local radio station and documentary proof of submittal.
- 9. A copy of the <u>classified or legal</u> ad including the page header (date and newspaper title) or its affidavit of publication stating the ad date, and a copy of the ad. When appropriate, this ad shall be printed in both English and Spanish.
- 10. A copy of the <u>display</u> ad including the page header (date and newspaper title) or its affidavit of publication stating the ad date, and a copy of the ad. When appropriate, this ad shall be printed in both English and Spanish.
- 11. A map with a graphic scale showing the facility boundary and the surrounding area in which owners of record were notified by mail. This is necessary for verification that the correct facility boundary was used in determining distance for notifying land owners of record.

Municipalities, Counties, and Indian Tribes List Within 10 Miles

City of Farmington Dianne Smylie City Clerk 800 Municipal Drive Farmington, NM 87401

Town of Kirtland Gwen Warner Town Clerk PO Box 1887 Kirtland, NM 87417

San Juan County Clerk Tanya Shelby San Juan County 100 South Oliver Drive, Suite 200 Aztec, NM 87410

Chapter President's Office Upper Fruitland Chapter P.O. Box 1257 Fruitland, NM 87416

Chapter President's Office Tse Daa K'ann (Hogback) Chapter P.O. Box 1288 Shiprock, NM 87420

Chapter President's Office Nenahnezad Chapter P.O. Box 438 Fruitland, NM 87416

Chapter President's Office San Juan Chapter P.O. Box 1636 Fruitland, NM 87416

Office of the President and Vice President Navajo Nation P.O. Box 7440 Window Rock, AZ 86515

ANDREWS DANNY 47 ROAD 6200 KIRTLAND, NM 87417

BEGAY RENAE LEE 34 ROAD 6406 KIRTLAND, NM 87417

BEKIS MICHAEL D 6 ROAD 6401 KIRTLAND, NM 87417-0000

BIEL THOMAS G AND JOY K TRUJILLO DORIS PO BOX 415 CANJILON, NM 87515

BEYALE RENA P O BOX 3114 SEAL BEACH, CA 90740-2114

BOLACK TOMMY TRUST 3901 BLOOMFIELD HWY FARMINGTON, NM 87401

BRADSHAW BARBARA LYNN 2128 SUMMIT DR FARMINGTON, NM 87401

BROWN GWEN PO BOX 1111 KIRTLAND, NM 87417

BROWN LARRY P O BOX 1034 FRUITLAND, NM 87416-1034

BROWN NADINE R 20 ROAD 6401 KIRTLAND, NM 87417

CARLSTON PETER AND MAGGIE 13 ROAD 6193 NBU 32 KIRTLAND, NM 87417

CARPENTER WALTER R AND CATHERINE I TRUST 2821 ERIN AVE NAMPA, ID 83686-8547

CHRISTIANSON DAVID AND MELISSA J 9 ROAD 6193 KIRTLAND, NM 87417-0000

CURTIS COLAINE 13339 W JACOBSON DR LITCHFRIELD PARK, AZ 85340

DAN VERNON AND LILLIE BOX 2004 KIRTLAND, NM 87417-2004

DAWSON CHAD A 17 ROAD 6207 KIRTLAND, NM 87417-0000

DELANEY WELDON V JR AND LOLITA 2305 E 14TH ST FARMINGTON, NM 87401

DIAMOND D CONSTRUCTION CO INC KIRTLAND 6406 LLC PO BOX 764 WATERFLOW, NM 87421

DIAMOND D CONSTRUCTION CO INC BEGAY VIDA A PO BOX 3206 INDIAN WELLS, AZ 86031

DIAMOND D CONSTRUCTION CO INC YAZZIE JAMES J AND ROBERTA L P O BOX 1841 KIRTLAND, NM 87417

DIAMOND D CONSTRUCTION CO INC SHORTY LINDA 40 ROAD 6406 KIRTLAND, NM 87417-0000

DIAMOND D CONSTRUCTION CO INC LOGG LYLE AND MELLISA PO BOX 3301 KIRTLAND, NM 87417

DIAMOND D CONSTRUCTION CO INC BOYD YOUNZER AND PEGGY 26 ROAD 6406 KIRTLAND, NM 87417-0000

DIAMOND D CONSTRUCTION CO INC DANCE JAMES A AND SAM VINA A PO BOX 6791 FARMINGTON, NM 87499-6791

DUNCAN BRIAN 22 ROAD 6401 KIRTLAND, NM 87417

EATON BESSIE M ET AL 11 RD 6193 NBU #32 KIRTLAND, NM 87417

F AND D HOLDINGS LLC 5810 CEDARWOOD DR FARMINGTON, NM 87402

FAIRCHILD JAMES W AND LILA P O BOX 1761 FARMINGTON, NM 87499

FINCH AMBER N 16 ROAD 6401 KIRTLAND, NM 87417-0000

FRANK WANDA ET AL 30 ROAD 6406 KIRTLAND, NM 87417-9436

GARLINGTON BILLY L III 41 ROAD 6200 KIRTLAND, NM 87417-0000

GILMORE FRED AND WILMA A C/O 1 HWY 64 TRUCK AND AUTO SALVAGE LLC PO BOX 1687 FARMINGTON, NM 87499

GLADDEN VERNON R AND ROSEMIL V PO BOX 2827 KIRTLAND, NM 87417

HARRIS RAYMOND KEITH ET AL 1201 FAIRWAY DR GALLUP, NM 87301

HENDRIX BRADLEY D AND CATHY B TRUST P.O BOX 814 KIRTLAND, NM 87417-0000

HOBBS DEVIN M AND MIRANDA K 1 ROAD 6207 KIRTLAND, NM 87417-9742

HOLMES ARCHIE W AND MARGARET C CLEMENTS P O BOX 359 KIRTLAND, NM 87417-0359

HORSLEY PATRICK B AND TRACY V 9 ROAD 6207 KIRTLAND, NM 87417-0000

HORTON ROGER W JR AND DEBORAH L 36 ROAD 6401 KIRTLAND, NM 87417

HOSKAY ETHEL 26 ROAD 6041 KIRTLAND, NM 87417

INGRAHAM RONALD 3480 LA PLATA HWY FARMINGTON, NM 87401

INVESTORS TRUST LC C/O MATEKOVIC GONZALES MARIA 31 ROAD 6195 KIRTLAND, NM 87417

Form-Section 9 last revised: 8/15/2011

JACKSON KENDRICK P 10 ROAD 6212 KIRTLAND, NM 87417-0000

JAKE EVANGELINE P O BOX 285 WATERFLOW, NM 87421-0285

JARAMILLO STEVEN D AND DANA S 5 ROAD 6207 NBU 30 KIRTLAND, NM 87417-9742

KIDDIE TODD B 7 ROAD 6193 KIRTLAND, NM 87417-9328

KRIEG ERIC W AND FREDRICA 3 ROAD 6207 KIRTLAND, NM 87417-0000

LEE CALVIN P O BOX 313 FRUITLAND, NM 87416-0313

KUECKS GEORGE J TRUSTEES LEWIS FRANK 19 ROAD 6193 KIRTLAND, NM 87417-9329

LIGHT KIMBERLY CANDACE EMERSON LUCINDA ALBERTA 8 ROAD 6212 KIRTLAND, NM 87417-9791

LINK THOMAS G 4346 US 64 KIRTLAND, NM 87417

LUCERO OSCAR M ET AL P O BOX 1412 FRUITLAND, NM 87416-1412

MAESTAS ELIJAH E PO BOX 2025 KIRTLAND, NM 87417

MAHON SCOTT TRUSTEES 12 RD 5151 BLOOMFIELD, NM 87413-9700

MOORE LEONARD BRYAN TRUST 204 W 20TH ST FARMINGTON, NM 87401

PTQ ENTERPRISES LLC 10 ROAD 6185 KIRTLAND, NM 87417

RAMIREZ ALFREDO Y AND MARIA A 1015 GLADE LN SP 1 FARMINGTON, NM 87401

REBELES TED AND DANIELLE 14 ROAD 6212 KIRTLAND, NM 87417

RENFRO CALLIE P RENDON REBECCA GINA 2 ROAD 6212 KIRTLAND, NM 87417

RODRIGUEZ IGNACIO ARROYO P O BOX 1384 KIRTLAND, NM 87417

SERRANO JIMMIE D AND SHARON K TRUST PO BOX 1361 FLORA VISTA, NM 874151361

SEYFERT DENNIS R 45 RD 6200 NBU31 KIRTLAND, NM 87417

SHERMAN ERNIE AND HAZEL 24 ROAD 6401 NBU-33 KIRTLAND, NM 87417

SHORTY MICHAEL AND SHERRI A 21 RD 6195 KIRTLAND, NM 87417-9332

SINGLETON PATRICIA B 2809 LA NAPA ST FARMINGTON, NM 87401-3728

SINGLETON SHERMANN SAMALA TRUST 2001 E MAIN FARMINGTON, NM 87401-7713

SMALLCANYON ALBERTA 13 ROAD 6207 NBU 30-B KIRTLAND, NM 87417

SMILEY HARRY AND EDNA 10 ROAD 6401 KIRTLAND, NM 87417-9549

STANFORD JOHN DUKE JR AND KATHERINE W 28 ROAD 6401 KIRTLAND, NM 87417

STERLING PRODUCTION & DEVELOPMENT LTD CO KIRTLAND SAND & GRAVEL LLC 32 ROAD 6210 KIRTLAND, NM 87417

STEVENSON CALVIN AND LENA P O BOX 504 FRUITLAND, NM 87416-0504

TAPAHA JOHN DAVID AND ROSIE 4 ROAD 6209 NBU-31 KIRTLAND, NM 87417-9745

THOMPSON LANGSTON LANCE AND QUISHANA L 32 ROAD 6401 KIRTLAND, NM 87417-0000

TORREZ RICO D 61 ROAD 6409 KIRTLAND, NM 87417

TSO ROBERT J AND LAPRINCESS D 7 ROAD 6206 KIRTLAND, NM 87417

VAN ARSDALE GERALD L AND MARY L 43 ROAD 6200 NBU 31 KIRTLAND, NM 87417

WHITE GARRICK AND CAMILLE A 34 ROAD 6401 KIRTLAND, NM 87417-0000

WILLIS ALICE E 5 ROAD 6193 KIRTLAND, NM 87417-0000

WILLIS BOBBY L AND CARRIE S PO BOX 377 KIRTLAND, NM 87417

YAZZIE GILBERT ET AL PO BOX 191 KIRTLAND, NM 87417

YAZZIE LEANDER PO BOX 3106 KIRTLAND, NM 87417

YAZZIE MELVIN AND DORIS P O BOX 1254 KIRTLAND, NM 87417-1254

YOUNG AMOS PO BOX 3042 KIRTLAND , NM 87417

NOTICE

Elam Construction announces its application to the New Mexico Environment Department for a new air quality permit for the construction of an aggregate rock crushing and screening plant, aggregate wash plant, and hot mix asphalt plant. The expected date of application submittal to the Air Quality Bureau is December 22, 2017.

The exact location for the proposed facility known as, Kirtland Sand & Gravel will be 32 Road 6210 Kirtland, NM, 87417. The approximate location of this facility is 1.4 miles east of the intersection of Highway 64 and County Road 6500 in the town of Kirtland in San Juan County.

The proposed construction consists of 500 tons per hour (TPH) aggregate rock crushing and screening plant, 500 TPH aggregate wash plant, and 400 TPH hot mix asphalt plant.

The estimated maximum quantities of any regulated air contaminants will be as follows in pound per hour (pph) and tons per year (tpy). These reported emissions could change slightly during the course of the Department's review:

Pollutant:	Pounds per hour	Tons per year
Total Suspended Particulates (TSP)	93.5 pph	63.1 tpy
PM 10	38.1 pph	26.0 tpy
PM _{2.5}	14.4 pph	9.8 tpy
Sulfur Dioxide (SO ₂)	24.5 pph	14.6 tpy
Nitrogen Oxides (NO _x)	100.8 pph	184.4 tpy
Carbon Monoxide (CO)	66.6 pph	56.0 tpy
Volatile Organic Compounds (VOC)	22.5 pph	15.9 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	4.3 pph	2.1 tpy
Toxic Air Pollutant (TAP)	4.9 pph	2.5 tpy
Green House Gas Emissions as Total CO2e	n/a	16,644 tpy

The standard operating schedule of the facility will be from 7 a.m. to 5 p.m. 7 days a week and a maximum of 52 weeks per year. The maximum operating schedule will be from 24 hours per day in the summer months, from 4 a.m. to 10 p.m. in the spring months, from 4 a.m. to 8 p.m. in the fall months, from 6 a.m. to 5 p.m. in the winter months, 7 days a week and a maximum of 52 weeks per year.

The owner and/or operator of the Facility is: Elam Construction, 556 Struthers Avenue, Grand Junction, CO, 81501.

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816; (505) 476-4300; 1 800 224-7009; https://www.env.nm.gov/aqb/permit/aqb_draft_permits.html. Other comments and questions may be submitted verbally.

Please refer to the company name and site name, or send a copy of this notice along with your comments, since the Department may have not yet received the permit application. Please include a legible return mailing address with your comments. Once the Department has performed a preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

General information about air quality and the permitting process can be found at the Air Quality Bureau's web site. The regulation dealing with public participation in the permit review process is 20.2.72.206 NMAC. This regulation can be found in the "Permits" section of this web site.

Attención

Este es un aviso de la Agencia de Calidad de Aire del Departamento de Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento en esta área. Si usted desea información en español, por favor de comunicarse con la oficina de Calidad de Aire al teléfono 505-476-5557.

Notice of Non-Discrimination

NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Part 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, policies or procedures, you may contact: Kristine Pintado, Non-Discrimination Coordinator, New Mexico Environment Department, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, <u>nd.coordinator@state.nm.us</u>. If you believe that you have been discriminated against with respect to a NMED program or activity, you may contact the Non-Discrimination Coordinator identified above or visit our website at <u>https://www.env.nm.gov/NMED/EJ/index.html</u> to learn how and where to file a complaint of discrimination.

General Posting of Notices – Certification

I, Daniel Flack, the undersigned, certify that on December 19, 2017, posted a true and correct copy of the attached Public Notice in the following publicly accessible and conspicuous places in the Town of Kirtland of San Juan County, State of New Mexico on the following dates:

- 1. Facility entrance, December 19, 2017
- 2. Lower Valley Water Users Association, 4286 US 64 Kirtland, December 19, 2017
- 3. Town of Kirtland Town Hall, 47 Road 6500 Kirtland, December 19, 201
- 4. US Post Office, 4211 US 64, Kirtland, December 19, 2017

Signed this <u>19</u> day of <u>December</u> , <u>2017</u> ,

Aund TFlank

Signature

<u>12-19-17</u> Date

<u>Daniel Flack</u> Printed Name

<u>Engineer for Elam Construction</u> Title {APPLICANT OR RELATIONSHIP TO APPLICANT}



<section-header><section-header><section-header>

Lower Valley Water Users

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Site



US Post Office

Town Hall



December 22, 2017

Dianne Smylie City of Farmington City Clerk 800 Municipal Drive Farmington, NM 87401

Dear Ms. Dianne Smylie

Elam Construction announces its application to the New Mexico Environment Department for a new air quality permit for the construction of an aggregate rock crushing and screening plant, aggregate wash plant, and hot mix asphalt plant. The expected date of application submittal to the Air Quality Bureau is December 22, 2017.

The exact location for the proposed facility known as, Kirtland Sand & Gravel will be 32 Road 6210 Kirtland, NM, 87417. The approximate location of this facility is 1.4 miles east of the intersection of Highway 64 and County Road 6500 in the town of Kirtland in San Juan County.

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Toxic Air Pollutant (TAP)	4.9 pph	2.5 tpy
Green House Gas Emissions as Total CO ₂ e	n/a	16,644 tpy

The standard operating schedule of the facility will be from 7 a.m. to 5 p.m. 7 days a week and a maximum of 52 weeks per year. The maximum operating schedule will be from 24 hours per day in the summer months, from 4 a.m. to 10 p.m. in the spring months, from 4 a.m. to 8 p.m. in the fall months, from 6 a.m. to 5 p.m. in the winter months, 7 days a week and a maximum of 52 weeks per year.



The owner and/or operator of the Facility is: Elam Construction, 556 Struthers Avenue, Grand Junction, CO, 81501.

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816; (505) 476-4300; 1 800 224-7009; <u>https://www.env.nm.gov/aqb/permit/aqb_draft_permits.html</u>. Other comments and questions may be submitted verbally.

With your comments, please refer to the company name and facility name, or send a copy of this notice along with your comments. This information is necessary since the Department may have not yet received the permit application. Please include a legible return mailing address. Once the Department has completed its preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

Attención

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Notice of Non-Discrimination

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Sincerely,

Elam Construction 556 Struthers Avenue Grand Junction, CO, 81501













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R4010072 2-083-172-315-336 STERLING PRODUCT KIRTLAND SAND & B:1616 P:538 291.9Ac.











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R4010072 2-083-172-315-336 STERLING PRODUCT KIRTLAND SAND & B:1616 P:538 291.9Ac.













COPY OF PUBLICATION

Ad No. 74616

STATE OF NEW MEXICO **County of San Juan:**

SAMMY LOPEZ, being duly sworn says: That He IS the PRESIDENT of THE DAILY TIMES. a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the State of New Mexico for publication and appeared in the Internet at The Daily Times web site on the following day(s):

Friday, December 22, 2017

And the cost of the publication is \$289.51

SAMMY LOPEZ appeared before me, whom I know personally to be the person who signed the above document on the 22nd of December, 2017.



NOTICE OF AIR QUALITY PERMIT APPLICATION

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Elam Construction announces its application to the New Mexico Environment Department for a new air quality permit for the construction of an aggregate rock crushing and screening plant, ag-gregate wash plant, and hot mix asphalt plant. The expected date of application submittal to the Air Quality Bureau is December 22, 2017.

The exact location for the proposed facility known as, Kirtland Sand & Gravel will be 32 Road 6210 Kirtland, NM, 87417. The approximate location of this facility is 1.4 miles east of the intersection of Highway 64 and County Road 6500 in the town of Kirtland in San Juan County.

The proposed construction consists of 500 tons per hour (TPH) aggregate rock crushing and screening plant, 500 TPH aggregate wash plant, and 400 TPH hot mix asphalt plant.

The estimated maximum quantities of any regulated air contaminants will be as follows in pound per hour (pph) and tons per year (tpy). These reported emissions could change slightly during the course of the Department's review:

Pollutant:	Pounds per hour	Tons per year
Total Suspended Particulates (TSP)	93.5 pph	63.1 tpy
PM 10	38.1 pph	26.0 tpy
PM 2.5	14.4 pph	9.8 tpy
Sulfur Dioxide (SO 2)	24.5 pph	14.6 tpy
Nitrogen Oxides (NO x)	100.8 pph	184.4 tpy
Carbon Monoxide (CO)	66.6 pph	56.0 tpy
Volatile Organic Compounds (VOC)	22.5 pph	15.9 tpy
Total sum of all Hazardous Air Pollutants (HAPs)	4.3 pph	2.1 tpy
Toxic Air Pollutant (TAP)	4.9 pph	2.5 tpy
Green House Gas Emissions as Total CO 2e	n/a	16,644 tpy

The standard operating schedule of the facility will be from 7 a.m. to 5 p.m. 7 days a week and a maximum of 52 weeks per year. The maximum operating schedule will be from 24 hours per day in the summer months, from 4 a.m. to 10 p.m. in the spring months, from 4 a.m. to 8 p.m. in the fall months, from 6 a.m. to 5 p.m. in the winter months, 7 days a week and a maximum of 52 weeks and a maximum of 52 months, from 6 a.m. to 5 p.m. in the winter months, 7 days a week and a maximum of 52 months, from 6 a.m. to 5 p.m. in the winter months, 7 days a week and a maximum of 52 months, from 6 a.m. to 5 p.m. in the winter months, 7 days a week and a maximum of 52 months, from 6 month weeks per year.

The owner and/or operator of the Facility is: Elam Construction, 556 Struthers Avenue, Grand Junction, CO, 81501.

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address: Permit Programs Manager; New Mexico Environment Department; Air Quality Bureau; 525 Camino de los Marquez, Suite 1; Santa Fe, New Mexico; 87505-1816; (505) 476-4300; 1 800 224-7009; https://www.env.nm.gov/aqb/permit/aqb_draft_permits.html. Other comments and questions may be submitted verbally.

Please refer to the company name and site name, or send a copy of this notice along with your comments, since the Department may have not yet received the permit application. Please ina preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

General information about air quality and the permitting process can be found at the Air Quality Bureau's web site. The regulation dealing with public participation in the permit review process is 20.2.72.206 NMAC. This regulation can be found in the "Permits" section of this web site.

Attención

Este es un aviso de la Agencia de Calidad de Aire del Departamento de Medio Ambiente de Nuevo México, acerca de las emisiones producidas por un establecimiento de Medio Ambiente de Nuevo información en español, por favor de comunicarse con la oficina de Calidad de Aire al teléfono 505-476-5557.

Notice of Non-Discrimination

Notice of Non-Discrimination NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Part 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimi-nation Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non-discrimination programs, pollicities or precedure wave are water to the dividual any of NMED's non- discrimination programs, policies or procedures, you may contact: Kristine Pintado, Non-Discrimination Coordinator, New Mexico Environment Department, 1190 St. Francis Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, Dr., Suite N4050, P.O. Box 5469, Santa Fe, NM 87502, (505) 827-2855, <u>nd.coordinator@state.nm.us</u>. If you believe that you have been discriminated against with re-spect to a NMED program or activity, you may contact the Non-Discrimination Coordinator identi-fied above or visit our website at <u>https://www.env.nm.gov/NMED/EJ/index.html</u> to learn how and where to file a complaint of discrimination.

Legal No. 74616 published in The Daily Times on December 22, 2017.

COPY OF PUBLICATION

Ad No. 1227157

STATE OF NEW MEXICO County of San Juan:

SAMMY LOPEZ, being duly sworn says: That He IS the PRESIDENT of THE DAILY TIMES, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said DAILY TIMES, a daily newspaper duly qualified for the purpose within the State of New Mexico for publication and appeared in the Internet at The Daily Times web site on the following day(s):

Friday, December 22, 2017

And the cost of the publication is \$532.38

SAMMY LOPEZ appeared before me, whom I know personally to be the person who signed the above document on the 22^{nd} of December, 2017.



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Please refer to the company name and site name, or send a copy of this notice along with your comments, since the Department may have not yet received the permit application. Please include a legible return mailing address with your comments. Once the Department has performed a preliminary review of the application and its air quality impacts, the Department's notice will be published in the legal section of a newspaper circulated near the facility location.

General information about air quality and the permitting process can be found at the Air Quality Bureau's web site. The regulation dealing with public participation in the permit review process is 20.2.72.206 NMAC. This regulation can be found in the "Permits" section of this web site.

Attención

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Notice of Non-Discrimination

NMED does not discriminate on the basis of race, color, national origin, disability, age or sex in the administration of its programs or activities, as required by applicable laws and regulations. NMED is responsible for coordination of compliance efforts and receipt of inquiries concerning non-discrimination requirements implemented by 40 C.F.R. Part 7, including Title VI of the Civil Rights Act of 1964, as amended; Section 504 of the Rehabilitation Act of 1973; the Age Discrimination Act of 1975, Title IX of the Education Amendments of 1972, and Section 13 of the Federal Water Pollution Control Act Amendments of 1972. If you have any questions about this notice or any of NMED's non- discrimination programs, policies or procedures, you may contact: Kristine Pintado, Non-Discrimination Coordinator, New Mexico Environment Department, 1190 St. Francis Dr., Suite N4050, PO. Box 5469, Santa Fe, NM 87502, (505) 827-2855, <u>nd.coordinator@state.nm.us</u>. If you believe that you have been discriminated against with respect to a NMED program or activity, you may contact the Non-Discrimination Coordinator identified above or visit our website at <u>https://www.env.nm.gov/NMED/EJ/index.html</u> to learn how and where to file a complaint of discrimination.

RADIO ANNOUNCEMENT

Elam Construction announces its application to the New Mexico Environment Department for a new air quality permit for the construction of an aggregate rock crushing and screening plant, aggregate wash plant, and hot mix asphalt plant. The expected date of application submittal to the Air Quality Bureau is December 22, 2017.

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The proposed construction consists of a 500 tons per hour (TPH) aggregate rock crushing and screening plant, 500 TPH aggregate wash plant, and 400 TPH hot mix asphalt plant.

Public notice postings for this permit application can be found at the follow locations: Elam Kirtland Sand & Gravel Site, 32 Road 6210 Kirtland, NM, 87417 Lower Valley Water Users Association, 4286 US 64, Kirtland, NM Town of Kirtland Town Hall, 47 Road 6500,Kirtland, NM US Post Office, 4211 US 64, Kirtland, NM

The owner and/or operator of the Facility is:

Elam Construction 556 Struthers Avenue Grand Junction, CO, 81501.

If you have any comments about the construction or operation of this facility, and you want your comments to be made as part of the permit review process, you must submit your comments in writing to this address:

Permit Programs Manager New Mexico Environment Department Air Quality Bureau 525 Camino de los Marquez, Suite 1 Santa Fe, New Mexico; 87505-1816 Telephone Number (505) 476-4300 or 1 800 224-7009





December 28, 2017

KNDN Radio 1515 West Main St. Farmington, NM 87401

CERTIFIED MAIL

Dear KNDN Radio:

SUBJECT: PSA Request - Proposed Air Quality Construction Permit for Elam Construction's Kirtland Sand & Gravel.

Attached is a copy of a public service announcement regarding a proposed air quality construction permit for Elam Construction's Kirtland Sand & Gravel. This announcement is being submitted by Montrose Air Quality Services, Albuquerque, NM on behalf of Elam Construction.

The announcement request is being made to fulfill the requirements of the New Mexico Environmental Department air quality permitting regulations. Please consider reading the attached announcement as a public service message.

If you have any questions or need additional information, please contact me at (505) 830-9680 ext 6 (voice), (505) 830-9678 (fax) or email at pwade@montrose-env.com. Thank you in advance.

Sincerely,

Paul Wade

Paul Wade **Senior Engineer Class One Technical Services**

Class One Technical Services, Inc. an affiliate of Montrose Air Quality Services F: 505.830.9678 3500 Comanche Road NE Suite G Albuguergue, NM 87107-4546

T: 505.830.9680 ext. 6 Pwade@montrose-env.com www.montrose-env.com



Section 10

Written Description of the Routine Operations of the Facility

<u>A written description of the routine operations of the facility</u>. Include a description of how each piece of equipment will be operated, how controls will be used, and the fate of both the products and waste generated. For modifications and/or revisions, explain how the changes will affect the existing process. In a separate paragraph describe the major process bottlenecks that limit production. The purpose of this description is to provide sufficient information about plant operations for the permit writer to determine appropriate emission sources.

The Kirtland Sand and Gravel Aggregate Crushing/Screening and Wash Plants, and HMA Plant will be permitted to operate with the following material inputs.

	81
Plant	Tons Per Hour
Crushing and Screening Plant	500
Wash Plant	500
HMA Plant	400

TABLE 10-1: Material Throughputs for Each Plant

The facility will include the main 500 TPH aggregate crushing and screening plant and 500 TPH aggregate wash plant.

The 500 tph aggregate quarry and crushing operations will include an aggregate quarry, feeder, primary jaw crusher, two (2) secondary cone crushers, three (3) 6' x 20' screens, eighteen (18) transfer conveyors, and five (5) stacker conveyors. The plant will be powered by a 1429 horsepower (hp) generator during hours of aggregate processing and a 113 hp standby generator at all other times. Aggregate from the quarry will be transported to the aggregate crushing plant by large rock trucks. Processed aggregate will be transported from the aggregate crushing plant to the HMA plant, aggregate wash plant, and off-site sales. The aggregate crushing plant will limit hourly processing rate to 500 tph and 1,000,000 tons per year (tpy). The main plant generator will be limited to operating 3904 hours per year. The standby generator will be limited to operating 4880 hours per year. A process flow diagram is presented as Figure 4-1.

The 500 tph aggregate wash plant will include a feeder, twin-screw wash plant, six (6) transfer conveyors, and four (4) stacker conveyors. The plant will be powered by a 475 horsepower (hp) generator. Processed aggregate will be transported from the aggregate wash plant to the HMA plant, concrete batch plant, and off-site sales. The aggregate wash plant will limit hourly processing rate to 500 tph and 1,000,000 tons per year (tpy). The main wash plant generator will be limited to operating 4571 hours per year. A process flow diagram is presented as Figure 4-2.

The 400 tph hot mix asphalt plant will include a 5-bin cold aggregate feeder, scalping screen, pug mill, 2- bin RAP feeder, RAP scalping screen, mineral filler silo with baghouse, drum dryer with baghouse, incline conveyor, asphalt silo, asphalt heater, and eight (8) transfer conveyors. The plant will be powered by a 1429 horsepower (hp) generator during hours of asphalt processing and a 158 hp standby generator at all other times. Processed asphalt will be transported from the HMA plant to off-site sales. The HMA plant will limit hourly processing rate to 400 tph and 400,000 tons per year (tpy). The main plant generator will be limited to operating 4800 hours per year. The standby generator will be limited to operating 3960 hours per year. Hot oil asphalt heaters will be permitted to operate 8760 hours per year. A process flow diagram is presented as Figure 4-3.

Section 11 Source Determination

Source submitting under 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC

Sources applying for a construction permit, PSD permit, or operating permit shall evaluate surrounding and/or associated sources (including those sources directly connected to this source for business reasons) and complete this section. Responses to the following questions shall be consistent with the Air Quality Bureau's permitting guidance, <u>Single Source Determination Guidance</u>, which may be found on the Applications Page in the Permitting Section of the Air Quality Bureau website.

Typically, buildings, structures, installations, or facilities that have the same SIC code, that are under common ownership or control, and that are contiguous or adjacent constitute a single stationary source for 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC applicability purposes. Submission of your analysis of these factors in support of the responses below is optional, unless requested by NMED.

A. Identify the emission sources evaluated in this section (list and describe): Hot Mix Asphalt Plant – SIC Code 2951, Aggregate Crushing and Screening Plant – SIC Code 1442, and Aggregate Wash Plant – SIC Codes 1429, 1442.

B. Apply the 3 criteria for determining a single source:

<u>SIC</u> <u>Code</u>: Surrounding or associated sources belong to the same 2-digit industrial grouping (2-digit SIC code) as this facility, <u>OR</u> surrounding or associated sources that belong to different 2-digit SIC codes are support facilities for this source.

🗆 Yes 🛛 🖾 No

<u>Common</u> <u>Ownership</u> or <u>Control</u>: Surrounding or associated sources are under common ownership or control as this source.

⊠ Yes □ No

<u>Contiguous or Adjacent</u>: Surrounding or associated sources are contiguous or adjacent with this source.

🛛 Yes 🛛 🗆 No

C. Make a determination:

□ The source, as described in this application, constitutes the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes. If in "A" above you evaluated only the source that is the subject of this application, all "YES" boxes should be checked. If in "A" above you evaluated other sources as well, you must check AT LEAST ONE of the boxes "NO" to conclude that the source, as described in the application, is the entire source for 20.2.70, 20.2.72, 20.2.73, and 20.2.74 NMAC applicability purposes.

☑ The source, as described in this application, <u>does not</u> constitute the entire source for 20.2.70, 20.2.72, 20.2.73, or 20.2.74 NMAC applicability purposes (A permit may be issued for a portion of a source). The entire source consists of the following facilities or emissions sources (list and describe): Hot Mix Asphalt Plant – SIC Code 2951, Aggregate Crushing and Screening Plant – SIC Code 1442, and Aggregate Wash Plant – SIC Codes 1429, 1442. The 2-digit SIC Codes are different for the Hot Mix Asphalt Plant and Aggregate Crushing and Screening Plant plus Aggregate Wash Plant.

Section 12

Section 12.A PSD Applicability Determination for All Sources

(Submitting under 20.2.72, 20.2.74 NMAC)

<u>A PSD applicability determination for all sources</u>. 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 <u>EPA New Source Review</u> <u>Workshop Manual</u> to determine if the revision is subject to PSD review.

- A. This facility is a "synthetic minor" source
- B. This facility is not one of the listed 20.2.74.501 Table I PSD Source Categories.
 - a. NOx: 184.4 TPY
 - b. CO: 56.0 TPY
 - c. VOC: 15.9 TPY
 - d. SOx: 14.6 TPY
 - e. TSP (PM): 63.1 TPY
 - f. PM10: 26.0 TPY
 - g. PM2.5: 9.84 TPY
 - h. Lead: 0.0035 TPY
 - i. GHG: 16,644 TPY
- C. Netting is not required for this application.
- D. BACT is not required for this application.
- 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.

No, this facility is not a major source. The facility consists of aggregate processing plants and a HMA plant. Aggregate processing falls under 2-digit SIC Code Group 14 and HMA plants falls under 2-digit SIC Code Group 29. While aggregate material from aggregate processing plants is used in the HMA plant, since they are operating under different SIC Codes they are separate facilities for major source determination.

Section 13

Determination of State & Federal Air Quality Regulations

This section lists each state and federal air quality regulation that may apply to your facility and/or equipment that are stationary sources of regulated air pollutants.

Not all state and federal air quality regulations are included in this list. Go to the Code of Federal Regulations (CFR) or to the Air Quality Bureau's regulation page to see the full set of air quality regulations.

Required Information for Specific Equipment:

For regulations that apply to specific source types, in the 'Justification' column **provide any information needed to determine if the regulation does or does not apply**. **For example**, to determine if emissions standards at 40 CFR 60, Subpart IIII apply to your three identical stationary engines, we need to know the construction date as defined in that regulation; the manufacturer date; the date of reconstruction or modification, if any; if they are or are not fire pump engines; if they are or are not emergency engines as defined in that regulation; their site ratings; and the cylinder displacement.

Required Information for Regulations that Apply to the Entire Facility:

See instructions in the 'Justification' column for the information that is needed to determine if an 'Entire Facility' type of regulation applies (e.g. 20.2.70 or 20.2.73 NMAC).

Regulatory Citations for Regulations That Do Not, but Could Apply:

If there is a state or federal air quality regulation that does not apply, but you have a piece of equipment in a source category for which a regulation has been promulgated, you must **provide the low level regulatory citation showing why your piece of equipment is not subject to or exempt from the regulation. For example** if you have a stationary internal combustion engine that is not subject to 40 CFR 63, Subpart ZZZZ because it is an existing 2 stroke lean burn stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, your citation would be 40 CFR 63.6590(b)(3)(i). We don't want a discussion of every non-applicable regulation, but if it is possible a regulation could apply, explain why it does not. For example, if your facility is a power plant, you do not need to include a citation to show that 40 CFR 60, Subpart OOO does not apply to your non-existent rock crusher.

Regulatory Citations for Emission Standards:

For each unit that is subject to an emission standard in a source specific regulation, such as 40 CFR 60, Subpart OOO or 40 CFR 63, Subpart HH, include the low level regulatory citation of that emission standard. Emission standards can be numerical emission limits, work practice standards, or other requirements such as maintenance. Here are examples: a glycol dehydrator is subject to the general standards at 63.764C(1)(i) through (iii); an engine is subject to 63.6601, Tables 2a and 2b; a crusher is subject to 60.672(b), Table 3 and all transfer points are subject to 60.672(e)(1)

Federally Enforceable Conditions:

All federal regulations are federally enforceable. All Air Quality Bureau State regulations are federally enforceable except for the following: affirmative defense portions at 20.2.7.6.B, 20.2.7.110(B)(15), 20.2.7.11 through 20.2.7.113, 20.2.7.115, and 20.2.7.116; 20.2.37; 20.2.42; 20.2.43; 20.2.62; 20.2.63; 20.2.86; 20.2.89; and 20.2.90 NMAC. Federally enforceable means that EPA can enforce the regulation as well as the Air Quality Bureau and federally enforceable regulations can count toward determining a facility's potential to emit (PTE) for the Title V, PSD, and nonattainment permit regulations.

INCLUDE ANY OTHER INFORMATION NEEDED TO COMPLETE AN APPLICABILITY DETERMINATION OR THAT IS RELEVENT TO YOUR FACILITY'S NOTICE OF INTENT OR PERMIT.

EPA Applicability Determination Index for 40 CFR 60, 61, 63, etc: http://cfpub.epa.gov/adi/

To save paper and to standardize the application format, delete this sentence, and begin your submittal for this attachment on this page.

Table for STATE REGULATIONS:

STATE REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.1 NMAC	General Provisions	Yes	Facility	General Provisions apply to Notice of Intent, Construction, and Title V permit applications.
20.2.3 NMAC	Ambient Air Quality Standards NMAAQS	Yes	Facility	20.2.3 NMAC is a SIP approved regulation that limits the maximum allowable concentration of Total Suspended Particulates, Sulfur Compounds, Carbon Monoxide and Nitrogen Dioxide.
20.2.7 NMAC	Excess Emissions	Yes	Facility	This facility is subject to 20.2.7 NMAC.
20.2.61.109 NMAC	Smoke & Visible Emissions	Yes	34, 35, 50, 72, 74, 75	Engines and heaters are Stationary Combustion Equipment. Specify units subject to this regulation. The facility stationary combustion equipment are subject to a 20 percent opacity limit.
20.2.70 NMAC	Operating Permits	No	Facility	This facility is not a Title V Operating Permit source. The facility consists of aggregate processing plants and a HMA plant. Aggregate processing falls under 2-digit SIC Code Group 14 and HMA plants falls under 2-digit SIC Code Group 29. While aggregate material from aggregate processing plants is used in the HMA plant, since they are operating under different SIC Codes they are separate facilities for major source determination.
20.2.71 NMAC	Operating Permit Fees	No	Facility	This facility is not a Title V Operating Permit source.
20.2.72 NMAC	Construction Permits	Yes	Facility	Potential emission rate (PER) for the facility is greater than 10 pph or greater than 25 tpy for any pollutant subject to a state or federal ambient air quality standard.
20.2.73 NMAC	NOI & Emissions Inventory Requirements	Yes	Facility	NOI: 20.2.73.200 NMAC applies (requiring a NOI application) Emissions Inventory Reporting: 20.2.73.300 NMAC applies.
20.2.74 NMAC	Permits – Prevention of Significant Deterioration (PSD)	No	Facility	This facility is not a PSD major source.
20.2.75 NMAC	Construction Permit Fees	Yes	Facility	This facility is subject to 20.2.72 NMAC and is in turn subject to 20.2.75 NMAC.
20.2.77 NMAC	New Source Performance	Yes	Subpart OOO - Crusher , Screens, Convey ors, Subpart IIII -34, 35, 50, 74, 75 Subpart I - 66, 68	This is a stationary source, which is subject to the requirements of 40 CFR Part 60.
20.2.78 NMAC	Emission Standards for HAPS	No	Units Subject to 40 CFR 61	This facility doesn't emits hazardous air pollutants which are subject to the requirements of 40 CFR Part 61.

STATE REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION: (You may delete instructions or statements that do not apply in the justification column to shorten the document.)
20.2.79 NMAC	Permits – Nonattainment Areas	No	Facility	This facility is located in an Attainment Area.
20.2.80 NMAC	Stack Heights	Yes	34, 35, 50, 69, 72, 74, 75	The objective of this Part is to establish requirements for the evaluation of stack heights and other dispersion techniques in permitting decisions. The Department shall give no credit for reductions in emissions due to the length of a source's stack height that exceeds good engineering practice or due to any other dispersion technique. The facility will met all requirements of good engineering practices.
20.2.82 NMAC	MACT Standards for source categories of HAPS	Yes	34, 35, 50, 74, 75	This regulation applies to all sources emitting hazardous air pollutants, which are subject to the requirements of 40 CFR Part 63.
Table for Applicable FEDERAL REGULATIONS:

FEDERAL REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
40 CFR 50	NAAQS	Yes	Facility	Defined as applicable at 20.2.70.7.E.11, Any national ambient air quality standard
NSPS 40 CFR 60, Subpart A	General Provisions	Yes	Subpart OOO - Crusher, Screens, Conveyo rs, Subpart IIII -34, 35, 50, 74, 75 Subpart I - 66,	Subparts OOO, IIII, and I in 40 CFR 60 applies.
			68	
NSPS 40 CFR60.40, Subpart I	Subpart I, Performance Standards for Hot Mix Asphalt Facilities	Yes	66, 68	The affected facility, that commences construction or modification after June 11, 1973, to which the provisions of this subpart apply is each hot mix asphalt facility. For the purpose of this subpart, a hot mix asphalt facility is comprised only of any combination of the following: dryers; systems for screening, handling, storing, and weighing hot aggregate; systems for loading, transferring, and storing mineral filler, systems for mixing hot mix asphalt; and the loading, transfer, and storage systems associated with emission control systems.
NSPS 40 CFR 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	No		This facility does not have storage vessels with a capacity greater than or equal to 75 cubic meters (m ³) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification is commenced after July 23, 1984.
NSPS 40 CFR Part 60 Subpart OOO	Standards of Performance for Nonmetallic Mineral Processing Plants	Yes	Subpart OOO - Crusher, Screens, Conveyo rs,	NSPS standards for non-metallic minerals apply to applicable crushers, screens, and conveyors.
NSPS 40 CFR 60 Subpart IIII	Standards of performance for Stationary Compression Ignition Internal Combustion Engines	Yes	34, 35, 50, 74, 75	The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE). Units 34, 35, 50, 74, and 75 are potentially applicable to Subpart IIII.
NESHAP 40 CFR 61 Subpart A	General Provisions	No	Units Subject to 40 CFR 61	No stationary source is applicable to any Subpart in 40 CFR 61.
MACT 40 CFR 63, Subpart A	General Provisions	Yes	34, 35, 50, 74, 75	Applies if any other Subpart in 40 CFR 63 applies.

FEDERAL REGU- LATIONS CITATION	Title	Applies? Enter Yes or No	Unit(s) or Facility	JUSTIFICATION:
MACT 40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)	Yes	34, 35, 50, 74, 75	Facilities are subject to this subpart if they own or operate a stationary RICE, except if the stationary RICE is being tested at a stationary RICE test cell/stand.

Section 14

Operational Plan to Mitigate Emissions

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

- □ **Title V Sources** (20.2.70 NMAC): By checking this box and certifying this application the permittee certifies that it has developed an <u>Operational Plan to Mitigate Emissions During Startups</u>, <u>Shutdowns</u>, <u>and Emergencies</u> defining the measures to be taken to mitigate source emissions during startups, shutdowns, and emergencies as required by 20.2.70.300.D.5(f) and (g) NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.
- NSR (20.2.72 NMAC), PSD (20.2.74 NMAC) & Nonattainment (20.2.79 NMAC) Sources: By checking this box and certifying this application the permittee certifies that it has developed an <u>Operational Plan to Mitigate Source Emissions</u> <u>During Malfunction, Startup, or Shutdown</u> defining the measures to be taken to mitigate source emissions during malfunction, startup, or shutdown as required by 20.2.72.203.A.5 NMAC. This plan shall be kept on site to be made available to the Department upon request. This plan should not be submitted with this application.
- **Title V** (20.2.70 NMAC), **NSR** (20.2.72 NMAC), **PSD** (20.2.74 NMAC) & **Nonattainment** (20.2.79 NMAC) Sources: By checking this box and certifying this application the permittee certifies that it has established and implemented a Plan to Minimize Emissions During Routine or Predictable Startup, Shutdown, and Scheduled Maintenance through work practice standards and good air pollution control practices as required by 20.2.7.14.A and B NMAC. This plan shall be kept on site or at the nearest field office to be made available to the Department upon request. This plan should not be submitted with this application.

Operational Plan to Mitigate Emissions and **Plan of Work Practices**

<u>Startup</u>

Prior to the production of asphalt, the drum mixer dust collector will be operational and functioning correctly per 20.2.11.108.A, 20.2.11.109, and applicable permit conditions.

Prior to loading of mineral filler, the mineral filler silo dust collector will be operational and functioning correctly per 20.2.11.108.A, 20.2.11.109, and applicable permit conditions.

Prior to the production of asphalt, feeder bin exit enclosures or other control measures will be functioning correctly to control fugitive emissions to an opacity limit of 20 percent per EPA Reference Method 9.

Prior to the production of asphalt, water sprays, or other control measures, for the scalping screen and pug mill will be functioning correctly and used as needed, to control fugitive emissions to an opacity limit of 20 percent per EPA Reference Method 9.

Prior to unloading of the drum mixer dust collector baghouse fines, dust control measures will be functioning correctly to control fugitive emissions to an opacity limit of 20 percent per EPA Reference Method 9.

Upon visual inspection, all haul roads will be controlled with surfactants or other equivalent control methods, to minimize fugitive dust as required under applicable permit conditions.

Shutdown

All required control equipment will operate until all asphalt production ceases.

Maintenance

The feeder bin exit enclosures, asphalt drum mixer, drum mixer dust collector, water sprays, and mineral filler silo dust collector will be maintained to prevent excess emissions during startup or shutdown. This facility will not have excess emissions during any maintenance procedures.

Malfunction

Upon malfunction where excess particulate emissions are observed from the feeder bin exit enclosures, asphalt drum mixer, drum mixer dust collector, scalping screen and pug mill water sprays, mineral filler silo dust collector, and baghouse loadout enclosure and watering, all asphalt production will cease until repairs to control equipment are made.

Section 15

Alternative Operating Scenarios

(Submitting under 20.2.70, 20.2.72, 20.2.74 NMAC)

Alternative Operating Scenarios: Provide all information required by the department to define alternative operating scenarios. This includes process, material and product changes; facility emissions information; air pollution control equipment requirements; any applicable requirements; monitoring, recordkeeping, and reporting requirements; and compliance certification requirements. Please ensure applicable Tables in this application are clearly marked to show alternative operating scenario.

Construction Scenarios: When a permit is modified authorizing new construction to an existing facility, NMED includes a condition to clearly address which permit condition(s) (from the previous permit and the new permit) govern during the interval between the date of issuance of the modification permit and the completion of construction of the modification(s). There are many possible variables that need to be addressed such as: Is simultaneous operation of the old and new units permitted and, if so for example, for how long and under what restraints? In general, these types of requirements will be addressed in Section A100 of the permit, but additional requirements may be added elsewhere. Look in A100 of our NSR and/or TV permit template for sample language dealing with these requirements. Find these permit templates at: https://www.env.nm.gov/aqb/permit/aqb_pol.html. Compliance with standards must be maintained during construction, which should not usually be a problem unless simultaneous operation of old and new equipment is requested.

In this section, under the bolded title "Construction Scenarios", specify any information necessary to write these conditions, such as: conservative-realistic estimated time for completion of construction of the various units, whether simultaneous operation of old and new units is being requested (and, if so, modeled), whether the old units will be removed or decommissioned, any PSD ramifications, any temporary limits requested during phased construction, whether any increase in emissions is being requested as SSM emissions or will instead be handled as a separate Construction Scenario (with corresponding emission limits and conditions, etc.

Plant equipment operation will reflect application, but mine pit size will increase over life of the mine.

Section 16 Air Dispersion Modeling

- Minor Source Construction (20.2.72 NMAC) and Prevention of Significant Deterioration (PSD) (20.2.74 NMAC) ambient impact analysis (modeling): Provide an ambient impact analysis as required at 20.2.72.203.A(4) and/or 20.2.74.303 NMAC and as outlined in the Air Quality Bureau's Dispersion Modeling Guidelines found on the Planning Section's modeling website. If air dispersion modeling has been waived for one or more pollutants, attach the AQB Modeling Section modeling waiver approval documentation.
- 2) SSM Modeling: Applicants must conduct dispersion modeling for the total short term emissions during routine or predictable startup, shutdown, or maintenance (SSM) using realistic worst case scenarios following guidance from the Air Quality Bureau's dispersion modeling section. Refer to "Guidance for Submittal of Startup, Shutdown, Maintenance Emissions in Permit Applications (<u>http://www.env.nm.gov/aqb/permit/app_form.html</u>) for more detailed instructions on SSM emissions modeling requirements.
- 3) Title V (20.2.70 NMAC) ambient impact analysis: Title V applications must specify the construction permit and/or Title V Permit number(s) for which air quality dispersion modeling was last approved. Facilities that have only a Title V permit, such as landfills and air curtain incinerators, are subject to the same modeling required for preconstruction permits required by 20.2.72 and 20.2.74 NMAC.

What is the purpose of this application?	Enter an X for each purpose that applies
New PSD major source or PSD major modification (20.2.74 NMAC). See #1 above.	
New Minor Source or significant permit revision under 20.2.72 NMAC (20.2.72.219.D NMAC).	v
See #1 above. Note: Neither modeling nor a modeling waiver is required for VOC emissions.	Λ
Reporting existing pollutants that were not previously reported.	
Reporting existing pollutants where the ambient impact is being addressed for the first time.	
Title V application (new, renewal, significant, or minor modification. 20.2.70 NMAC). See #3	
above.	
Relocation (20.2.72.202.B.4 or 72.202.D.3.c NMAC)	
Minor Source Technical Permit Revision 20.2.72.219.B.1.d.vi NMAC for like-kind unit replacements.	
Other: i.e. SSM modeling. See #2 above.	
This application does not require modeling since this is a No Permit Required (NPR) application.	
This application does not require modeling since this is a Notice of Intent (NOI) application	
(20.2.73 NMAC).	
This application does not require modeling according to 20.2.70.7.E(11), 20.2.72.203.A(4), 20.2.74.303, 20.2.79.109.D NMAC and in accordance with the Air Quality Bureau's Modeling Guidelines	

Check each box that applies:

- □ See attached, approved modeling **waiver for all** pollutants from the facility.
- □ See attached, approved modeling **waiver for some** pollutants from the facility.
- Attached in Universal Application Form 4 (UA4) is a modeling report for all pollutants from the facility.
- □ Attached in UA4 is a **modeling report for some** pollutants from the facility.
- \Box No modeling is required.

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-	16-A: Identification				
1	Name of facility: Kirtland Sand & Gravel				
2	Name of company: Elam Construction				
3	Current Permit number: New Permit				
4	Name of applicant's modeler: Paul Wade, Montrose Air Quality Services				
5	Phone number of modeler: (505) 830-9680 ext6				
6	E-mail of modeler: pwade@montrose-env.com				
0	E-mail of modeler: pwade@montrose-env.com				

16-	B: Brief			
	Why is the modeling being done?			
1	New NSR Permit Application			
	Describe the permit changes relevant to the modeling.			
2	New NSR Permit Application. Facility consists of 500 TPH Aggregate Crushing and Screening Plant, 500 TPH Aggregate Wash Plant, and 400 TPH HMA Plant.			
3	What geodetic datum was used in the modeling? NAD83			
4	How long will the facility be at this location? Permanent			
5	Is the facility a major source with respect to Prevention of Significant Deterioration (PSD)?	Yes	No	
6	Identify the Air Quality Control Region (AQCR) in which the facility is located. AQCR 014			

7	List the PSD baseline dates for this region (minor or major, as appropriate). PM_{10} Minor Baseline – $8/7/1978$; NO2 Minor Baseline – $6/6/1989$; SO2 minor baseline – $8/7/1978$
8	Provide the name and distance to Class I areas within 50 km of the facility (300 km for PSD permits). Mesa Verde National Park – 47 km
9	Is the facility located in a non-attainment area? If so, describe. No
10	Describe any special modeling requirements, such as streamline permit requirements. None

16-	16-C: Modeling History of Facility					
1	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).					
	Pollutant Latest permit and modification number that modeled the pollutant facility-wide.		Date of Permit	Comments		
	СО	New Permit				
	NO ₂	New Permit				
	SO ₂	New Permit				
	H_2S	New Permit				
	PM2.5	New Permit				
	PM10	New Permit				
	TSP	New Permit				
	Lead	Not Applicable				
	Ozone (PSD only)	Not Applicable				
	NM Toxic Air Pollutants (20.2.72.402 NMAC)	New Permit				

16-D: Modeling performed for this application							
1	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.						
	PollutantROICumulative analysisCulpability analysisWaiver approvedPollutant not emitted or not 						
	СО	Yes	NA	NA	NA		
	NO ₂	Yes	Yes	NA	NA		
	SO ₂	Yes	Yes	NA	NA		
	H_2S	NA	NA	NA	NA	Not Emitted	
	PM2.5	Yes	Yes	Yes	NA		
	PM10	Yes	Yes	Yes	NA		
	TSP	Yes	Yes	NA	NA		
	Lead	NA	NA	NA	NA	Not Emitted	
Ozone NA NA NA NA					NA	Not Emitted	
Asphalt Fumes NA NA Yes NA							

16-E: New Mexico toxic air pollutants modeling 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. 1 Asphalt Fumes List any NMTAPs that are emitted but not modeled because stack height correction factor. Add additional rows to the table below, if required. **Emission Rate Emission Rate** Stack Height Emission Rate/ Pollutant Correction Factor Screening Level (pounds/hour) (meters) Correction Factor (pounds/hour) Calcium 0.18 0.333 Hydroxide

16-	-F: Modeling options
	What model(s) were used for the modeling? Why?
1	The dispersion modeling was conducted using the American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee Dispersion Model (AERMOD), Version 16216r. This is the regulatory model recommended by EPA for determining Class II impacts within 50 km of the source being assessed.
	What model options were used and why were they considered appropriate to the application?
2	AERMOD was run using all the regulatory default options including use of stack-tip downwash, buoyancy-induced dispersion, calms processing routines, upper-bound downwash concentrations for super-squat buildings, default wind speed profile exponents, vertical potential temperature gradients, and no use of gradual plume rise. Non-default options included the use of flat terrain mode for fugitive ground release sources and horizontal release stacks. The model incorporated local terrain into the calculations for point sources and neighboring point sources only. Surrounding terrain (within 500 meters) is basically flat for fugitive dust volume source modeling, so all volume sources were modeled using the flat terrain option.

16-	16-G: Surrounding source modeling				
-	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 unmerged list of sources to describe the changes.				
1	Valley Scrap Metal - Aluminum Sweat Furnace UTM coordinates were incorrect. Hours of operation for Valley Scrap Metal - Aluminum Sweat Furnace were limited to daylight hours only per Eric Peters email dated November 27, 2017.				
2	Date of surrounding	ng source retrieval. From Eric Peters – 10/24/2017			
	AQB Source ID	Description of Corrections			
	1370E2	Correction - UTM Coordinates 737130E; 4069125N			

16-	16-H: Building and structure downwash				
1	How many buildings are present at the facility?	0			
2	How many above ground storage tanks are present at the facility?	8			
3	Was building downwash modeled for all buildings?	Yes	No		
4	If not, explain why. No buildings located on site.				
5	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 gate			
2	Receptors must be placed along publicly accessible roads in the restricted area. Are there public roads passing through the restricted area?	Yes	<u>No</u>	
3	Are restricted area boundary coordinates included in the modeling files?	Yes	No	
4	Describe the receptor grids and their spacing. For each pollutant, the radius of significant impact around the facility is established using a Cartesian grid. A 50-meter spacing and 100-meter spacing are extended to 500-meters and 1-km beyond the facility boundary, respectively from the facility boundary in each direction for a very fine grid resolution. Receptors for a fine grid resolution are placed with 250- meter spacing to a distance of 3-km from the facility boundary. Receptors for a course grid resolution are placed with 500- meter, 1000-meter, and 2000-meter spacing to a distance of 5-km, 10-km, and 24-km, respectively from the facility boundary.			
5	Describe receptor spacing along the fence line. A 50-meter grid spacing is used for the facility boundary receptors, because most of the sources are low release fugitive emission sources.			
6	Describe the PSD Class I area receptors. Receptors placed along Mesa Verde southern boundary at a 200 meter spacing.			

16-	16-J: Sensitive areas								
1	Are there schools or hospitals or other sensitive areas near the facility? This information is optional (and purposely undefined), but may help determine issues related to public notice.	Yes	<u>No</u>						
2	If so, describe.								
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

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).

Aggregate Crushing Plant

The 500 tph aggregate quarry and crushing operations will include an aggregate quarry, feeder, primary jaw crusher, two (2) secondary cone crushers, three (3) 6' x 20' screens, eighteen (18) transfer conveyors, and five (5) stacker conveyors. The plant will be powered by a 1429 horsepower (hp) generator during hours of aggregate processing and a 113 hp standby generator **at all other times**. Aggregate from the quarry will be transported to the aggregate crushing plant by large rock trucks. Processed aggregate will be transported from the aggregate crushing plant to the HMA plant, aggregate wash plant, and off-site sales. The aggregate crushing plant will limit hourly processing rate to 500 tph and 1,000,000 tons per year (tpy). The hours of operation is presented below in Table 1, but the aggregate crushing plant will limit the daily throughput per season to the values listed in Table 2.

TABLE 1: Aggregate Crusher Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	1	1	1	0	0	0	0
7:00 AM	0	0	1	1	1	1	1	1	1	1	1	0
8:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
4:00 PM	0	1	1	1	1	1	1	1	1	1	1	0
5:00 PM	0	1	1	1	1	1	1	1	0	0	0	0
6:00 PM	0	0	0	0	0	1	1	1	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	8	10	11	11	11	13	13	13	10	10	10	8

Dec

TABLE 2.	Aggregate	Daily	Production	Rates
IADLE 2.	Aggiegaie	Dany	1 I ouuciion	naus

Season	Tons Per Day
Winter	4000
Spring	5500
Summer	5500
Fall	4500

Since the daily production rate is less than the proposed hours of operation running at maximum hourly production rate, two modeling scenarios will be performed, one for morning and one for afternoon hours. The model hours are presented in Tables 3 and 4.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
12:00 AM	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	1	1	1	0	0	0
7:00 AM	0	0	1	1	1	1	1	1	1	1	1
8:00 AM	1	1	1	1	1	1	1	1	1	1	1
9:00 AM	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1

TABLE 3: Aggregate Crusher Morning Modeled Hours of Operation (MST) Jan Feb Mar Apr May Jun Jul Aug Sep Oct

1:00 PM

2:00 PM

3:00 PM

4:00 PM

5:00 PM

6:00 PM

7:00 PM

8:00 PM

9:00 PM

10:00 PM

11:00 PM

Total

TABLE 4: Aggregate Crusher Afternoon Modeled Hours of Operation (MST)												
-	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	0	1	1	1	0	0	0	0	0	0	0
8:00 AM	1	0	1	1	1	1	1	1	1	1	1	1
9:00 AM	1	0	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
4:00 PM	0	1	1	1	1	1	1	1	1	1	1	0
5:00 PM	0	1	1	1	1	1	1	1	0	0	0	0
6:00 PM	0	0	0	0	0	1	1	1	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	8	8	11	11	11	11	11	11	9	9	9	8

Aggregate Wash Plant

The 500 tph aggregate wash plant will include a feeder, twin-screw wash plant, six (6) transfer conveyors, and four (4) stacker conveyors. The plant will be powered by a 475 horsepower (hp) generator. Processed aggregate will be transported from the aggregate wash plant to the HMA plant, concrete batch plant, and off-site sales. The aggregate wash plant will limit hourly processing rate to 500 tph and 1,000,000 tons per year (tpy). The hours of operation will be daylight hours and is presented below in Table 5.

TABLE 5: Wash Plant Modeled Hours o	of O	peration ((MST))
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	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
5:00 AM	0	0	0	1	1	1	1	1	0.5	0	0	0
6:00 AM	0	0.5	1	1	1	1	1	1	1	1	0.5	0

7:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
8:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
4:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
5:00 PM	0.5	1	1	1	1	1	1	1	1	1	0	0
6:00 PM	0	0	0	1	1	1	1	1	0.5	0	0	0
7:00 PM	0	0	0	0	0	0.5	0.5	0	0	0	0	0
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
10:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
11:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
Total	10.5	11.5	12	14	14	14.5	14.5	14	13	12	10.5	10

HMA Plant

The 400 tph hot mix asphalt plant will include a 5-bin cold aggregate feeder, scalping screen, pug mill, 2- bin RAP feeder , RAP scalping screen, mineral filler silo with baghouse, drum dryer with baghouse, incline conveyor, asphalt silo, asphalt heater, and eight (8) transfer conveyors. The plant will be powered by a 1429 horsepower (hp) generator during hours of asphalt processing and a 158 hp standby generator **at all other times**. Processed asphalt will be transported from the HMA plant to off-site sales. The HMA plant will limit hourly processing rate to 400 tph and 400,000 tons per year (tpy). The hours of operation is presented below in Table 6. Seasonal daily throughput are presented in Table 7.

TABLE 6: HMA Plant Hours of Operation (MST)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
12:00 AM	0	0	0	0	0	1	1	1	0	0	0	0
1:00 AM	0	0	0	0	0	1	1	1	0	0	0	0
2:00 AM	0	0	0	0	0	1	1	1	0	0	0	0
3:00 AM	0	0	0	0	0	1	1	1	0	0	0	0
4:00 AM	0	0	1	1	1	1	1	1	1	1	1	0
5:00 AM	0	0	1	1	1	1	1	1	1	1	1	0
6:00 AM	0	0	1	1	1	1	1	1	1	1	1	0
7:00 AM	0	0	1	1	1	1	1	1	1	1	1	0
8:00 AM	0	0	1	1	1	1	1	1	1	1	1	0
9:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
10:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
11:00 AM	1	1	1	1	1	1	1	1	1	1	1	1
12:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
1:00 PM	1	1	1	1	1	1	1	1	1	1	1	1

2:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
3:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
4:00 PM	1	1	1	1	1	1	1	1	1	1	1	1
5:00 PM	0	0	1	1	1	1	1	1	1	1	1	0
6:00 PM	0	0	1	1	1	1	1	1	1	1	1	0
7:00 PM	0	0	1	1	1	1	1	1	1	1	1	0
8:00 PM	0	0	1	1	1	1	1	1	0	0	0	0
9:00 PM	0	0	1	1	1	1	1	1	0	0	0	0
10:00 PM	0	0	0	0	0	1	1	1	0	0	0	0
11:00 PM	0	0	0	0	0	1	1	1	0	0	0	0
Total	8	8	18	18	18	24	24	24	16	16	16	8

TABLE 7: HMA Daily Production Rates and Corresponding Max Hours of Production

Season	Tons Per Day	At Max Hourly Throughput – Hours per Day
Winter	3200	8
Spring	4000	10
Summer	4000	10
Fall	4000	10

Table 8 presents the 12 model scenarios modeled hours for showing compliance with the worst-case operating scenario.

TABLE 8: HMA Model Scenario Time Segments

Model Scenario	8-Hour Blocks Winter Months	Time Segments 10-Hour Blocks Spring, Summer, Fall Months
1	6 AM to 2 PM	12 AM to 10 AM
2	8 AM to 4 PM	2 AM to 12 PM
3	9 AM to 5 PM	4 AM to 2 PM
4	9 AM to 5 PM	6 AM to 4 PM
5	9 AM to 5 PM	8 AM to 6 PM
6	9 AM to 5 PM	10 AM to 8 PM
7	9 AM to 5 PM	12 PM to 10 PM
8	9 AM to 5 PM	2 PM to 12 AM
9	9 AM to 5 PM	4 PM to 2 AM
10	9 AM to 5 PM	6 PM to 4 AM
11	9 AM to 5 PM	8 PM to 6 AM
12	9 AM to 5 PM	10 PM to 8 AM

2 Highest concentrations for particulate modeling occurred when the HMA plant is operating in the evening and early morning.

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.)		<u>Yes</u>			No						
4	If so, des (Modify Sources:	scribe facto or duplica	ors for each te table as	h group of necessary.	sources. I It's ok to	List the so put the ta	urces in ea Ible below	ch group b section 16	efore the f -K if it mal	actor table kes format	for that gr ting easier	oup. .)
	Hour of Day	Factor	Hour of Day	Factor								
	1		13									
	2		14									
	3		15			1	1			1	1	
	4		16			I						
	5		17		See tables in 16-K 1							
5	6		18									
5	7		19									
	8		20									
	9		21									
	10		22									
	11		23									
	12		24									
	If hourly	, variable	emission r	ates were i	used that w	ere not de	escribed ab	ove, descr	ibe them he	ere: No		
6	Were dif annual m	ferent emi odeling?	ssion rates	used for s	hort-term a	and	Yes			No		
7	If yes, describe. Emission rates in annual models take in the requested annual production limit by including an hourly factor. Yes HMA Plant Annual Hourly Factor – 400,000 ton/yr permit limit / 1,391,200 max tons/yr = 0.288 hourly factor Aggregate Crusher Plant Annual Hourly Factor – 1,000,000 ton/yr permit limit / 1,785,500 max tons/yr = 0.560 hourly factor Aggregate Wash Plant Annual Hourly Factor – 1,000,000 ton/yr permit limit / 2,289,500 max tons/yr = 0.437 hourly factor											

16-L: NO₂ Modeling Which types of NO₂ modeling were used? Check all that apply. 100% $NO_{\rm X}$ to NO_2 conversion ARM 1 Х PVMRM - 1 hour averaging period OLM Х ARM2 - ROI and CIA annual period Other: Describe the NO₂ modeling. 2 NO₂ PVMRM modeling includes hourly monitored ozone concentrations corresponding to the meteorological data for the same year and hour. ARM2 modeling used EPA default inputs.

	In-stack NO ₂ /1	NO_X ratio(s) used in modeling.					
	Summary of Selected ISR						
3		Source Description	Selected ISR				
		Kirtland HMA Baghouse Stack	0.50				
		Kirtland HMA Asphalt Cement Heater	0.50				
		Kirtland Plant Generators/Engines	0.20				
		Kirtland CBP Plant Water Heater	0.50				
4	Equilibrium N	O_2/NO_X ratio(s) used in modeling. EPA Defaults					
5	Describe/justify the use of the ratios chosen. Based on EPA's ISR databases, a proposed conservative NO ₂ /NO _X ISR ratio for Diesel-fired RICE is 0.20. No data could be found for a hot mix asphalt drum so to be conservative the EPA default ISR of 0.50 was used. For natural gas combustion, to be conservative, the EPA default ISR of 0.50 was used.						
6	Describe the d 1-hour: 98th p	esign value used for each averaging period modeled. percentile as calculated by AERMOD					

16	M: Par	ticulate Matter Modeling					
	Select the pollutants for which plume depletion modeling was used.						
	PM2.5						
1	Х	PM10					
	Х	TSP					
		None					
	Describe the particle size distributions used. Include the source of information.						
	Representati	ve average particle densities were obtained from NM	IED accepted values				
		Material	Density (g/cm ³)	Reference			
		Road Dust – Kirtland and Neighbor	2.5	NMED Value			
		Lime – Kirtland and Neighbor	3.3	NMED Value			
,		HMA Asphalt – Kirtland and Neighbor	1.5	NMED Value			
2		Combustion – Kirtland and Neighbor	1.5	NMED Value			
		Fugitive Dust – Kirtland and Neighbor	2.5	NMED Value			
		Cooling Tower - Neighbor	2.5	NMED Value			
		Coal - Neighbor	1.5	NMED Value			
		Fly Ash - Neighbor	1.04	NMED Value			
		Cement - Neighbor	2.85	NMED Value			
	The densities	and size distribution for PM_{10} and TSP emission so	urces are presented i	n Tables 1 - 9.			
		TABLE 1: Unpaved Road Vehicle Fu	gitive Dust Depleti	on Parameters			

	Particle Size Category (μm)	Mass Mean Particle Diameter (µm)	Mass Weighted Size Distribution (%)	Density (g/cm ³)
Ē		PM1	0	
	0 - 2.5	1.57	25.0	2.5
	2.5 - 10	6.91	75.0	2.5
		TSP		
	0-2.5	1.57	5.0	2.5
	2.5-10	6.91	15.0	2.5
	10-15	12.63	5.0	
	15-30	23.23	75.0	2.5

Based on NMED Particle Size Distribution Spreadsheet - April 25, 2007

TABLE 2: Lime	Baghouse	Source	Depletion	Parameters
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Particle Size Category (µm)	Mass Mean Particle Diameter (µm)	Mass Weighted Size Distribution (%)	Density (g/cm³)
	PM1	0	
0-2.5	1.57	25	3.3
2.5-10	6.91	75	3.3
	TSP	•	·
0-2.5	1.57	17.4	3.3
2.5-10	6.91	52.1	3.3
10-30	21.54	30.5	3.3

Parameters based on baghouse exhaust capture percentages.

TABLE 3: Combustion Source Depletion Parameters

Particle Size Category (µm)	Particle SizeMass MeanCategoryParticle Diameter(μm)(μm)		Density (g/cm³)			
	PM10					
0 - 2.5	1.57	100	1.5			
TSP						
0 - 2.5	1.57	100	1.5			

Based on NMED Particle Size Distribution Spreadsheet – April 25, 2007

TABLE 4: Asphalt Baghouse and	Stack Source Depletion Parameters
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Particle Size	Mass Mean	Mass Weighted	Density
Category	Particle Diameter	Size Distribution	(g/cm ³)

(μm)	(μm)	(%)	
	PM1	0	
0-1.0	0.63	50.0	1.5
1.0-2.5	1.85	19.0	1.5
2.5-10	6.92	31.0	1.5
	TSP		
0-1.0	0.63	15.0	1.5
1.0-2.5	1.85	6.0	1.5
2.5-10	6.92	9.0	1.5
10.0-15.0	12.66	5.0	1.5
15.0-30.0	23.3	65.0	1.5

Based on NMED Particle Size Distribution Spreadsheet - April 25, 2007

TABLE 5: Fugitive Dust Source Depletion Parameters

Particle Size Category (µm)	Mass Mean Particle Diameter (µm)	Mass Weighted Size Distribution (%)	Density (g/cm³)
	PM1	0	
2.5 - 5	3.88	22.6	2.5
5 - 10	7.77	77.4	2.5
	TSP		
2.5 - 5	3.88	6.0	2.5
5 - 10	7.77	20.5	2.5
10 - 15	12.66	16.0	2.5
15 - 20	17.62	17.5	2.5
20 - 30	25.33	22.5	2.5
30 - 45	38.00	17.5	2.5

Parameters based on values from the Albuquerque Air Quality Division Modeling Guidelines.

TABLE 6: Cooling Tower Source Depletion Parameters

Particle Size Category (μm)	Mass Mean Particle Diameter (µm)	Mass Weighted Size Distribution (%)	Density (g/cm³)
	PM1	0	
0-2.5	1.57	7.8	2.5
2.5-5	3.88	27.0	2.5
5-10	7.77	65.2	2.5
	TSP)	
0-2.5	1.57	3.0	2.5
2.5-5	3.88	10.0	2.5
5-10	7.77	24.0	2.5

	10-20	15.54	38.0	2.5
	20-30	25.33	25.0	2.5

Based on NMED Particle Size Distribution Spreadsheet - April 25, 2007

TABLE 7: Coal Handling Fugitive Source Depletion Parameters					
Particle Size Category (µm)	Mass Mean Particle Diameter (µm)	Mass Weighted Size Distribution (%)	Density (g/cm³)		
	PM1	0			
0-2.5	1.57	7.8	1.5		
2.5-5	3.88	27.0	1.5		
5-10	7.77	65.2	1.5		
	TSF)			
0-2.5	1.57	3.0	1.5		
2.5-5	3.88	10.0	1.5		
5-10	7.77	24.0	1.5		
10-20	15.54	38.0	1.5		
20-30	25.33	25.0	1.5		

TADLE 7. Contraction a Fusitivo S D. 1.0

Based on NMED Particle Size Distribution Spreadsheet - April 25, 2007

TABLE 8: Fly Ash Baghouse Source Depletion Parameters

Particle Size Category (μm)	Mass Mean Particle Diameter (µm)	Mass Weighted Size Distribution (%)	Density (g/cm³)
	PM1	0	
0-2.5	1.57	7.8	1.5
2.5-5	3.88	27.0	1.5
5-10	7.77	65.2	1.5
	TSP		
0-2.5	1.57	3.0	1.5
2.5-5	3.88	10.0	1.5
5-10	7.77	24.0	1.5
10-20	15.54	38.0	1.5
20-30	25.33	25.0	1.5

Based on NMED Particle Size Distribution Spreadsheet - April 25, 2007

TABLE 9: Cement Baghouse Depletion Parameters

Particle Size Category (µm)	Mass Mean Particle Diameter (µm)	Mass Weighted Size Distribution (%)	Density (g/cm ³)	
PM10				
0-2.5	1.5	0.26	2.85	

		2.5-5	3	0.25	2.85	
		5-10	6	0.48	2.85	
			TS	P		
		0-2.5	1.5	0.11	2.85	
		2.5-5	3	0.11	2.85	
		5-10	6	0.21	2.85	
		10-20	12	0.26	2.85	
			24	0.23	2.85	
		20-30	30	0.08	2.85	
	Based	d on NMED Particle Size	e Distribution Spreadsheet –	April 25, 2007		
3	Was second Only requir for minor s	dary PM modeled for PM red for PSD major modi ources, but allows use o	12.5? fications that are significant f f high eighth high.	for NOx and/or SOx. Optional	Yes	No
	For minor sources, but allows use of high eighth high. Highest 8^{th} high was used in the model analysis by determining how fast the PM _{2.5} concentration drop-off occurred. Since the drop-off to below SILs was within 2 kilometers of the facility there was not time to convert facility NO ₂ and SO ₂ emissions to nitrates or sulfates.					

16-	16-N: Setback Distances and Source Classification					
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.					
	Equipment locations for	or this site are permanent,	but if in the future equipment is relocated with	in the site an	analysis will be	
	done to make sure the s	site is still in compliance	with NAAQS and NMAAQS.	ortable statio	nary source	
2	Include a haul road in t	he relocation modeling.	tees for future locations, if this permit is for a pe	Sitable Statio	nary source.	
3	The unit numbers in the modeling files. Do these	e Tables 2-A, 2-B, 2-C, 2 se match?	-E, 2-F, and 2-I should match the ones in the	Yes	No	
	Provide a cross-reference table between unit numbers if they do not match. It's ok to place the table below section 16-N for easier formatting.					
	Emission Unit #	Model ID	Emission Source Descriptio	n		
	68, 69	HMASTK	Kirtland HMA Baghouse Stack			
	74	HMAGEN	Kirtland HMA Main Plant Generator			
	75	HMASGEN	Kirtland HMA Standby Plant Generator			
	72	HMAHEAT	Kirtland HMA Asphalt Cement Heater			
4	66, 67	HMAFILL	Kirtland HMA Mineral Filler Silo Loading			
	70	DRUMUNL	Kirtland HMA Asphalt Silo Loading			
	71	HMASILO	Kirtland HMA Asphalt Silo Unloading			
		HMAPILE1	Kirtland HMA Storage Pile Handling 1			
		HMAPILE2	Kirtland HMA Storage Pile Handling 2			
	52	HMAPILE3	Kirtland HMA Storage Pile Handling 3			
		HMAPILE4	Kirtland HMA Storage Pile Handling 4			
		HMAPILE5	Kirtland HMA Storage Pile Handling 5			
	53	HMABIN	Kirtland HMA Bin Loading			

	54	HMATP1	Kirtland HMA Bin	Unloading			
	55	HMASCR	Kirtland HMA Scal	ping Screen			
	56	HMATP2	Kirtland HMA Scal	ping Screen U	Jnloading		
	57	57 HMAPUG Kirtland HMA Pug		Mill			
	58	58 HMATP3 Kirtland HMA Pug		Mill Unloadin	ng		
	59	HMATP4	Kirtland HMA Con	veyor Transfe	r to Drum C	onveyor	
	60	RAPBIN	Kirtland HMA RAF	Bin Loading			
	61	RAPTP1	Kirtland HMA RAF	Bin Unloadi	ng		
	62	RAPSCR	Kirtland HMA RAF	P Screen			
	63	RAPTP2	Kirtland HMA RAF	Screen Unlo	ading		
	64	RAPTP3	Kirtland HMA RAF	P Transfer Poi	nt		
	65	RAPTP4	Kirtland HMA RAF	P Transfer Poi	nt		
	76, 77	HMA_0001-62	Unpaved Road HM	A to Exit Vol	ume 1-62		
		CRH_0001-83	Unpaved Road Crus	sher to HMA	Volume 1-83	3	
		CRE_0001-52	Unpaved Road Crus	sher to Exit V	olume 1-52		
	51	CRW_0001-82	Unpaved Road Crus	sher to Wash	Plant Volum	e 1-82	
		WPE_0001-61	Unpaved Road Was	h Plant to Exi	it Volume 1-	61	
		ROC_0001-11	Unpaved Road Roc	k Haul Trucks	s to Crusher	Volume 1-11	
5	The emission rates	s in the Tables 2-E and 2-F sl	hould match the ones ir	n the modeling	g files. Do	Ves	No
	these match?					105	110
	If not, explain why	/.					
	For emission rates	where wind speed is part of	the regulated emission	rate calculation	on, the annua	al wind speed v	was used in the
	calculation submit		Pri was used in the reg	ulated hourly	emission rat	e în Table 2-E.	
				TSP	PM10	PM2.5	
	Model ID	Emission Source	Description	Emission (lbs/br)	Emission (lbs/br)	Emission (lbs/br)	
	1	Ennission Source	Description	(105/111)	(105/111)	111/3/111/	
	31P1	Feeder		2 32409	1 09923	0 16646	
		Stacker Conveyor Drop to 1	Pile 1	2.32409	1.09923	0.16646	
	31P2	Stacker Conveyor Drop to I	Pile 1 Pile 2	2.32409 0.27898 0.27898	1.09923 0.13195 0.13195	0.16646 0.01998 0.01998	
	31P2 31P3	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Stacker Conveyor Drop to I	Pile 1 Pile 2 Pile 3	2.32409 0.27898 0.27898 0.27898	1.09923 0.13195 0.13195 0.13195	0.16646 0.01998 0.01998 0.01998	
	31P2 31P3 31P4	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Stacker Conveyor Drop to I Stacker Conveyor Drop to I	Pile 1 Pile 2 Pile 3 Pile 4	2.32409 0.27898 0.27898 0.27898 0.27898 0.27898	1.09923 0.13195 0.13195 0.13195 0.13195 0.13195	0.16646 0.01998 0.01998 0.01998 0.01998	
	31P2 31P3 31P4 31P5	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Stacker Conveyor Drop to I Stacker Conveyor Drop to I Stacker Conveyor Drop to I	Pile 1 Pile 2 Pile 3 Pile 4 Pile 5	2.32409 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898	1.09923 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195	0.16646 0.01998 0.01998 0.01998 0.01998 0.01998	
	31P2 31P3 31P4 31P5 32P1	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Finish Product Storage Pile	Pile 1 Pile 2 Pile 3 Pile 4 Pile 5	2.32409 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.46482	1.09923 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.21985	0.16646 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998	
6	31P2 31P3 31P4 31P5 32P1 32P2	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Finish Product Storage Pile	Pile 1 Pile 2 Pile 3 Pile 4 Pile 5 1 2	2.32409 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.46482	1.09923 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.21985	0.16646 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.03329 0.03329	
6	31P2 31P3 31P3 31P4 31P5 32P1 32P2 32P3	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Finish Product Storage Pile Finish Product Storage Pile	Pile 1 Pile 2 Pile 3 Pile 4 Pile 5 1 2 3	2.32409 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.46482 0.46482 0.46482	1.09923 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.21985 0.21985 0.21985	0.16646 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.03329 0.03329 0.03329	
6	31P2 31P3 31P4 31P5 32P1 32P2 32P3 32P4	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Finish Product Storage Pile Finish Product Storage Pile Finish Product Storage Pile	Pile 1 Pile 2 Pile 3 Pile 4 Pile 5 1 2 3 4	2.32409 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.46482 0.46482 0.46482 0.46482	1.09923 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.21985 0.21985 0.21985 0.21985	0.16646 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.03329 0.03329 0.03329 0.03329	
6	31P2 31P3 31P4 31P5 32P1 32P2 32P3 32P4 32P5	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Finish Product Storage Pile Finish Product Storage Pile Finish Product Storage Pile Finish Product Storage Pile	Pile 1 Pile 2 Pile 3 Pile 4 Pile 5 1 2 3 4 5	2.32409 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.46482 0.46482 0.46482 0.46482 0.46482	1.09923 0.13195 0.13195 0.13195 0.13195 0.13195 0.21985 0.21985 0.21985 0.21985 0.21985	0.16646 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.03329 0.03329 0.03329 0.03329 0.03329 0.03329	
6	31P2 31P3 31P3 31P4 31P5 32P1 32P2 32P3 32P4 32P5 33	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Finish Product Storage Pile Finish Product Storage Pile Finish Product Storage Pile Finish Product Storage Pile Finish Product Storage Pile	Pile 1 Pile 2 Pile 3 Pile 4 Pile 5 1 2 3 4 5 pile Pile	2.32409 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.46482 0.46482 0.46482 0.46482 0.46482 0.46482 2.32409	1.09923 0.13195 0.13195 0.13195 0.13195 0.13195 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985	0.16646 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.03329 0.03329 0.03329 0.03329 0.03329 0.03329 0.03329 0.03329 0.03329	
6	31P2 31P2 31P3 31P4 31P5 32P1 32P2 32P3 32P4 32P5 33 33 36	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Finish Product Storage Pile Finish Product Storage Pile	Pile 1 Pile 2 Pile 3 Pile 4 Pile 5 1 2 3 4 5 nish Pile	2.32409 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.46482 0.46482 0.46482 0.46482 0.46482 2.32409 2.32409	1.09923 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985	0.16646 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.03329 0.03329 0.03329 0.03329 0.03329 0.03329 0.16646 0.16646	
6	31P2 31P2 31P3 31P4 31P5 32P1 32P2 32P3 32P4 32P5 33 36 48P1	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Finish Product Storage Pile Finish Product Storage Pile Wet Plant Feeder	Pile 1 Pile 2 Pile 3 Pile 4 Pile 5 1 2 3 4 5 nish Pile	2.32409 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.46482 0.46482 0.46482 0.46482 0.46482 2.32409 2.32409 0.58102	1.09923 0.13195 0.13195 0.13195 0.13195 0.13195 0.21985 0.21985 0.21985 0.21985 0.21985 1.09923 1.09923 0.27481	0.16646 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.03329 0.03329 0.03329 0.03329 0.03329 0.03329 0.16646 0.16646 0.04161	
6	31P1 31P2 31P3 31P4 31P5 32P1 32P2 32P3 32P4 32P5 33 36 48P1 48P2	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Finish Product Storage Pile Finish Product Storage Pile Wet Plant Feeder Wet Plant Finish Product Storage Storage Wat Plant Finish Product Storage Storage Storage Pile	Pile 1 Pile 2 Pile 3 Pile 4 Pile 5 1 2 3 4 5 nish Pile torage Pile 1 torage Pile 2	2.32409 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.46482 0.46482 0.46482 0.46482 0.46482 2.32409 2.32409 0.58102 0.58102	1.09923 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.21985	0.16646 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.03329 0.03329 0.03329 0.03329 0.16646 0.16646 0.04161	
6	31P1 31P2 31P3 31P4 31P5 32P1 32P2 32P3 32P4 32P5 33 36 48P1 48P2	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Finish Product Storage Pile Finish Product Storage Pile Vet Plant Finish Product Storage File Wet Plant Finish Product Storage Store Wet Plant Finish Product Store Wet Plant Finish Product Store Wet Plant Finish Product Store Store Store Stor	Pile 1 Pile 2 Pile 3 Pile 4 Pile 5 1 2 3 4 5 nish Pile torage Pile 1 torage Pile 2 torage Pile 3	2.32409 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.46482 0.46482 0.46482 0.46482 2.32409 2.32409 2.32409 0.58102 0.58102	1.09923 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.21985 0.27481 0.27481	0.16646 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.03329 0.03329 0.03329 0.03329 0.16646 0.16646 0.04161 0.04161	
6	31P1 31P2 31P3 31P4 31P5 32P1 32P2 32P3 32P4 32P5 33 36 48P1 48P2 48P3	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Finish Product Storage Pile Finish Product Storage Pile Wet Plant Feeder Wet Plant Finish Product Stor Wet Plant Finish Product Stor Wet Plant Finish Product Stor Wet Plant Finish Product Stor	Pile 1 Pile 2 Pile 3 Pile 4 Pile 5 1 2 3 4 5 nish Pile torage Pile 1 torage Pile 2 torage Pile 3 torage Pile 4	2.32409 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.46482 0.46482 0.46482 0.46482 2.32409 2.32409 2.32409 0.58102 0.58102 0.58102	1.09923 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.27481 0.27481 0.27481	0.16646 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.03329 0.03329 0.03329 0.03329 0.03329 0.16646 0.16646 0.04161 0.04161	
6	31P1 31P2 31P3 31P4 31P5 32P1 32P2 32P3 32P4 32P5 33 36 48P1 48P2 48P3 48P4	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Finish Product Storage Pile Finish Product Storage Pile Finish Product Storage Pile Finish Product Storage Pile Finish Product Storage Pile Product Truck Loading - Fi Wet Plant Feeder Wet Plant Finish Product Stor Wet Plant Finish Product Stor	Pile 1 Pile 2 Pile 3 Pile 4 Pile 5 1 2 3 4 5 nish Pile torage Pile 1 torage Pile 2 torage Pile 3 torage Pile 4 pile 3	2.32409 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.46482 0.46482 0.46482 0.46482 0.46482 2.32409 2.32409 0.58102 0.58102 0.58102 0.58102	1.09923 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.21985 0.27481 0.27481 0.27481 0.27481	0.16646 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.03329 0.03329 0.03329 0.03329 0.16646 0.16646 0.04161 0.04161 0.04161 0.04161 0.04161	
6	31P1 31P2 31P3 31P4 31P5 32P1 32P2 32P3 32P4 32P5 33 36 48P1 48P2 48P3 48P4 49	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Finish Product Storage Pile Finish Product Storage Pile Finish Product Storage Pile Finish Product Storage Pile Finish Product Storage Pile Product Truck Loading - Fi Wet Plant Feeder Wet Plant Finish Product Stor Wet Plant Finish Product Stor	Pile 1 Pile 2 Pile 3 Pile 4 Pile 5 1 2 3 4 5 nish Pile torage Pile 1 torage Pile 2 torage Pile 3 torage Pile 4 pading - Finish Pile	2.32409 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.46482 0.46482 0.46482 0.46482 0.46482 2.32409 2.32409 0.58102 0.58102 0.58102 0.58102 0.58102 0.58102	1.09923 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.21985 0.27481 0.27481 0.27481 1.09923 0.16240	0.16646 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.03329 0.03329 0.03329 0.03329 0.16646 0.16646 0.04161 0.04161 0.04161 0.04161 0.04161 0.04161	
6	31P1 31P2 31P3 31P4 31P5 32P1 32P2 32P3 32P4 32P5 33 36 48P1 48P2 48P3 48P4 49 HMAPILE1	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Finish Product Storage Pile Finish Product Storage Pile Wet Plant Feeder Wet Plant Finish Product St Wet Plant Finish Product St	Pile 1 Pile 2 Pile 3 Pile 4 Pile 5 1 2 3 4 5 nish Pile torage Pile 1 torage Pile 2 torage Pile 3 torage Pile 4 poding - Finish Pile	2.32409 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.46482 0.46482 0.46482 0.46482 0.46482 2.32409 2.32409 0.58102 0.58102 0.58102 0.58102 2.32409 0.34397 0.34397	1.09923 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.21985 0.27481 0.27481 0.027481 0.027481 0.02669 0.16269	0.16646 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.03329 0.03329 0.03329 0.03329 0.03329 0.16646 0.16646 0.04161 0.04161 0.04161 0.04161 0.04161 0.04161 0.02464	
6	31P1 31P2 31P3 31P4 31P5 32P1 32P2 32P3 32P4 32P5 33 36 48P1 48P2 48P3 48P4 49 HMAPILE1 HMAPILE2	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Finish Product Storage Pile Finish Product Storage Pile Finish Product Storage Pile Finish Product Storage Pile Finish Product Storage Pile Product Truck Loading - Fi Wet Plant Feeder Wet Plant Finish Product St Wet Plant Finish Product St	Pile 1 Pile 2 Pile 3 Pile 4 Pile 5 1 2 3 4 5 nish Pile torage Pile 1 torage Pile 2 torage Pile 3 torage Pile 4 pading - Finish Pile Handling 1 Handling 2 Handling 2	2.32409 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.46482 0.46482 0.46482 0.46482 0.46482 2.32409 2.32409 0.58102 0.58102 0.58102 2.32409 0.58102 2.32409 0.34397 0.34397	1.09923 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.21985 0.27481 0.27481 0.027481 0.027481 0.0269 0.16269 0.16269	0.16646 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.03329 0.03329 0.03329 0.03329 0.03329 0.16646 0.16646 0.04161 0.04161 0.04161 0.04161 0.02464 0.02464	
6	31P1 31P2 31P3 31P4 31P5 32P1 32P2 32P3 32P4 32P5 33 36 48P1 48P2 48P3 48P4 49 HMAPILE1 HMAPILE3	Stacker Conveyor Drop to I Stacker Conveyor Drop to I Finish Product Storage Pile Finish Product Storage Pile Finish Product Storage Pile Finish Product Storage Pile Finish Product Storage Pile Product Truck Loading - Fi Wet Plant Feeder Wet Plant Finish Product St Wet Plant Finish Product St	Pile 1 Pile 2 Pile 3 Pile 4 Pile 5 1 2 3 4 5 nish Pile torage Pile 1 torage Pile 2 torage Pile 3 torage Pile 4 oading - Finish Pile Handling 1 Handling 3 Hue Win 4	2.32409 0.27898 0.27898 0.27898 0.27898 0.27898 0.27898 0.46482 0.46482 0.46482 0.46482 0.46482 2.32409 2.32409 0.58102 0.58102 0.58102 0.58102 0.58102 0.58102 0.58102 0.34397 0.34397 0.34397	1.09923 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.13195 0.21985 0.27481 0.27481 0.09923 0.16269 0.16269 0.16269 0.16269	0.16646 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.01998 0.03329 0.03329 0.03329 0.03329 0.03329 0.03329 0.16646 0.04161 0.04161 0.04161 0.04161 0.02464 0.02464 0.02464	

Hind Hills Hinde Hills Conger in Hinde Hills Out of the following of the Hills Out of the following of the Hills HMABIN Kirtland HMA Bin Loading 1.71983 0.81343 0.12318 RAPBIN Kirtland HMA RAP Bin Loading 0.19522 0.09234 0.01398 Have the minor NSR exempt sources or Title V Insignificant Activities" (Table 2-B) sources Yes No Which units consume increment for which pollutants? Yes No Model ID Description PM10 NO2 SO2 Quarry Quarry X 1 Feeder X 1 1 Feeder X 1 Yes X 1
Initial Birly Initial Birly Birl Doubling Initial Birly Bir
Have the minor NSR exempt sources or Title V Insignificant Activities" (Table 2-B) sources Yes No Which units consume increment for which pollutants? Source PM10 NO2 SO2 Model ID Description PM10 NO2 SO2 Quarry Quarry X I 1 Feeder X I 2 Codermids law Grapher X I
been modeled? Yes No Which units consume increment for which pollutants? No No Model ID Source PM10 NO2 SO2 Quarry Quarry X I 1 Feeder X I 2 Codermids law Grupher X I
Which units consume increment for which pollutants? Source Model ID Description Quarry Quarry Quarry X 1 Feeder 2 Codereroids Jaw Crucher
Model IDSource DescriptionPM10NO2SO2QuarryQuarryX11FeederX12Coderenide Jaw CrucherX1
Model IDSource DescriptionPM10NO2SO2QuarryQuarryX
Model ID Description PM10 NO2 SO2 Quarry Quarry X 1 Feeder X 2 Codereride Jaw Crucher X
Quarry Quarry X 1 Feeder X 2 Codereride Jaw Crucher X
1 Feeder X 2 Cadaramida Jany Crushar X
2 Codemonida Jany Crusher V
2 Cedarapius Jaw Crusiier A
3 Transfer Conveyor X
4 Transfer Conveyor X
5 Cedarapids 6'x20' Screen X
6 Stacker Conveyor X
7 Under Screen Transfer Conveyor X
8 Transfer Conveyor X
9 Secondary Cone Crusher X
10 Secondary Cone Crusher Transfer Conveyor X
11 Transfer Conveyor X
12 Under Screen Transfer Conveyor X
13 Transfer Conveyor X
14 Secondary Cone Crusher X
15 Secondary Cone Crusher Transfer Conveyor X
16 Transfer Conveyor X
17 Cedarapids 6'x20' Screen X
18 Transfer Conveyor X
19 Stacker Conveyor X
20 Transfer Conveyor X
21 Transfer Conveyor X
22 Transfer Conveyor X
23 Stacker Conveyor X
24 Under Screen Transfer Conveyor X
25 Transfer Conveyor X
26 Cedarapids 6'x20' Screen X
27 Under Screen Transfer Conveyor X
28 Stacker Conveyor X
29 Under Screen Transfer Conveyor X
30 Stacker Conveyor X
31P1 Stacker Conveyor Drop to Pile 1 X
31P2 Stacker Conveyor Drop to Pile 2 X
31P3 Stacker Conveyor Drop to Pile 3 X
31P4 Stacker Conveyor Drop to Pile 4 X
31P5 Stacker Conveyor Drop to Pile 5 X
32P1 Finish Product Storage Pile 1 X
32P2 Finish Product Storage Pile 2 X
32P3 Finish Product Storage Pile 3 X
32P4 Finish Product Storage Pile 4 X

32P5	Finish Product Storage Pile 5	Х		
33	Product Truck Loading - Finish Pile	Х		
34	Crusher Plant Generator	Х	Х	Х
35	Crusher Plant Standby Generator	Х	Х	Х
36	Wet Plant Feeder	Х		
37	Wet Plant Transfer Conveyor	Х		
38	Wet Plant Transfer Conveyor	Х		
48P1	Wet Plant Finish Product Storage Pile 1	Х		
48P2	Wet Plant Finish Product Storage Pile 2	Х		
48P3	Wet Plant Finish Product Storage Pile 3	Х		
48P4	Wet Plant Finish Product Storage Pile 4	Х		
49	Wet Plant Product Truck Loading - Finish Pile	Х		
50	Wash Plant Generator	Х	Х	Х
CRH 0001-83	Unpaved Road Crusher to HMA Volume 1-83	Х		
CRE 0001-52	Unpaved Road Crusher to Exit Volume 1-52	Х		
CRW 0001-82	Unpaved Road Crusher to Wash Plant Volume 1-82	Х		
WPE 0001-61	Unpaved Road Wash Plant to Exit Volume 1-61	Х		
ROC 0001-11	Unpaved Road Rock Haul Trucks to Crusher Volume 1-11	Х		
HMASTK	Kirtland HMA Baghouse Stack	Х	Х	Х
HMAGEN	Kirtland HMA Main Plant Generator	Х	Х	Х
HMASGEN	Kirtland HMA Standby Plant Generator	Х	Х	Х
HMAHEAT	Kirtland HMA Asphalt Cement Heater	Х	Х	Х
HMAFILL	Kirtland HMA Mineral Filler Silo Loading	Х		
DRUMUNL	Kirtland HMA Asphalt Silo Loading	Х		
HMASILO	Kirtland HMA Asphalt Silo Unloading	Х		
HMAPILE1	Kirtland HMA Storage Pile Handling 1	Х		
HMAPILE2	Kirtland HMA Storage Pile Handling 2	Х		
HMAPILE3	Kirtland HMA Storage Pile Handling 3	Х		
HMAPILE4	Kirtland HMA Storage Pile Handling 4	Х		
HMAPILE5	Kirtland HMA Storage Pile Handling 5	Х		
HMABIN	Kirtland HMA Bin Loading	Х		
HMATP1	Kirtland HMA Bin Unloading	Х		
HMASCR	Kirtland HMA Scalping Screen	Х		
HMATP2	Kirtland HMA Scalping Screen Unloading	Х		
HMAPUG	Kirtland HMA Pug Mill	Х		
HMATP3	Kirtland HMA Pug Mill Unloading	Х		
HMATP4	Kirtland HMA Conveyor Transfer to Drum Conveyor	Х		
RAPBIN	Kirtland HMA RAP Bin Loading	Х		
RAPTP1	Kirtland HMA RAP Bin Unloading	Х		
RAPSCR	Kirtland HMA RAP Screen	Х		
RAPTP2	Kirtland HMA RAP Screen Unloading	Х		
	0			
RAPTP3	Kirtland HMA RAP Transfer Point	Х		
RAPTP3 RAPTP4	Kirtland HMA RAP Transfer Point Kirtland HMA RAP Transfer Point	X X		

	PSD increment description for sources. (for unusual cases, i.e., baseline unit expanded emissions after baseline date).		
9	All sources will be installed after NO ₂ , SO ₂ , PM_{10} PSD minor source baseline date and modeled facility would not cause violation of NO ₂ , SO ₂ , PM_{10} PSD increment limits. Neighboring increwere included in the analysis.	d to show emissi ment source out	ons from the to 20 km
10	Are all the actual installation dates included in Table 2A of the application form, as required?	Yes	No - TRD
	This is necessary to verify the accuracy of PSD increment modeling.	105	
	If not please explain how increment consumption status is determined for the missing installation	on dates.	
11	All sources are new sources to be installed after the baseline dates.		

16-O: 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)		
	NA					

16-	P: Volume	and Related Sources			
1	Were the dimension Bureau (AQB) Mod	ns of volume sources different from standard dimensions in the A leling Guidelines?	ir Quality	<u>Yes</u>	No
2	If the dimensions of the dimensions wer	f volume sources are different from standard dimensions in the A e determined.	QB Modeling	g Guideline	s, describe how
3	Describe the determ	nination of sigma-Y and sigma-Z for fugitive sources. AQB Mode	eling Guidelir	nes	
	Describe how the v	olume sources are related to unit numbers.			
	Or say they are the	same.	D.I.		
		Source	Release Height	SYINI T	SZINI T
	Model ID	Description	(m)	(m)	(m)
	1	Feeder	6.00	1.16	2.33
	2	Cedarapids Jaw Crusher	6.00	1.16	2.33
	3	Transfer Conveyor	2.00	0.47	0.93
4	4	Transfer Conveyor	2.00	0.47	0.93
	5	Cedarapids 6'x20' Screen	4.00	1.16	2.33
	6	Stacker Conveyor	2.00	0.47	0.93
	7	Under Screen Transfer Conveyor	2.00	0.47	0.93
	8	Transfer Conveyor	2.00	0.47	0.93
	9	Secondary Cone Crusher	6.00	1.16	2.33
	10	Secondary Cone Crusher Transfer Conveyor	2.00	0.47	0.93
	11	Transfer Conveyor	2.00	0.47	0.93
	12	Under Screen Transfer Conveyor	2.00	0.47	0.93

13	Transfer Conveyor	2.00	0.47	0.93	
14	Secondary Cone Crusher	6.00	1.16	2.33	
15	Secondary Cone Crusher Transfer Conveyor	2.00	0.47	0.93	
16	Transfer Conveyor	2.00	0.47	0.93	
17	Cedarapids 6'x20' Screen	4.00	1.16	2.33	
18	Transfer Conveyor	2.00	0.47	0.93	
19	Stacker Conveyor	2.00	0.47	0.93	
20	Transfer Conveyor	2.00	0.47	0.93	
21	Transfer Conveyor	2.00	0.47	0.93	
22	Transfer Conveyor	2.00	0.47	0.93	
23	Stacker Conveyor	2.00	0.47	0.93	
24	Under Screen Transfer Conveyor	2.00	0.47	0.93	
25	Transfer Conveyor	2.00	0.47	0.93	
26	Cedarapids 6'x20' Screen	4.00	1.16	2.33	
27	Under Screen Transfer Convevor	6.00	1.16	2.33	
28	Stacker Convevor	2.00	0.47	0.93	
29	Under Screen Transfer Convevor	2.00	0.47	0.93	
30	Stacker Convevor	2.00	0.47	0.93	
31P1	Stacker Conveyor Dron to Pile 1	4.00	0.47	0.93	
31P2	Stacker Conveyor Drop to Pile 2	4.00	0.47	0.93	
31P3	Stacker Conveyor Drop to Pile 3	4.00	0.47	0.93	
31P4	Stacker Conveyor Drop to Pile 4	4.00	0.47	0.93	
31P5	Stacker Conveyor Drop to Pile 5	4.00	0.47	0.93	
32P1	Finish Product Storage Pile 1	4.00	1.16	2.33	
32P2	Finish Product Storage Pile 2	4.00	1.16	2.33	
32P3	Finish Product Storage Pile 3	4.00	1.16	2.33	
32P4	Finish Product Storage Pile 4	4.00	1.16	2.33	
32P5	Finish Product Storage Pile 5	4.00	1.16	2.33	
33	Product Truck Loading - Finish Pile	6.00	1.16	2.33	
36	Wet Plant Feeder	6.00	1.16	2.33	
37	Wet Plant Transfer Conveyor	2.00	0.47	0.93	
38	Wet Plant Transfer Conveyor	4.00	0.47	0.93	
48P1	Wet Plant Finish Product Storage Pile 1	4.00	1.16	2.33	
48P2	Wet Plant Finish Product Storage Pile 2	4.00	1.16	2.33	
48P3	Wet Plant Finish Product Storage Pile 3	4.00	1.16	2.33	
48P4	Wet Plant Finish Product Storage Pile 4	4.00	1.16	2.33	
49	Wet Plant Product Truck Loading - Finish Pile	6.00	1.16	2.33	
CRH 0001-83	Unpaved Road Crusher to HMA Volume 1-83	3.40	6.80	3.16	
CRE 0001-52	Unpaved Road Crusher to Exit Volume 1-52	3.40	6.80	3.16	
CRW 0001-82	Unpaved Road Crusher to Wash Plant Volume 1-82	3.40	6.80	3.16	
WPE 0001-61	Unpaved Road Wash Plant to Exit Volume 1-61	3.40	6.80	3.16	
ROC 0001-11	Unpaved Road Rock Haul Trucks to Crusher Volume 1-11	3.40	6.80	3.16	
DRUMUNL	Kirtland HMA Asphalt Silo Loading	2.00	0.47	0.93	
HMASILO	Kirtland HMA Asphalt Silo Unloading	4.00	0.47	0.93	
HMAPILE1	Kirtland HMA Storage Pile Handling 1	2.44	7.16	2.27	
HMAPILE2	Kirtland HMA Storage Pile Handling 2	2.44	7.16	2.27	
HMAPILE3	Kirtland HMA Storage Pile Handling 3	2.44	7.16	2.27	
HMAPILE4	Kirtland HMA Storage Pile Handling 4	2.44	7.16	2.27	
	-				

	HMAPILE5	Kirtland HMA Storage Pile Handling 5	2.44	7.16	2.27	
	HMABIN	Kirtland HMA Bin Loading	6.00	1.16	2.33	
	HMATP1	Kirtland HMA Bin Unloading	2.00	0.47	0.93	
	HMASCR	Kirtland HMA Scalping Screen	4.00	1.16	2.33	
	HMATP2	Kirtland HMA Scalping Screen Unloading	2.00	0.47	0.93	
	HMAPUG	Kirtland HMA Pug Mill	4.00	1.16	2.33	
	HMATP3	Kirtland HMA Pug Mill Unloading	2.00	0.47	0.93	
	HMATP4	Kirtland HMA Conveyor Transfer to Drum Conveyor	2.00	0.47	0.93	
	RAPBIN	Kirtland HMA RAP Bin Loading	6.00	1.16	2.33	
	RAPTP1	Kirtland HMA RAP Bin Unloading	2.00	0.47	0.93	
	RAPSCR	Kirtland HMA RAP Screen	4.00	1.16	2.33	
	RAPTP2	Kirtland HMA RAP Screen Unloading	2.00	0.47	0.93	
	RAPTP3	Kirtland HMA RAP Transfer Point	2.00	0.47	0.93	
	RAPTP4	Kirtland HMA RAP Transfer Point	2.00	0.47	0.93	
	HMA_0001-62	Unpaved Road HMA to Exit Volume 1-62	3.40	6.80	3.16	
						-
5	Describe any open	pits. NA				
6	Describe ended	unite in shadad in analy and a NTA				
6	Describe emission	units included in each open pit. NA				

16-Q: Background Concentrations

Identify and justify the background concentrations used.

Ambient background concentrations represent the contribution of pollutant sources that are not included in the modeling analysis, including naturally occurring sources. If the modeled concentration of a criteria pollutant is above the modeling significance level, the background concentration for each criteria pollutant will be added to the maximum modeled concentration to calculate the total estimated pollutant concentration for comparison with the AAQS.

The ambient background concentrations are listed in the Air Quality Bureau Guidelines for TSP, PM10, and $PM_{2.5}$. For TSP, PM10, and $PM_{2.5}$, Elam is using backgrounds from Farmington Environmental Department (Monitor ID 1FO). For NO_X and SO₂, Elam is using backgrounds from Shiprock Substation (Monitor ID 1H). For CO, Elam is using backgrounds from the rest of New Mexico (Monitor ID 350010023).

	$PM_{2.5}$ (µg/m ³)	PM_{10} (µg/m ³)	$(\mu g/m^3)$	$(\mu g/m^3)$	CO (μg/m ³)	SO ₂ (μg/m ³
1 Hour					1787.865	44.515
8 Hour					1183.006	
24 Hour	14.13	42.0	42.0			
Annual	4.19		8.5	10.836		

1

16-R: Meteorological Data

Identify and justify the meteorological data set(s) used.

Dispersion model meteorological input files were created for the year 2016 from meteorological data collected at Farmington Airport, NM for the year 2016, about 5 kilometers from the site. The similar elevation, topography, terrain, vegetation, and climate of both sites make this meteorological data representative of the model area. Figure 2 shows wind rose diagram of the meteorological wind speed versus direction data that has been collected for the year 2016.

AERMET wind speed threshold for surface data will be 0.5 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 Farmington surface data when processing with AERMET. Albuquerque Airport 2016 data was used for upper air.

Since the meteorological input data does not use turbulence data, the adjust U* option in AERMET was used during processing of the meteorological data.

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

- Surface roughness length (m)
- Albedo

1

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 13016*). AERSURFACE requires the input of land cover data from the U.S. Geological Survey (USGS) National Land Cover Data 1992 archives (NLCD92), which it uses to determine the land cover types for the Farmington airport-specified location. AERSURFACE matches the NLCD92 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 Farmington Airport meteorological data, YES 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 Farmington Airport.

The meteorological data was processed using AERMET (Version 16216) and upper air from Albuquerque Airport for the