Exhibit N

13.2.5 Industrial Wind Erosion

13.2.5.1 General[1-3]

Dust emissions may be generated by wind erosion of open aggregate storage piles and exposed areas within an industrial facility. These sources typically are characterized by nonhomogeneous surfaces impregnated with nonerodible elements (particles larger than approximately 1 centimeter [cm] in diameter). Field testing of coal piles and other exposed materials using a portable wind tunnel has shown that (a) threshold wind speeds exceed 5 meters per second (m/s) (11 miles per hour [mph]) at 15 cm above the surface or 10 m/s (22 mph) at 7 m above the surface, and (b) particulate emission rates tend to decay rapidly (half-life of a few minutes) during an erosion event. In other words, these aggregate material surfaces are characterized by finite availability of erodible material (mass/area) referred to as the erosion potential. Any natural crusting of the surface binds the erodible material, thereby reducing the erosion potential.

13.2.5.2 Emissions And Correction Parameters

If typical values for threshold wind speed at 15 cm are corrected to typical wind sensor height (7 - 10 m), the resulting values exceed the upper extremes of hourly mean wind speeds observed in most areas of the country. In other words, mean atmospheric wind speeds are not sufficient to sustain wind erosion from flat surfaces of the type tested. However, wind gusts may quickly deplete a substantial portion of the erosion potential. Because erosion potential has been found to increase rapidly with increasing wind speed, estimated emissions should be related to the gusts of highest magnitude.

The routinely measured meteorological variable that best reflects the magnitude of wind gusts is the fastest mile. This quantity represents the wind speed corresponding to the whole mile of wind movement that has passed by the 1 mile contact anemometer in the least amount of time. Daily measurements of the fastest mile are presented in the monthly Local Climatological Data (LCD) summaries. The duration of the fastest mile, typically about 2 minutes (for a fastest mile of 30 mph), matches well with the half-life of the erosion process, which ranges between 1 and 4 minutes. It should be noted, however, that peak winds can significantly exceed the daily fastest mile.

The wind speed profile in the surface boundary layer is found to follow a logarithmic distribution:

$$u(z) = \frac{u^*}{0.4} \ln\frac{z}{z_o} \qquad (z > z_o) \qquad (1)$$

where:

u = wind speed, cm/s
u^* = friction velocity, cm/s
z = height above test surface, cm
z_o = roughness height, cm
0.4 = von Karman's constant, dimensionless

The friction velocity (u^*) is a measure of wind shear stress on the erodible surface, as determined from the slope of the logarithmic velocity profile. The roughness height (z_o) is a measure of the roughness of the exposed surface as determined from the y intercept of the velocity profile, i. e., the height at which the wind speed is zero. These parameters are illustrated in Figure 13.2.5-1 for a roughness height of 0.1 cm.

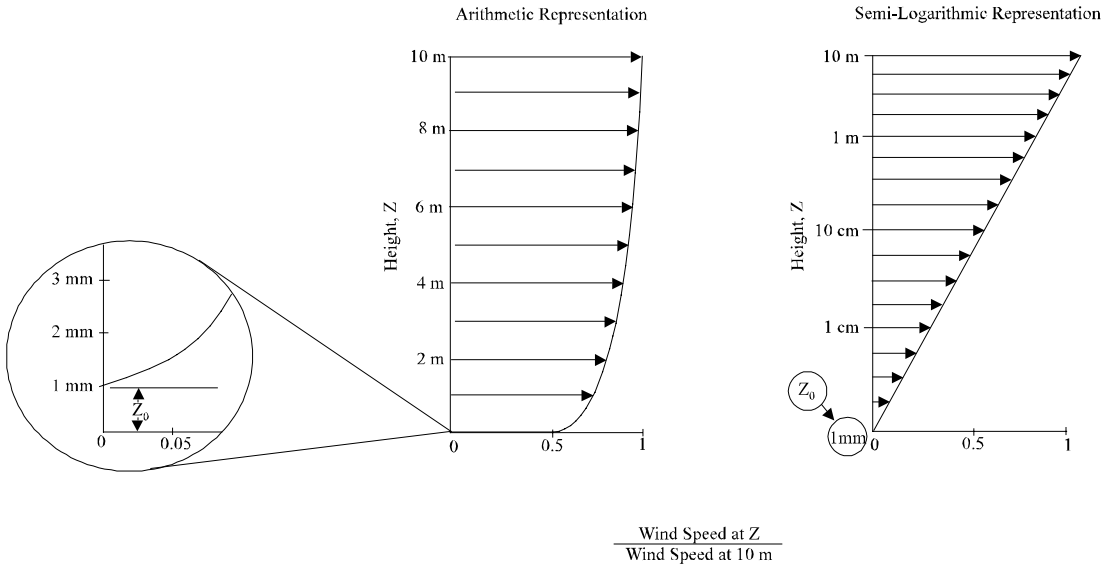


Figure 13.2.5-1. Illustration of logarithmic velocity profile.

Emissions generated by wind erosion are also dependent on the frequency of disturbance of the erodible surface because each time that a surface is disturbed, its erosion potential is restored. A disturbance is defined as an action that results in the exposure of fresh surface material. On a storage pile, this would occur whenever aggregate material is either added to or removed from the old surface. A disturbance of an exposed area may also result from the turning of surface material to a depth exceeding the size of the largest pieces of material present.

13.2.5.3 Predictive Emission Factor Equation[4]

The emission factor for wind-generated particulate emissions from mixtures of erodible and nonerodible surface material subject to disturbance may be expressed in units of grams per square meter (g/m^2) per year as follows:

$$\text{Emission factor} = k \sum_{i=1}^{N} P_i \qquad (2)$$

where:

k = particle size multiplier
N = number of disturbances per year
P_i = erosion potential corresponding to the observed (or probable) fastest mile of wind for the ith period between disturbances, g/m^2

The particle size multiplier (k) for Equation 2 varies with aerodynamic particle size, as follows:

Aerodynamic Particle Size Multipliers For Equation 2			
30 µm	<15 µm	<10 µm	<2.5 µm
1.0	0.6	0.5	0.075[a]

[a] Multiplier for < 2.5 um taken from Reference 11.

This distribution of particle size within the under 30 micrometer (µm) fraction is comparable to the distributions reported for other fugitive dust sources where wind speed is a factor. This is illustrated, for example, in the distributions for batch and continuous drop operations encompassing a number of test aggregate materials (see Section 13.2.4).

In calculating emission factors, each area of an erodible surface that is subject to a different frequency of disturbance should be treated separately. For a surface disturbed daily, N = 365 per year, and for a surface disturbance once every 6 months, N = 2 per year.

The erosion potential function for a dry, exposed surface is:

$$P = 58\,(u^* - u_t^*)^2 + 25\,(u^* - u_t^*) \qquad (3)$$

$$P = 0 \text{ for } u^* \leq u_t^*$$

where:

u^* = friction velocity (m/s)
u_t = threshold friction velocity (m/s)

Because of the nonlinear form of the erosion potential function, each erosion event must be treated separately.

Equations 2 and 3 apply only to dry, exposed materials with limited erosion potential. The resulting calculation is valid only for a time period as long or longer than the period between disturbances. Calculated emissions represent intermittent events and should not be input directly into dispersion models that assume steady-state emission rates.

For uncrusted surfaces, the threshold friction velocity is best estimated from the dry aggregate structure of the soil. A simple hand sieving test of surface soil can be used to determine the mode of the surface aggregate size distribution by inspection of relative sieve catch amounts, following the procedure described below.

FIELD PROCEDURE FOR DETERMINATION OF THRESHOLD FRICTION VELOCITY
(from a 1952 laboratory procedure published by W. S. Chepil):

1. Prepare a nest of sieves with the following openings: 4 mm, 2 mm, 1 mm, 0.5 mm, and 0.25 mm. Place a collector pan below the bottom (0.25 mm) sieve.

2. Collect a sample representing the surface layer of loose particles (approximately 1 cm in depth, for an encrusted surface), removing any rocks larger than about 1 cm in average physical diameter. The area to be sampled should be not less than 30 cm by 30 cm.

3. Pour the sample into the top sieve (4-mm opening), and place a lid on the top.

4. Move the covered sieve/pan unit by hand, using a broad circular arm motion in the horizontal plane. Complete 20 circular movements at a speed just necessary to achieve some relative horizontal motion between the sieve and the particles.

5. Inspect the relative quantities of catch within each sieve, and determine where the mode in the aggregate size distribution lies, i. e., between the opening size of the sieve with the largest catch and the opening size of the next largest sieve.

6. Determine the threshold friction velocity from Table 13.2.5-1.

The results of the sieving can be interpreted using Table 13.2.5-1. Alternatively, the threshold friction velocity for erosion can be determined from the mode of the aggregate size distribution using the graphical relationship described by Gillette.[5-6] If the surface material contains nonerodible elements that are too large to include in the sieving (i. e., greater than about 1 cm in diameter), the effect of the elements must be taken into account by increasing the threshold friction velocity.[10]

Table 13.2.5-1 (Metric Units). FIELD PROCEDURE FOR DETERMINATION OF THRESHOLD FRICTION VELOCITY

Tyler Sieve No.	Opening (mm)	Midpoint (mm)	u_t^* (cm/s)
5	4		
9	2	3	100
16	1	1.5	76
32	0.5	0.75	58
60	0.25	0.375	43

Threshold friction velocities for several surface types have been determined by field measurements with a portable wind tunnel. These values are presented in Table 13.2.5-2.

Table 13.2.5-2 (Metric Units). THRESHOLD FRICTION VELOCITIES

Material	Threshold Friction Velocity (m/s)	Roughness Height (cm)	Threshold Wind Velocity At 10 m (m/s)	
			z_o = Act	z_o = 0.5 cm
Overburden[a]	1.02	0.3	21	19
Scoria (roadbed material)[a]	1.33	0.3	27	25
Ground coal (surrounding coal pile)[a]	0.55	0.01	16	10
Uncrusted coal pile[a]	1.12	0.3	23	21
Scraper tracks on coal pile[a,b]	0.62	0.06	15	12
Fine coal dust on concrete pad[c]	0.54	0.2	11	10

[a] Western surface coal mine. Reference 2.
[b] Lightly crusted.
[c] Eastern power plant. Reference 3.

The fastest mile of wind for the periods between disturbances may be obtained from the monthly LCD summaries for the nearest reporting weather station that is representative of the site in question.[7] These summaries report actual fastest mile values for each day of a given month. Because the erosion potential is a highly nonlinear function of the fastest mile, mean values of the fastest mile are inappropriate. The anemometer heights of reporting weather stations are found in Reference 8, and should be corrected to a 10-m reference height using Equation 1.

To convert the fastest mile of wind (u^+) from a reference anemometer height of 10 m to the equivalent friction velocity (u^*), the logarithmic wind speed profile may be used to yield the following equation:

$$u^* = 0.053\ u_{10}^+ \quad (4)$$

where:

u^* = friction velocity (m/s)

u_{10}^+ = fastest mile of reference anemometer for period between disturbances (m/s)

This assumes a typical roughness height of 0.5 cm for open terrain. Equation 4 is restricted to large relatively flat piles or exposed areas with little penetration into the surface wind layer.

If the pile significantly penetrates the surface wind layer (i. e., with a height-to-base ratio exceeding 0.2), it is necessary to divide the pile area into subareas representing different degrees of exposure to wind. The results of physical modeling show that the frontal face of an elevated pile is exposed to wind speeds of the same order as the approach wind speed at the top of the pile.

For 2 representative pile shapes (conical and oval with flattop, 37-degree side slope), the ratios of surface wind speed (u_s) to approach wind speed (u_r) have been derived from wind tunnel studies.[9] The results are shown in Figure 13.2.5-2 corresponding to an actual pile height of 11 m, a reference (upwind) anemometer height of 10 m, and a pile surface roughness height (z_o) of 0.5 cm. The measured surface winds correspond to a height of 25 cm above the surface. The area fraction within each contour pair is specified in Table 13.2.5-3.

Table 13.2.5-3. SUBAREA DISTRIBUTION FOR REGIMES OF u_s/u_r[a]

Pile Subarea	Percent Of Pile Surface Area			
	Pile A	Pile B1	Pile B2	Pile B3
0.2a	5	5	3	3
0.2b	35	2	28	25
0.2c	NA	29	NA	NA
0.6a	48	26	29	28
0.6b	NA	24	22	26
0.9	12	14	15	14
1.1	NA	NA	3	4

[a] NA = not applicable.

The profiles of u_s/u_r in Figure 13.2.5-2 can be used to estimate the surface friction velocity distribution around similarly shaped piles, using the following procedure:

1. Correct the fastest mile value (u^+) for the period of interest from the anemometer height (z) to a reference height of 10 m u_{10}^+ using a variation of Equation 1:

$$u_{10}^+ = u^+ \frac{\ln (10/0.005)}{\ln (z/0.005)} \quad (5)$$

   where a typical roughness height of 0.5 cm (0.005 m) has been assumed. If a site-specific roughness height is available, it should be used.

2. Use the appropriate part of Figure 13.2.5-2 based on the pile shape and orientation to the fastest mile of wind, to obtain the corresponding surface wind speed distribution (u_s^+)

$$u_s^+ = \frac{(u_s)}{u_r} \quad u_{10}^+ \quad (6)$$

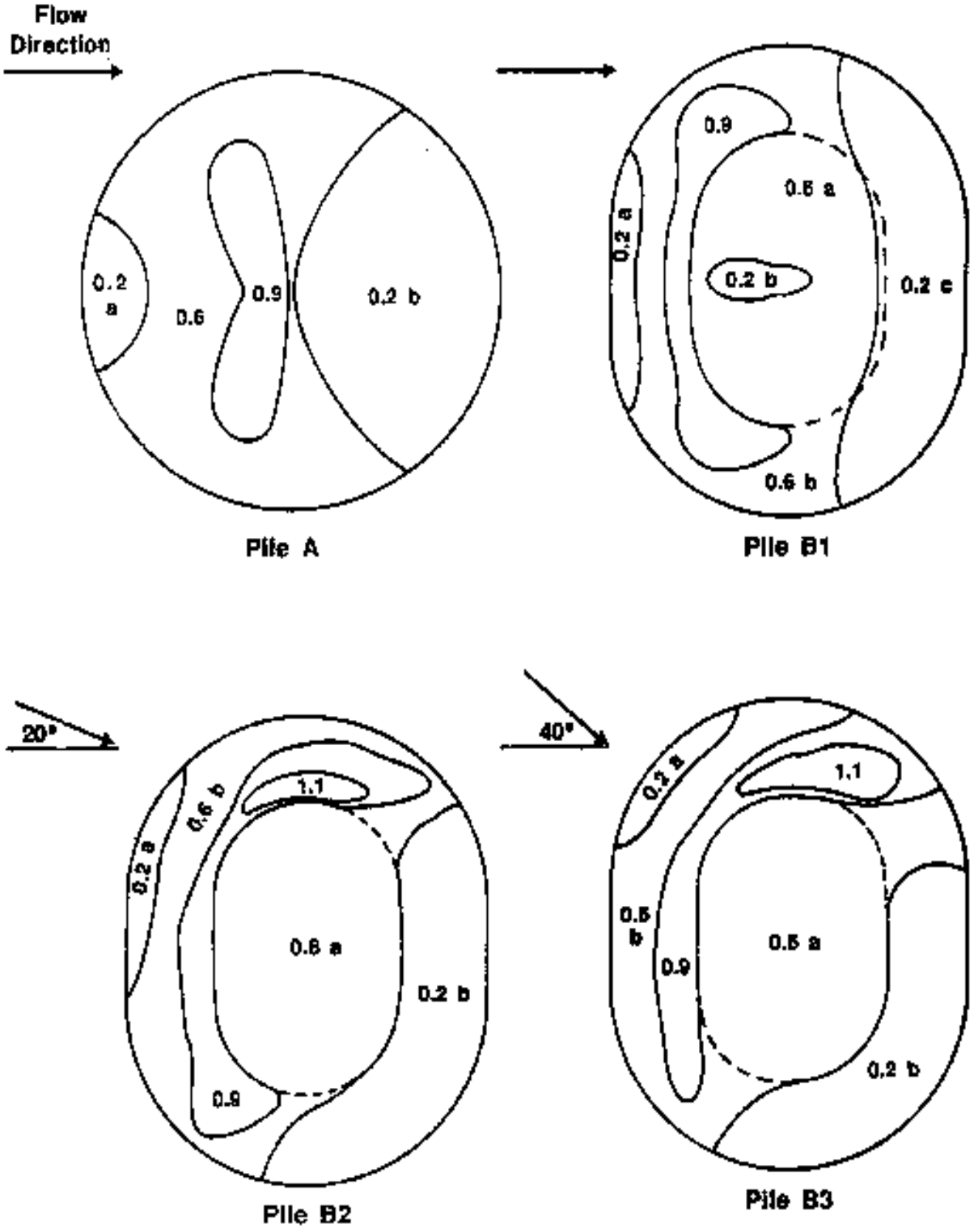


Figure 13.2.5-2. Contours of normalized surface windspeeds, u_s/u_r.

3. For any subarea of the pile surface having a narrow range of surface wind speed, use a variation of Equation 1 to calculate the equivalent friction velocity (u^*):

$$u^* = \frac{0.4 u_s^+}{\frac{25}{\ln 0.5}} = 0.10 u_s^+ \quad (7)$$

From this point on, the procedure is identical to that used for a flat pile, as described above.

Implementation of the above procedure is carried out in the following steps:

1. Determine threshold friction velocity for erodible material of interest (see Table 13.2.5-2 or determine from mode of aggregate size distribution).

2. Divide the exposed surface area into subareas of constant frequency of disturbance (N).

3. Tabulate fastest mile values (u^+) for each frequency of disturbance and correct them to 10 m (u^+_{10}) using Equation 5.5

4. Convert fastest mile values (u_{10}) to equivalent friction velocities (u^*), taking into account (a) the uniform wind exposure of nonelevated surfaces, using Equation 4, or (b) the nonuniform wind exposure of elevated surfaces (piles), using Equations 6 and 7.

5. For elevated surfaces (piles), subdivide areas of constant N into subareas of constant u^* (i. e., within the isopleth values of u_s/u_r in Figure 13.2.5-2 and Table 13.2.5-3) and determine the size of each subarea.

6. Treating each subarea (of constant N and u^*) as a separate source, calculate the erosion potential (P_i) for each period between disturbances using Equation 3 and the emission factor using Equation 2.

7. Multiply the resulting emission factor for each subarea by the size of the subarea, and add the emission contributions of all subareas. Note that the highest 24-hour (hr) emissions would be expected to occur on the windiest day of the year. Maximum emissions are calculated assuming a single event with the highest fastest mile value for the annual period.

The recommended emission factor equation presented above assumes that all of the erosion potential corresponding to the fastest mile of wind is lost during the period between disturbances. Because the fastest mile event typically lasts only about 2 minutes, which corresponds roughly to the half-life for the decay of actual erosion potential, it could be argued that the emission factor overestimates particulate emissions. However, there are other aspects of the wind erosion process that offset this apparent conservatism:

1. The fastest mile event contains peak winds that substantially exceed the mean value for the event.

2. Whenever the fastest mile event occurs, there are usually a number of periods of

slightly lower mean wind speed that contain peak gusts of the same order as the fastest mile wind speed.

Of greater concern is the likelihood of overprediction of wind erosion emissions in the case of surfaces disturbed infrequently in comparison to the rate of crust formation.

13.2.5.4 Example 1: Calculation for wind erosion emissions from conically shaped coal pile

A coal burning facility maintains a conically shaped surge pile 11 m in height and 29.2 m in base diameter, containing about 2000 megagrams (Mg) of coal, with a bulk density of 800 kilograms per cubic meter ($kg/m^{3)}$ (50 pounds per cubic feet [lb/ft^3]). The total exposed surface area of the pile is calculated as follows:

Coal is added to the pile by means of a fixed stacker and reclaimed by front-end loaders operating

$$S = \pi r \sqrt{r^2 + h^2}$$
$$= 3.14(14.6)\sqrt{(14.6)^2 + (11.0)^2}$$
$$= 838\ m^2$$

at the base of the pile on the downwind side. In addition, every 3 days 250 Mg (12.5 percent of the stored capacity of coal) is added back to the pile by a topping off operation, thereby restoring the full capacity of the pile. It is assumed that (a) the reclaiming operation disturbs only a limited portion of the surface area where the daily activity is occurring, such that the remainder of the pile surface remains intact, and (b) the topping off operation creates a fresh surface on the entire pile while restoring its original shape in the area depleted by daily reclaiming activity.

Because of the high frequency of disturbance of the pile, a large number of calculations must be made to determine each contribution to the total annual wind erosion emissions. This illustration will use a single month as an example.

Step 1: In the absence of field data for estimating the threshold friction velocity, a value of 1.12 m/s is obtained from Table 13.2.5-2.

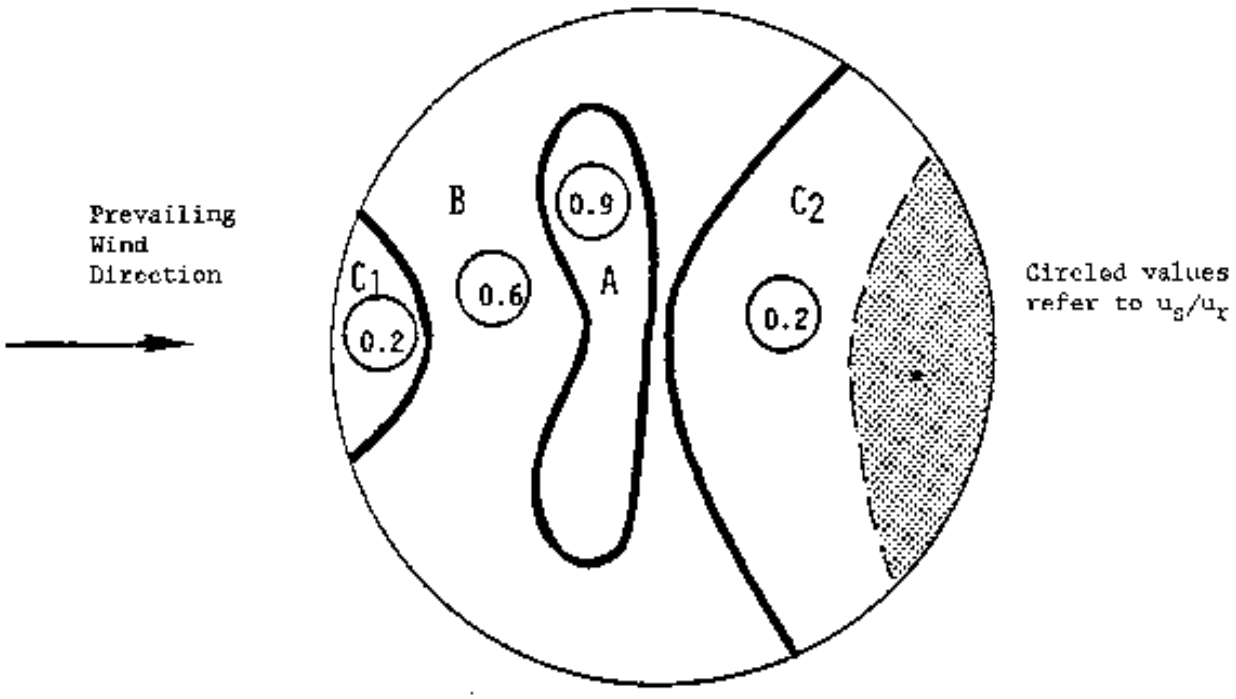
Step 2: Except for a small area near the base of the pile (see Figure 13.2.5-3), the entire pile surface is disturbed every 3 days, corresponding to a value of N = 120 per year. It will be shown that the contribution of the area where daily activity occurs is negligible so that it does not need to be treated separately in the calculations.

Step 3: The calculation procedure involves determination of the fastest mile for each period of disturbance. Figure 13.2.5-4 shows a representative set of values (for a 1-month period) that are assumed to be applicable to the geographic area of the pile location. The values have been separated into 3-day periods, and the highest value in each period is indicated. In this example, the anemometer height is 7 m, so that a height correction to 10 m is needed for the fastest mile values. From Equation 5,

$$u_{10}^{+} = u_{7}^{+} \left(\frac{\ln (10/0.005)}{\ln (7/0.005)} \right)$$

$$u_{10}^{+} = 1.05\ u_{7}^{+}$$

Step 4: The next step is to convert the fastest mile value for each 3-day period into



* A portion of C_2 is disturbed daily by reclaiming activities.

Area ID	$\frac{u_s}{u_r}$	Pile Surface	
		%	Area (m^2)
A	0.9	12	101
B	0.6	48	402
$C_1 + C_2$	0.2	40	335
		Total	838

Figure 13.2.5-3. Example 1: Pile surface areas within each wind speed regime.

Local Climatological Data

Monthly Summary

Wind						
			Fastest Mile			
Resultant Dir.	Resultant Speed M.P.H.	Average Speed M.P.H.	Speed M.P.H.	Direction		Date
13	14	15	16	17		22
30	5.3	6.9	9	36		1
01	10.5	10.6	(14)	01		2
10	2.4	6.0	10	02		3
13	11.0	11.4	16	13		4
12	11.3	11.9	15	11		5
20	11.1	19.0	(29)	30		6
29	19.6	19.8	(30)	30		7
29	10.9	11.2	17	30		8
22	3.0	8.1	15	13		9
14	14.6	15.1	23	12		10
29	22.3	23.3	(31)	29		11
17	7.9	13.5	23	17		12
21	7.7	15.5	18	18		13
10	4.5	9.6	(22)	13		14
10	6.7	8.8	13	11		15
01	13.7	13.8	(21)	36		16
33	11.2	11.5	15	34		17
27	4.3	5.8	12	31		18
32	9.3	10.2	14	35		19
24	7.5	7.8	(16)	24		20
22	10.3	10.6	16	20		21
32	17.1	17.3	(25)	32		22
29	2.4	8.5	14	13		23
07	5.9	8.8	15	02		24
34	11.3	11.7	(17)	32		25
31	12.1	12.2	16	32		26
30	8.3	8.5	16	26		27
30	8.2	8.3	(13)	32		28
33	5.0	6.6	10	32		29
34	3.1	5.2	9	31		30
29	4.9	5.5	8	25		31
For the Month:						
30	3.3	11.1	31	29		
———	———	———	Date: 11			

Figure 13.2.5-4. Example daily fastest miles wind for periods of interest.

equivalent friction velocities for each surface wind regime (i. e., u_s/u_r ratio) of the pile, using Equations 6 and 7. Figure 13.2.5-3 shows the surface wind speed pattern (expressed as a fraction of the approach wind speed at a height of 10 m). The surface areas lying within each wind speed regime are tabulated below the figure.

The calculated friction velocities are presented in Table 13.2.5-4. As indicated, only 3 of the periods contain a friction velocity which exceeds the threshold value of 1.12 m/s for an uncrusted coal pile. These 3 values all occur within the u_s/u_r = 0.9 regime of the pile surface.

Table 13.2.5-4 (Metric And English Units). EXAMPLE 1: CALCULATION OF FRICTION VELOCITIES

	u_7^+		u_{10}^+		$u^* = 0.1u^+$ (m/s) s		
3-Day Period	mph	m/s	mph	m/s	u_s/u_r: 0.2	u_s/u_r: 0.6	u_s/u_r: 0.9
1	14	6.3	15	6.6	0.13	0.40	0.59
2	29	13.0	31	13.7	0.27	0.82	1.23
3	30	13.4	32	14.1	0.28	0.84	1.27
4	31	13.9	33	14.6	0.29	0.88	1.31
5	22	9.8	23	10.3	0.21	0.62	0.93
6	21	9.4	22	9.9	0.20	0.59	0.89
7	16	7.2	17	7.6	0.15	0.46	0.68
8	25	11.2	26	11.8	0.24	0.71	1.06
9	17	7.6	18	8.0	0.16	0.48	0.72
10	13	5.8	14	6.1	0.12	0.37	0.55

Step 5: This step is not necessary because there is only 1 frequency of disturbance used in the calculations. It is clear that the small area of daily disturbance (which lies entirely within the u_s/u_r = 0.2 regime) is never subject to wind speeds exceeding the threshold value.

Steps 6 and 7: The final set of calculations (shown in Table 13.2.5-5) involves the tabulation and summation of emissions for each disturbance period and for the affected subarea. The erosion potential (P) is calculated from Equation 3.

For example, the calculation for the second 3-day period is:

$$P = 58(u^* - u_t^*)^2 + 25(u^* - u_t^*)$$

$$P_2 = 58(1.23 - 1.12)^2 + 25(1.23 - 1.12)$$

$$= 0.70 + 2.75 = 3.45 \text{ g/m}^2$$

Table 13.2.5-5 (Metric Units). EXAMPLE 1: CALCULATION OF PM-10 EMISSIONS[a]

3-Day Period	u^* (m/s)	$u^* - u_t^*$ (m/s)	P (g/m^2)	ID	Pile Surface Area (m^2)	kPA (g)
2	1.23	0.11	3.45	A	101	170
3	1.27	0.15	5.06	A	101	260
4	1.31	0.19	6.84	A	101	350
TOTAL						780

[a] Where $u_t^* = 1.12$ m/s for uncrusted coal and k = 0.5 for PM-10.

The emissions of particulate matter greater than 10 µm (PM-10) generated by each event are found as the product of the PM-10 multiplier (k = 0.5), the erosion potential (P), and the affected area of the pile (A).

As shown in Table 13.2.5-5, the results of these calculations indicate a monthly PM-10 emission total of 780 g.

13.2.5.5 Example 2: Calculation for wind erosion from flat area covered with coal dust

A flat circular area 29.2 m in diameter is covered with coal dust left over from the total reclaiming of a conical coal pile described in the example above. The total exposed surface area is calculated as follows:

$$s = \frac{\pi}{4} d^2 = 0.785 (29.2)^2 = 670 \text{ m}^2$$

This area will remain exposed for a period of 1 month when a new pile will be formed.

Step 1: In the absence of field data for estimating the threshold friction velocity, a value of 0.54 m/s is obtained from Table 13.2.5-2.

Step 2: The entire surface area is exposed for a period of 1 month after removal of a pile and N = 1/yr.

Step 3: From Figure 13.2.5-4, the highest value of fastest mile for the 30-day period (31 mph) occurs on the 11th day of the period. In this example, the reference anemometer height is 7 m, so that a height correction is needed for the fastest mile value. From Step 3 of the previous example, $u_{10}^+ = 1.05\ u_7^+$, so that $u_{10}^+ \cong 33$ mph.

Step 4: Equation 4 is used to convert the fastest mile value of 14.6 m/s (33 mph) to an equivalent friction velocity of 0.77 m/s. This value exceeds the threshold friction velocity from Step 1 so that erosion does occur.

Step 5: This step is not necessary, because there is only 1 frequency of disturbance for the entire source area.

Steps 6 and 7: The PM-10 emissions generated by the erosion event are calculated as the product of the PM-10 multiplier (k = 0.5), the erosion potential (P) and the source area (A). The erosion potential is calculated from Equation 3 as follows:

$$P = 58(u^* - u_t^*)^2 + 25(u^* - u_t^*)$$

$$P = 58(0.77 - 0.54)^2 + 25(0.77 - 0.54)$$

$$= 3.07 + 5.75$$

$$= 8.82 \text{ g/m}^2$$

Thus the PM-10 emissions for the 1-month period are found to be:

$$E = (0.5)(8.82 \text{ g/m}^2)(670 \text{ m}^2)$$

$$= 3.0 \text{ kg}$$

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Exhibit O

CONSTRUCTION PERMIT APPLICATION FOR A FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) SOURCE

DTE CHICAGO FUELS TERMINAL, LLC
10730 SOUTH BURLEY AVENUE
CHICAGO, ILLINOIS

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SEPTEMBER 2012
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1.0 PROJECT NARRATIVE

On February 13, 2008, the Illinois Environmental Protection Agency (IEPA) Bureau of Air (Agency) issued a Joint Construction and Operating Permit to DTE Chicago Fuels Terminal, LLC (DTE), Permit #07050082, ID# 031600CSF, for its facility located at 10730 South Burley Avenue in Chicago, Illinois (Facility). In this permit, the Agency determined that this Facility has potential to emit (PTE) more than 100 tons per year (ton/yr) of particulate matter of less than ten microns (PM_{10}).

DTE filed a Federally Enforceable State Operating Permit (FESOP) application on February 2, 2009 and this application is still under review by the Agency. The FESOP application was deemed complete by the IEPA per the May 12, 2009 CAAPP Application Completeness Determination Letter. The purpose of this application is to request a modification to Construction Permit #07050082 issued on May 21, 2009 to allow the installation of additional equipment. DTE also requests that the FESOP application be updated to include the limitations contained in this application.

DTE proposes to construct four portable conveyors, fourteen storage piles, one 100-Horsepower (HP) air compressor, and five 15-HP light standards. Emissions from the 14 storage piles are fugitive and are not included in the 197-FEE form. The air compressor and five light standards are exempt from permitting under 35 IAC 201.146(i) are not included in the 197-FEE form.

Emissions from the proposed emission units including existing emission units are contained in Tables 1-12. Table 13 provides a listing of all emission units at the Facility.

In the permit application received by the IEPA on August 15, 2008, we noted that, upon review of Section 39.5 (2)(c)(ii) of the Illinois Environmental Protection Act (Act), the Facility is not one of the 28 categories of stationary sources listed there and is not subject to a standards promulgated under Section 111 or 112 of the Clean Air Act which would require them to include fugitive emissions. Therefore, the PTE does not include fugitive emissions.

DTE requests a control efficiency of 50% for the control of particulate matter using a water suppression system.

A list of State Rules and an applicability determination for each Rule are as follows:

212.123 – Visible Emissions Limitations for All Other Emission Units
The source will achieve compliance through the Fugitive Dust Plan.

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35 IAC Section 212.301 – Fugitive Particulate Matter
The source will not allow fugitive particulate matter to leave the source's boundaries. This will be accomplished through control practices in the Fugitive Dust Plan.

35 IAC Section 212.302 – Fugitive Particulate Matter
The source is located in Cook County, Illinois therefore it is subject to 35 IAC Sections 212.304 – 212.310 and 212.312.

35 IAC Section 212.304 – Storage Piles
The storage piles located at the source will be sprayed with water via a water cannon to control fugitive dust emissions. The piles will be sprayed on an as needed basis.

35 IAC Section 212.305 – Conveyor Loading Operations
The inherent moisture content of the coal/pet coke, telescoping chutes, and water suppression will provide adequate control for particulate matter emissions.

35 IAC Section 212.306 – Traffic Areas
The source operates a water truck for dust suppression on traffic areas. The traffic areas will be sprayed with water on an as needed basis.

35 IAC Section 212.307 – Materials Collected By Pollution Control Equipment
The source will recycle the coal/pet coke dust collected in the dust collectors located at the facility.

35 IAC Section 212.308 – Spraying or Choke-Feeding Required
The inherent moisture content of the coal/pet coke and water suppression will provide adequate control for particulate matter emissions for all of the emission points at the facility except for the pet coke rail unloading operations which will employ choke loading to reduce particulate matter emissions.

35 IAC Section 212.309 – Operating Program
A Fugitive Dust Plan has been created/updated.

35 IAC Section 212.310 – Minimum Operating Program
The data is included in this Fugitive Dust Plan.

35 IAC Section 212.312 – Amendment to Operating Program
A Fugitive Dust Plan has been created/updated to include the operating scenario at the Facility. If the Facility changes their operating scenario an amendment to the Operating Program will be submitted to the Agency.

35 IAC Section 212.316– Emission Limitations for Emission Units in Certain Areas
The source, which is subject to the requirements set forth in this Section, will, as discussed in this Fugitive Dust Plan, maintain compliance with the limitations in this Section. Regarding the crushing and screening operations, it has been stated that the inherent moisture content of the materials being processed will provide adequate

control of particulate matter emissions. The roadways will be sprayed with water on an as needed basis to control fugitive dust emissions. Water cannons will be used to control fugitive particulate matter emissions from the storage piles. The source will maintain records and provide reports as outlined in 35 IAC Section 212.316 (g).

35 IAC Section 212.321 – Process Emission Units for Which Construction or Modification Commenced on or After April 14, 1972.
To show compliance with the process weight rate rule a sample calculation is contained below using the throughput of a single transfer point.

$E = A(P)^B$

Where:
P = Process Weight Rate; and
E = Allowable Emission Rate

$E = 2.54(2500)^{0.534}$

E = 165.70 pounds per hour

The actual emissions from this transfer point are 0.79 pound per hour. Therefore, the source is in compliance with the Process Weight Rate Rule.

35 IAC Section 212.324 – Process Emission Units in Certain Areas
The source is subject to the requirements in this section. See the response to 35 IAC Section 212.316.

The diesel fuel-fired engines are subject to 40 Code of Federal Regulations (CFR) Part 60 Subpart IIII. The source will comply with the requirements through the following:

40 CFR 60.4204 – Emission Standards for Non-Emergency Engines
Manufacturer's certification.

40 CFR 60.4207 – Fuel Requirements for Non-Emergency Engines
DTE will only use compliant fuels in the engines.

40 CFR 60.4209 – Monitoring Requirements for Non-Emergency Engines
The use of a non-resettable hour meter.

40 CFR 60.4211 – Compliance Requirements for Non-Emergency Engines
Manufacturer's certification.

40 CFR 60.4212 – Test Method Requirements for Non-Emergency Engines
DTE will test the engines in a manner consistent with the requirements set forth in this regulation.

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40 CFR 60.4214 – Notification, Reporting, and Recordkeeping Requirements for Non-Emergency Engines
DTE will track hour usage on a rolling monthly basis and track fuel quality by purchase receipts and will record routine maintenance activities.

The PTE calculations in Table 1 indicates that the source is major, but the limitations set forth in Table 8A support the fact that this source is a synthetic minor source.

The emissions contained in Table 8A are based on the maximum facility throughput level of 11,000,000 tons of coal and petroleum coke and 250,000 ton/yr of salt. Therefore, please use the emissions listed in the tables below to establish the allowable emissions for FESOP limitations and for fee purposes.

Transfer and Conveying, and Loadout – Requested Permit Limitations

Material Handled	*Throughput*		*Emission Factor (lb/ton)*		*Number of Transfer Points*	*PM Emissions*		*PM10 Emissions*	
	ton/ month	*ton/yr*	*PM*	*PM_{10}*		*ton/ month*	*ton/yr*	*ton/ month*	*ton/yr*
Coal & Pet Coke	1,100,000	11,000,000	0.00064	0.0003	58	10.3	102.5	4.9	48.5
Salt	25,000	250,000	0.00064	0.0003	34	0.14	1.4	0.06	0.6
Incidental Soil Crushing	29,400	294,000	0.0033	0.00101	N/A	0.03	0.25	0.01	0.08
Incidental Soil Screening	29,400	294,000	0.00067	0.00034	N/A	0.01	0.05	0.01	0.03

The emission factors are based on material unloading, all possible transfer points located at the facility, and loadout. The emission factors are derived from AP-42 Section 13.2.4.3. There is also a 50% control efficiency taken into account in the emission calculations based on the use of water suppression.

The equation is a follows:

$E = k(0.0032) \times ((U/5)^{1.3}) / ((M/2)^{1.4})$
Coal and Coke Handling PM Emission Factor $0.74(0.0032) \times ((10.3/5)^{1.3}) / (10\%/2)^{1.4}$ 0.00064
Coal and Coke Handling PM_{10} Emission Factor $0.35(0.0032) \times ((10.3/5)^{1.3}) / (10\%/2)^{1.4}$ 0.0003

Coal and Coke Handling PM Emissions were calculated via the following formula:

11,000,000 ton/yr x 0.00064 lb/ton x 50% control efficiency x 58 transfers / 2,000 lb/ton = 102.5 ton/yr
102.5 ton/yr / 10 months = 10.3 ton/month

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118 HP Diesel Engine Emissions (Diesel Generators 1-3) – Requested Permit Limitations

Pollutant	Emission Factor	Emissions		
	lb/bhp-hr	lb/hr	ton/month	ton/yr
NO_X	0.015	1.77	1.12	11.15
CO	0.00815	0.96	0.61	6.06
SO_2	**	0.021	0.013	0.13
PM	0.00005	0.06	0.04	0.37
PM_{10}	0.00005	0.06	0.04	0.37
VOM	0.00033	0.04	0.03	0.25

This Table provides the emissions for DG (1-3).
Emissions are based on 4,200 hours of operation per year for each unit, or 12,600 hr/yr total (three units). (118 HP x 0.015 lb/bhp-hr x 4,200 hr/yr / 2,000 lb/ton x 3 units = 11.15 ton/yr)
Emission factors are from 40 CFR 89.112 Table 1.
** SO_2 emissions calculated using 40 CFR 60.4207 maximum sulfur content of 0.015% per gallon of fuel and a fuel consumption rate of 10 gallons of diesel fuel per hour per engine.
12,600 hr/yr x 10 gal/hr x 7.1 lb/gal x 0.015% S / 2,000 lb/gal x 64 MW of SO_2/32 MW of S = 0.13 ton/yr

500 HP Diesel Engine Emissions (Diesel Generators 4-7) – Requested Permit Limitations

Pollutant	Emission Factor	Emissions		
	lb/bhp-hr	lb/hr	ton/month	ton/yr
NO_X	0.015	7.5	6.30	63.00
CO	0.00573	2.86	2.41	24.05
SO_2	**	0.043	0.036	0.36
PM	0.0003	0.15	0.13	1.26
PM_{10}	0.0003	0.15	0.16	1.26
VOM	0.00033	0.17	0.14	1.39

This Table provides the emissions for DG-(4-7).
Emissions are based on 4,200 hours of operation per year for each unit, or 16,800 hr/yr total
(500 HP x 0.015 lb/bhp-hr x 4,200 hr/yr / 2,000 lb/ton x 4 units = 63.00 ton/yr)
Emission factors are from 40 CFR 89.112 Table 1.
** SO_2 emissions calculated using 40 CFR 60.4207 maximum sulfur content of 0.015% per gallon of fuel and a fuel consumption rate of 20 gallons of diesel fuel per hour per engine.
16,800 hr/yr x 20 gal/hr x 7.1 lb/gal x 0.015% S / 2,000 lb/gal x 64 MW of SO_2/32 MW of S = 0.36 ton/yr

KM00000405

100 HP Diesel Engine Emissions (Air Compressor) – Requested Permit Limitations

Pollutant	Emission Factor	Emissions		
	lb/bhp-hr	lb/hr	ton/month	ton/yr
NO_X	0.015	1.50	0.99	3.15
CO	0.00815	0.82	0.38	1.71
SO_2	**	0.02	0.004	0.04
PM	0.0005	0.05	0.02	0.11
PM_{10}	0.0005	0.05	0.02	0.11
VOM	0.00033	0.03	0.16	0.07

This Table provides the emissions for AC-1.

Emissions are based on 4,200 hours of operation per year.

(100 HP x 0.015 lb/bhp hr x 4,200 hr/yr / 2,000 lb/ton 3.15 tons/yr)

Emission factors are from 40 CFR 89.112 Table 1.

** SO_2 emissions calculated using 40 CFR 60.4207 maximum sulfur content of 0.15% per gallon of fuel and a fuel consumption rate of 10 gallons of diesel fuel per hour per engine.
4,200 hr/yr x 10 gal/hr x 7.1 lb/gal x 0.015% S / 2,000 lb/gal x 64 MW of SO_2/32
MW of S = 0.04 ton/yr

15 HP Diesel Engine Emissions (Light Standards 1-5) – Requested Permit Limitations

Pollutant	Emission Factor	Emissions		
	lb/bhp-hr	lb/hr	ton/month	ton/yr
NO_X	0.015	0.23	0.11	2.36
CO	0.00903	0.12	0.06	1.28
SO_2	**	0.01	0.011	0.11
PM	0.001	0.01	0.007	0.08
PM_{10}	0.001	0.01	0.007	0.08
VOM	0.00033	0.005	0.02	0.05

This Table provides the emissions for LS 1(5).
Emissions are based on 4,200 hours of operation per year for each unit, or 21,000 hr/yr total

(15 HP x 0.015 lb/bhp hr x 3,500 hr/yr / 2,000 lb/ton x 5 units 2.36 tons/yr)

Emission factors are from 40 CFR 89.112 Table 1.

** SO_2 emissions calculated using 40 CFR 60.4207 maximum sulfur content of 0.015% per gallon of fuel and a fuel consumption rate of 5 gallons of diesel fuel per hour per engine.
21,000 hr/yr x 5 gal/hr x 7.1 lb/gal x 0.015% S / 2,000 lb/gal x 64 MW of SO_2/32 MW of S 0.11 ton/yr

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20 HP Diesel Engine Emissions (Emergency Water Pump) – Requested Permit Limitations

	Emission Factor	*Emissions*		
Pollutant	*lb/bhp-hr*	*lb/hr*	*ton/month*	*ton/yr*
NO_X	0.015	0.3	0.01	0.08
CO	0.01079	0.22	0.005	0.05
SO_2	**	0.01	0.0003	0.003
PM	0.00013	0.03	0.0007	0.01
PM_{10}	0.00013	0.03	0.0007	0.01
VOM	0.00033	0.01	0.001	0.01

This Table provides the emissions for DWP 1.
Emissions are based on 500 hours of operation per year.
(20 HP x 0.015 lb/bhp-hr x 500 hr/yr / 2,000 lb/ton = 0.08 ton/yr)

Emission factors are from 40 CFR 89.112 Table 1.
** SO_2 emissions calculated using 40 CFR 60.4207maximum sulfur content of 0.015% per gallon of fuel and a fuel consumption rate of 5 gallons of diesel fuel per hour per engine.
500 hr/yr x 5 gal/hr x 7.1 lb/gal x 0.015% S / 2,000 lb/gal x 64 MW of SO_2/32
MW of S = 0.003 ton/yr

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Illinois Environmental Protection Agency
Division Of Air Pollution Control -- Permit Section
P.O. Box 19506
Springfield, Illinois 62794-9506

Construction Permit Application For a FESOP Source (FORM APC628)	For Illinois EPA use only
	BOA ID No.:
	Application No.:
	Date Received:

This form is to be used to supply information to obtain a construction permit for a proposed project involving a Federally Enforceable State Operating Permit (FESOP) or Synthetic Minor source. including construction of a new FESOP source. Other necessary information must accompany this form as discussed in the "General Instructions For Permit Applications," Form APC-201.

Proposed Project

1. Working Name of Proposed Project:
   Conveyor Addition
2. Is the project occurring at a source that already has a permit from the Bureau of Air (BOA)?
   ☐ No ☒ Yes If Yes, provide BOA ID Number: 0 3 1 6 0 0 G S F
3. Does this application request a revision to an existing construction permit issued by the BOA?
   ☐ No ☒ Yes If Yes, provide Permit Number: 0 7 0 5 0 0 8 2
4. Does this application request that the new/modified emission units be incorporated into an existing FESOP issued by the BOA? **
   ☐ No ☐ Yes If Yes, provide Permit Number: __ __ __ __ __ __ __ __

Source Information

5. Source name:*
   DTE Chicago Fuels Terminal, LLC
6. Source street address:*
   10730 South Burley Avenue

7. City:	8. County:	9. Zip code:
Chicago	Cook	60617

ONLY COMPLETE THE FOLLOWING FOR A SOURCE WITHOUT AN ID NUMBER.

10. Is the source located within city limits? ☐ Yes ☐ No
    If no, provide Township Name:

11. Description of source and product(s) produced:	12. Primary Classification Code of source: SIC: __ __ __ __ or NAICS: __ __ __ __ __ __
13. Latitude (DD:MM:SS.SSSS):	14. Longitude (DD:MM:SS.SSSS):

* If this information different than previous information. then complete a new Form 200-CAAPP to change the source name in initial FESOP application for the source or Form APC-620 for Air Permit Name and/or Ownership Change if the FESOP has been previously issued.

Applicant Information

15. Who is the applicant?	16. All correspondence to: (check one)
☒ Owner ☐ Operator	☒ Owner ☐ Operator ☐ Source
17. Applicant's FEIN: 204570538	18. Attention name and/or title for written correspondence: Donald Januszek

***The FESOP has not been issued yet.*

This Agency is authorized to require and you must disclose this information under 415 ILCS 5/39. Failure to do so could result in the application being denied and penalties under 415 ILCS 5 et seq. It is not necessary to use this form in providing this information. This form has been approved by the forms management center.

Owner Information*		
19. Name: DTE Chicago Fuels Terminal, LLC		
20. Address: 414 South Main Street		
21. City: Ann Arbor	22. State: Michigan	23. Zip code: 48104

* If this information different than previous information. then complete Form 272-CAAPP for a Request for Ownership Change for CAAPP Permit for an initial FESOP application for the source or Form APC-620 for Air Permit Name and/or Ownership Change if the FESOP has been previously issued.

Operator Information (If Different from Owner)*		
24. Name DTE Chicago Fuels Terminal, LLC		
25. Address: 10730 South Burley Avenue		
26. City: Chicago	27. State: Illinois	28. Zip code: 60617

* If this information different than previous information, then complete a new Form 200-CAAPP to change the source name in initial FESOP application for the source or Form APC-620 for Air Permit Name and/or Ownership Change if the FESOP has been previously issued.

Technical Contacts for Application	
29. Preferred technical contact: (check one) ☒ Applicant's contact ☐ Consultant	
30. Applicant's technical contact person for application: Donald Januszek	
31. Contact person's telephone number 734-302-5344	32. Contact person's email address: januszekd@dteenergy.com
33. Applicant's consultant for application: Conestoga-Rovers & Associates (Don Sutton)	
34. Consultant's telephone number: 217-717-9009	35. Consultant's email address: dsutton@craworld.com

Review Of Contents of the Application	
36. Is the emission unit covered by this application already constructed? If "yes", provide the date construction was completed: Note: The Illinois EPA is unable to issue a construction permit for a emission unit that has already been constructed.	☐ Yes ☒ No
37. Does the application include a narrative description of the proposed project?	☒ Yes ☐ No
38. Does the application contain a list or summary that clearly identifies the emission units and air pollution control equipment that are part of the project?	☒ Yes ☐ No
39. Does the application include process flow diagram(s) for the project showing new and modified emission units and control equipment and related existing equipment and their relationships?	☒ Yes ☐ No
40. If the project is at a source that has not previously received a permit from the BOA, does the application include a source description, plot plan and site map?	☐ Yes ☐ No ☒ N/A* *Information previously submitted.

Review Of Contents of the Application (continued)	
41. Does the application include relevant information for the proposed project as requested on Illinois EPA, BOA application forms (or otherwise contain all the relevant information)?	☒ Yes ☐ No
42. Does the application identify and address all applicable or potentially applicable emissions standards, including: a. State emission standards (35 IAC Chapter I, Subtitle B); b. Federal New Source Performance Standards (40 CFR Part 60); c. Federal standards for HAPs (40 CFR Parts 61 and 63)?	☒ Yes ☐ No
43. Does the application address whether the proposed project or the source could be a major project for Prevention of Significant Deterioration (PSD), 40 CFR 52.21?	☐ Yes ☐ No . ☒ N/A
44. Does the application address for which pollutant(s) the proposed project or the source could be a major project for PSD, 40 CFR 52.21?	☐ Yes ☐ No . ☒ N/A
45. Does the application address whether the proposed project or the source could be a major project for "Nonattainment New Source Review," (NA NSR), 35 IAC Part 203?	☐ Yes ☐ No ☒ N/A
46. Does the application address for which pollutant(s) the proposed project or the source could be a major project for NA NSR, 35 IAC Part 203?	☐ Yes ☐ No ☒ N/A
47. Does the application address whether the proposed project or the source could potentially be subject to federal Maximum Achievable Control Technology (MACT) standard under 40 CFR Part 63 for Hazardous Air Pollutants (HAP) and identify the standard that could be applicable?	☐ Yes ☐ No ☒ N/A* * Source not major ☒ Project not major ☒
48. Does the application identify the HAP(s) from the proposed project or the source that would trigger the applicability of a MACT standard under 40 CFR Part 63?	☐ Yes ☐ No ☒ N/A
49. Does the application include a summary of the current and the future potential emissions of the source after the proposed project has been completed for each criteria air pollutant and/or HAP (tons/year)?	☒ Yes ☐ No ☐ N/A* * Applicability of PSD, NA NSR or 40 CFR 63 not applicable to the source's emissions.
50. Does the application include a summary of the requested permitted annual emissions of the proposed project for the new and modified emission units (tons/year)?	☒ Yes ☐ No ☐ N/A* * Project does not involve an increase in emissions from new or modified emission units.
51. Does the application include a summary of the requested permitted production, throughput, fuel, or raw material usage limits that correspond to the annual emissions limits of the proposed project for the new and modified emission units?	☒ Yes ☐ No ☐ N/A* * Project does not involve an increase in emissions from new or modified emission units.
52. Does the application include sample calculations or methodology for the emission estimations and the requested emission limits?	☒ Yes ☐ No
53. Does the application address the relationships with and implications of the proposed project for the source's FESOP?	☐ Yes ☐ No ☒ N/A* *FESOP not yet issued.
54. If the application contains information that is considered a TRADE SECRET, has such information been properly marked and claimed and other requirements to perfect such a claim been satisfied in accordance with 35 IAC Part 130? Note: "Claimed information will not be legally protected from disclosure to the public if it is not properly claimed or does not qualify as trade secret information.	☐ Yes ☐ No ☒ N/A* * No information in the application is claimed to be a TRADE SECRET

Review Of Contents of the Application (continued)		
55. If the source is located in a county other than Cook County, are two separate copies of this application being submitted?	☐ Yes	☒ No
56. If the source is located in Cook County, are three separate copies of this application being submitted?	☒ Yes	☐ No
57. Does the application include a completed "FEE DETERMINATION FOR CONSTRUCTION PERMIT APPLICATION," Form 197-FEE, for the emission units and control equipment for which a permit for construction or modification is being sought?	☒ Yes	☐ No
58. Does the application include a check in the proper amount for payment of the Construction permit fee?	☒ Yes	☐ No

Note: Answering "No" to Items 36 through 58 may result in the application being deemed incomplete.

Signature Block

Pursuant to 35 IAC 201.159, all applications and supplements thereto shall be signed by the owner and operator of the source, or their authorized agent, and shall be accompanied by evidence of authority to sign the application. Applications without a signed certification will be deemed incomplete.

59. Authorized Signature:

I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate and complete and that I am a responsible official for the source, as defined by Section 39.5(1) of the Environmental Protection Act. In addition, the technical contact person identified above is authorized to submit (by hard copy and/or by electronic copy) any supplemental information related to this application that may be requested by the Illinois EPA.

BY: _____ Vice President

AUTHORIZED SIGNATURE — TITLE OF SIGNATORY

Stephen C. Grossman — 1 [illegible]

TYPED OR PRINTED NAME OF SIGNATORY — DATE

KM00000411

Illinois Environmental Protection Agency

Bureau of Air • 1021 North Grand Avenue East • P.O. Box 19506 • Springfield • Illinois • 62794-9506

FEE DETERMINATION FOR CONSTRUCTION PERMIT APPLICATION

FOR AGENCY USE ONLY

ID Number: _____ Permit #: _____

☐ Complete ☐ Incomplete Date Complete: _____

Check Number: _____ Account Name: _____

This form is to be used to supply fee information that must accompany all construction permit applications. This application must include payment in full to be deemed complete. Make check or money order payable to the Illinois Environmental Protection Agency. Division of Air Pollution Control - Permit Section at the above address. Do NOT send cash. Refer to instructions (197-INST) for assistance.

Source Information

1. Source Name: DTE Chicago Fuels Terminal, LLC
2. Project Name: Conveyor Addition
3. Source ID #: (if applicable) 031600GF
4. Contact Name: Donald Januszek
5. Contact Phone #: 734-302-5344

Fee Determination

6. The boxes below are automatically calculated.

Section 1 Subtotal: $0 + Section 2, 3 or 4 Subtotal: $7,000 = $7,000 Grand Total

Section 1: Status of Source/Purpose of Submittal

7. Your application will fall under only one of the following five categories described below. Check the one that applies. Proceed to applicable sections. For purposes of this form:

- **Major Source** is a source that is required to obtain a CAAPP permit.
- **Synthetic Minor Source** is a source that has taken limits on potential to emit in a permit to avoid CAAPP permit requirements (e.g., FESOP).
- **Non-Major Source** is a source that is not a major or synthetic minor source.

☑ Existing source without status change or with status change from synthetic minor to major source or vice versa. Proceed to Section 2.

☐ Existing non-major source that will become synthetic minor or major source. Proceed to Section 4.

☐ New major or synthetic minor source. Proceed to Section 4. $0

☐ New non-major source. Proceed to Section 3. Section 1 Subtotal

☐ AGENCY ERROR. If this is a timely request to correct an issued permit that involves only an agency error and if the request is received within the deadline for a permit appeal to the Pollution Control Board. Skip Sections 2, 3 and 4. Proceed directly to Section 5.

This agency is authorized to require and you must disclose this information under 415 ILCS 5/39. Failure to do so could result in the application being denied and penalties under 415 ILCS 5/42. It is not necessary to use this form in providing this information. This form has been approved by the forms management center.

Section 2: Special Case Filing Fee

8. **Filing Fee.** If the application only addresses one or more of the following, check the appropriate boxes, skip Sections 3 and 4 and proceed directly to Section 5. Otherwise, proceed to Section 3 or 4 as appropriate.

- ☐ Addition or replacement of control devices on permitted units.
- ☐ Pilot projects/trial burns by a permitted unit
- ☐ Land remediation projects
- ☐ Revisions related to methodology or timing for emission testing
- ☐ Minor administrative-type change to a permit

KM00000412

Section 3: Fees for Current or Projected Minor Sources

9.	☐	This application consists of a single new emission unit or no more than two modified emission units. ($500 fee)	9.
10.	☐	This application consists of more than one new emission unit or more than two modified units. ($1,000 fee)	10.
11.	☐	This application consists of a new source or emission unit subject to Section 39.2 of the Act (i.e., Local Siting Review), a commercial incinerator or a municipal waste, hazardous waste, or waste tire incinerator; a commercial power generator; or an emission unit designated as a complex source by agency rulemaking. ($15,000 fee)	11.
12.	☐	A public hearing is held (see instructions). ($10,000 fee)	12.
13.		Section 3 subtotal (lines 9 through 12 - entered on page 1)	13.

Section 4: Fees for Current or Projected Major or Synthetic Minor Sources

Application contains modified emission units only	14. For the first modified emission unit, enter $2,000.	14.	
	15. Number of additional modified emission units = x $1,000.	15.	
	16. Line 14 plus line 15, or $5,000, whichever is less.	16.	
Application contains new and/or modified emission units	17. For the first new emission unit, enter $4,000.	17.	$4,000
	18. Number of additional new and/or modified emission units = 3 x $1,000.	18.	$3,000
	19. Line 17 plus line 18, or $10,000, whichever is less.	19.	$7,000
Application contains netting exercise	20. Number of individual pollutants that rely on a netting exercise or contemporaneous emissions decrease to avoid application of PSD or nonattainment area NSR = x $3,000.	20.	
Additional Supplemental Fees	21. If the new source or emission unit is subject to Section 39.2 of the Act (i.e. siting); a commercial incinerator or other municipal waste, hazardous waste, or waste tire incinerator; a commercial power generator; or one or more other emission units designated as a complex source by Agency rulemaking, enter $25,000.	21.	
	22. If the source is a new major source subject to PSD, enter $10,000.	22.	
	23. If the project is a major modification subject to PSD, enter $5,000.	23.	
	24. If this is a new major source subject to nonattainment area (NAA) NSR, enter $20,000.	24.	
	25. If this is a major modification subject to NAA NSR, enter $5,000.	25.	
	26. If the application involves a determination of MACT for a pollutant and the project is not subject to MACT or LAER for the related pollutant under PSD or NSR (e.g., VOM for organic HAP), enter $5,000 per unit for which a determination is requested or otherwise required. x $5,000.	26.	
	27. If a public hearing is held (see instructions), enter $10,000.	27.	
28. Section 4 subtotal (lines 16 and lines 19 through 25) to be entered on page 1		28.	$7,000

Section 5: Certification

NOTE: Applications without a signed certification will be deemed incomplete.

29. I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the information contained in this application form is true, accurate and complete.

By: [signature] Vice President

Signature — Title of Signatory

Stephen C. Kennedy — 7/17/2014

Typed or Printed Name of Signatory — Date

KM00000413

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL -- PERMIT SECTION
P.O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

FOR APPLICANT'S USE
Revision #: _____
Date: _____ / _____ / _____
Page _____ of _____
Source Designation: _____

PROCESS EMISSION UNIT DATA AND INFORMATION	***FOR AGENCY USE ONLY***
	ID NUMBER:
	EMISSION POINT #:
	DATE:

SOURCE INFORMATION	
1) SOURCE NAME: DTE Chicago Fuels Terminal, LLC	
2) DATE FORM PREPARED: March 12, 2012	3) SOURCE ID NO. (IF KNOWN): 031600GSF

GENERAL INFORMATION	
4) NAME OF EMISSION UNIT: Four additional portable conveyors	
5) NAME OF PROCESS: Material Handling	
6) DESCRIPTION OF PROCESS: Handling of coal, pet coke, and salt.	
7) DESCRIPTION OF ITEM OR MATERIAL PRODUCED OR ACTIVITY ACCOMPLISHED: Material transfer station	
8) FLOW DIAGRAM DESIGNATION OF EMISSION UNIT: See figure 1.	
9) MANUFACTURER OF EMISSION UNIT (IF KNOWN): To Be Determined	
10) MODEL NUMBER (IF KNOWN): To Be Determined	11) SERIAL NUMBER (IF KNOWN): To Be Determined
12) DATES OF COMMENCING CONSTRUCTION, OPERATION AND/OR MOST RECENT MODIFICATION OF THIS EMISSION UNIT (ACTUAL OR PLANNED)	a) CONSTRUCTION (MONTH/YEAR): Upon issuance of permit
	b) OPERATION (MONTH/YEAR): Upon issuance of permit
	c) LATEST MODIFICATION (MONTH/YEAR): N/A
13) DESCRIPTION OF MODIFICATION (IF APPLICABLE): N/A	

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039.5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

FOR APPLICANT'S USE
052450-02-220-CAAPP

14) DOES THE EMISSION UNIT HAVE MORE THAN ONE MODE OF OPERATION? ☐ YES ☒ NO

IF YES, EXPLAIN AND IDENTIFY WHICH MODE IS COVERED BY THIS FORM (NOTE: A SEPARATE PROCESS EMISSION UNIT FORM 220-CAAPP MUST BE COMPLETED FOR EACH MODE):

15) PROVIDE THE NAME AND DESIGNATION OF ALL AIR POLLUTION CONTROL EQUIPMENT CONTROLLING THIS EMISSION UNIT, IF APPLICABLE (FORM 260-CAAPP AND THE APPROPRIATE 260-CAAPP ADDENDUM FORM MUST BE COMPLETED FOR EACH ITEM OF AIR POLLUTION CONTROL EQUIPMENT):

None, athough water suppression is used to control particulate emissions.

16) WILL EMISSIONS DURING STARTUP EXCEED EITHER THE ALLOWABLE EMISSION RATE PURSUANT TO A SPECIFIC RULE, OR THE ALLOWABLE EMISSION LIMIT AS ESTABLISHED BY AN EXISTING OR PROPOSED PERMIT CONDITION? ☐ YES ☒ NO

IF YES, COMPLETE AND ATTACH FORM 203-CAAPP, "REQUEST TO OPERATE WITH EXCESS EMISSIONS DURING STARTUP OF EQUIPMENT".

17) PROVIDE ANY LIMITATIONS ON SOURCE OPERATION AFFECTING EMISSIONS OR ANY WORK PRACTICE STANDARDS (E.G., ONLY ONE UNIT IS OPERATED AT A TIME):

The source has limited their material throughput per year to obtain a FESOP.

OPERATING INFORMATION

18) ATTACH THE CALCULATIONS. TO THE EXTENT THEY ARE AIR EMISSION RELATED, FROM WHICH THE FOLLOWING OPERATING INFORMATION, MATERIAL USAGE INFORMATION AND FUEL USAGE DATA WERE BASED AND LABEL AS EXHIBIT 220-1. REFER TO SPECIAL NOTES OF FORM 202-CAAPP.

19a) MAXIMUM OPERATING HOURS	HOURS/DAY: 12	DAYS/WEEK: 7	WEEKS/YEAR: 50	
b) TYPICAL OPERATING HOURS	HOURS/DAY: 12	DAYS/WEEK: 5.2	WEEKS/YEAR: 50	
20) ANNUAL THROUGHPUT	DEC-FEB(%): 25	MAR-MAY(%): 25	JUN-AUG(%): 25	SEP-NOV(%): 25

MATERIAL USAGE INFORMATION

	MAXIMUM RATES		TYPICAL RATES	
21a) RAW MATERIALS	LBS/HR	TONS/YEAR	LBS/HR	TONS/YEAR
See Tables 5 & 6				

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21b) PRODUCTS	MAXIMUM RATES		TYPICAL RATES	
	LBS/HR	TONS/YEAR	LBS/HR	TONS/YEAR

21c) BY-PRODUCT MATERIALS	MAXIMUM RATES		TYPICAL RATES	
	LBS/HR	TONS/YEAR	LBS/HR	TONS/YEAR

FUEL USAGE DATA

22a) MAXIMUM FIRING RATE (MILLION BTU/HR):	b) TYPICAL FIRING RATE (MILLION BTU/HR):	c) DESIGN CAPACITY FIRING RATE (MILLION BTU/HR):

d) FUEL TYPE:

☐ NATURAL GAS ☐ FUEL OIL: GRADE NUMBER _____ ☐ COAL ☐ OTHER _____

IF MORE THAN ONE FUEL IS USED, ATTACH AN EXPLANATION AND LABEL AS EXHIBIT 220-2.

e) TYPICAL HEAT CONTENT OF FUEL (BTU/LB, BTU/GAL OR BTU/SCF):	f) TYPICAL SULFUR CONTENT (WT %., NA FOR NATURAL GAS):
g) TYPICAL ASH CONTENT (WT %., NA FOR NATURAL GAS):	h) ANNUAL FUEL USAGE (SPECIFY UNITS, E.G., SCF/YEAR, GAL/YEAR, TON/YEAR):

23) ARE COMBUSTION EMISSIONS DUCTED TO THE SAME STACK OR CONTROL AS PROCESS UNIT EMISSIONS? ☐ YES ☐ NO

IF NO, IDENTIFY THE EXHAUST POINT FOR COMBUSTION EMISSIONS:

See Narrative, Section 1.0.

APPLICABLE RULES

24) PROVIDE ANY SPECIFIC EMISSION STANDARD(S) AND LIMITATION(S) SET BY RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT (E.G., VOM, IAC 218.204(j)(4), 3.5 LBS/GAL):

REGULATED AIR POLLUTANT(S)	EMISSION STANDARD(S)	REQUIREMENT(S)

25) PROVIDE ANY SPECIFIC RECORDKEEPING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT:

REGULATED AIR POLLUTANT(S)	RECORDKEEPING RULE(S)	REQUIREMENT(S)

26) PROVIDE ANY SPECIFIC REPORTING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT:

REGULATED AIR POLLUTANT(S)	REPORTING RULE(S)	REQUIREMENT(S)

27) PROVIDE ANY SPECIFIC MONITORING RULE(S) WHICH ARE APPLICABLE TO THIS EMISSION UNIT:

REGULATED AIR POLLUTANT(S)	MONITORING RULE(S)	REQUIREMENT(S)

28) PROVIDE ANY SPECIFIC TESTING RULES AND/OR PROCEDURES WHICH ARE APPLICABLE TO THIS EMISSION UNIT :

REGULATED AIR POLLUTANT(S)	TESTING RULE(S)	REQUIREMENT(S)

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29) DOES THE EMISSION UNIT QUALIFY FOR AN EXEMPTION FROM AN OTHERWISE APPLICABLE RULE? ☐ YES ☒ NO

IF YES. THEN LIST BOTH THE RULE FROM WHICH IT IS EXEMPT AND THE RULE WHICH ALLOWS THE EXEMPTION. PROVIDE A DETAILED EXPLANATION JUSTIFYING THE EXEMPTION. INCLUDE DETAILED SUPPORTING DATA AND CALCULATIONS. ATTACH AND LABEL AS EXHIBIT 220-3, OR REFER TO OTHER ATTACHMENT(S) WHICH ADDRESS AND JUSTIFY THIS EXEMPTION.

COMPLIANCE INFORMATION

30) IS THE EMISSION UNIT IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS? ☒ YES ☐ NO

IF NO, THEN FORM 294-CAAPP "COMPLIANCE PLAN/SCHEDULE OF COMPLIANCE -- ADDENDUM FOR NON COMPLYING EMISSION UNITS" MUST BE COMPLETED AND SUBMITTED WITH THIS APPLICATION.

31) EXPLANATION OF HOW INITIAL COMPLIANCE IS TO BE. OR WAS PREVIOUSLY. DEMONSTRATED:

See Narrative, Section 1.0.

32) EXPLANATION OF HOW ONGOING COMPLIANCE WILL BE DEMONSTRATED:

See Narrative, Section 1.0.

TESTING, MONITORING, RECORDKEEPING AND REPORTING

33a) LIST THE PARAMETERS THAT RELATE TO AIR EMISSIONS FOR WHICH RECORDS ARE BEING MAINTAINED TO DETERMINE FEES. RULE APPLICABILITY OR COMPLIANCE. INCLUDE THE UNIT OF MEASUREMENT. THE METHOD OF MEASUREMENT, AND THE FREQUENCY OF SUCH RECORDS (E.G., HOURLY, DAILY, WEEKLY):

PARAMETER	UNIT OF MEASUREMENT	METHOD OF MEASUREMENT	FREQUENCY
Visible Emissions	Percent Opacity	Method 9	Upon request by the Agency

KM00000418

33b) BRIEFLY DESCRIBE THE METHOD BY WHICH RECORDS WILL BE CREATED AND MAINTAINED. FOR EACH RECORDED PARAMETER INCLUDE THE METHOD OF RECORDKEEPING, TITLE OF PERSON RESPONSIBLE FOR RECORDKEEPING, AND TITLE OF PERSON TO CONTACT FOR REVIEW OF RECORDS:

PARAMETER	METHOD OF RECORDKEEPING	TITLE OF PERSON RESPONSIBLE	TITLE OF CONTACT PERSON
Throughput	Log Book	Operations Manager	Operations Manager

c) IS COMPLIANCE OF THE EMISSION UNIT READILY DEMONSTRATED BY REVIEW OF THE RECORDS? ☒ YES ☐ NO

IF NO. EXPLAIN:

d) ARE ALL RECORDS READILY AVAILABLE FOR INSPECTION. COPYING AND SUBMITTAL TO THE AGENCY UPON REQUEST? ☒ YES ☐ NO

IF NO, EXPLAIN:

34a) DESCRIBE ANY MONITORS OR MONITORING ACTIVITIES USED TO DETERMINE FEES, RULE APPLICABILITY OR COMPLIANCE:

N/A

b) WHAT PARAMETER(S) IS(ARE) BEING MONITORED (E.G.. VOM EMISSIONS TO ATMOSPHERE)?

N/A

c) DESCRIBE THE LOCATION OF EACH MONITOR (E.G., IN STACK MONITOR 3 FEET FROM EXIT):

N/A

34d) IS EACH MONITOR EQUIPPED WITH A RECORDING DEVICE? ☐ YES ☐ NO

IF NO, LIST ALL MONITORS WITHOUT A RECORDING DEVICE:

N/A

e) IS EACH MONITOR REVIEWED FOR ACCURACY ON AT LEAST A QUARTERLY BASIS? ☐ YES ☐ NO

IF NO. EXPLAIN:

N/A

f) IS EACH MONITOR OPERATED AT ALL TIMES THE ASSOCIATED EMISSION UNIT IS IN OPERATION? ☐ YES ☐ NO

IF NO. EXPLAIN:

N/A

35) PROVIDE INFORMATION ON THE MOST RECENT TESTS, IF ANY. IN WHICH THE RESULTS ARE USED FOR PURPOSES OF THE DETERMINATION OF FEES. RULE APPLICABILITY OR COMPLIANCE. INCLUDE THE TEST DATE, TEST METHOD USED, TESTING COMPANY, OPERATING CONDITIONS EXISTING DURING THE TEST AND A SUMMARY OF RESULTS. IF ADDITIONAL SPACE IS NEEDED, ATTACH AND LABEL AS EXHIBIT 220-4:

TEST DATE	TEST METHOD	TESTING COMPANY	OPERATING CONDITIONS	SUMMARY OF RESULTS
	N/A			

36) DESCRIBE ALL REPORTING REQUIREMENTS AND PROVIDE THE TITLE AND FREQUENCY OF REPORT SUBMITTALS TO THE AGENCY:

REPORTING REQUIREMENTS	TITLE OF REPORT	FREQUENCY
	A	A

See Tables 1-12.

(37)EMISSION INFORMATION

REGULATED AIR POLLUTANT		☐ [1]ACTUAL EMISSION RATE ☐ [1]UNCONTROLLED EMISSION RATE					ALLOWABLE BY RULE EMISSION RATE			[2]PERMITTED EMISSION RATE	
		LBS PER HOUR (LBS/HR)	TONS PER YEAR (TONS/YR)	[3]OTHER TERMS	[3]OTHER TERMS	[4]DM	[5]RATE (UNITS)	APPLICABLE RULES	TONS PER YEAR (TONS/YR)	RATE (UNITS)	TONS PER YEAR (TONS/YR)
CARBON MONOXIDE (CO)	MAXIMUM						( )				
	TYPICAL						( )				
LEAD	MAXIMUM						( )				
	TYPICAL						( )				
NITROGEN OXIDES (NOx)	MAXIMUM						( )				
	TYPICAL						( )				
PARTICULATE MATTER (PART)	MAXIMUM						( )				
	TYPICAL						( )				
PARTICULATE MATTER <= 10 MICROMETERS (PM10)	MAXIMUM						( )				
	TYPICAL						( )				
SULFUR DIOXIDE (SO2)	MAXIMUM						( )				
	TYPICAL						( )				
VOLATILE ORGANIC MATERIAL (VOM)	MAXIMUM						( )				
	TYPICAL						( )				
OTHER, SPECIFY: _____	MAXIMUM						( )				
	TYPICAL						( )				
EXAMPLE: PARTICULATE MATTER	MAXIMUM:	*5.00*	*21.9*	*0.3 GR/DSCF*		*1*	*6.0 (LBS/HR)*	*212.321*	*26.28*	*5.5 LBS/HR*	*22*
	TYPICAL:	*4.00*	*14.4*	*0.24 GR/DSCF*		*4*	*5.5 (LBS/HR)*	*212.321*	*19.80*		

IMPORTANT: ATTACH CALCULATIONS, TO THE EXTENT THEY ARE AIR EMISSIONS RELATED, ON WHICH EMISSIONS WERE DETERMINED AND LABEL AS EXHIBIT 220-5.

[1]CHECK UNCONTROLLED EMISSION RATE BOX IF CONTROL EQUIPMENT IS USED. OTHERWISE CHECK AND PROVIDE THE ACTUAL EMISSION RATE TO ATMOSPHERE, INCLUDING INDOORS. SEE INSTRUCTIONS.
[2]PROVIDE THE EMISSION RATE THAT WILL BE USED AS A PERMIT SPECIAL CONDITION. THIS LIMIT WILL BE USED TO DETERMINE THE PERMIT FEE.
[3]PLEASE PROVIDE ANY OTHER EMISSION RATE WHICH IS COMMONLY USED, REQUIRED BY A SPECIFIC LIMITATION OR THAT WAS MEASURED (E.G. PPM, GR/DSCF, ETC.)
[4]DM - DETERMINATION METHOD: 1) STACK TEST, 2) MATERIAL BALANCE, 3) STANDARD EMISSION FACTOR (AP-42 OR AIRS), 4) ENGINEERING ESTIMATE, 5) SPECIAL EMISSION FACTOR (NOT AP-42 OR AIRS)
[5]RATE - ALLOWABLE EMISSION RATE SPECIFIED BY MOST STRINGENT APPLICABLE RULE.

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N/A

(38) HAZARDOUS AIR POLLUTANT EMISSION INFORMATION

		☐ [1]ACTUAL EMISSION RATE ☐ [1]UNCONTROLLED EMISSION RATE				ALLOWABLE BY RULE	
NAME OF HAP EMITTED	[2]CAS NUMBER		POUNDS PER HOUR (LBS/HR)	TONS PER YEAR (TONS/YR)	[3]OTHER TERMS	[4]DM	[5]RATE OR STANDARD	APPLICABLE RULE
		MAXIMUM						
		TYPICAL						
		MAXIMUM						
		TYPICAL						
		MAXIMUM						
		TYPICAL						
		MAXIMUM						
		TYPICAL						
		MAXIMUM						
		TYPICAL						
		MAXIMUM						
		TYPICAL						
		MAXIMUM						
		TYPICAL						
		MAXIMUM						
		TYPICAL						
EXAMPLE:		MAXIMUM:	*10.0*	*1.2*		*2*	*98% by wt control device*	*CFR 61*
Benzene	*71432*	TYPICAL:	*8.0*	*0.8*		*2*	*leak-tight trucks*	*61.302(b),(d)*

IMPORTANT: ATTACH CALCULATIONS, TO THE EXTENT THEY ARE AIR EMISSIONS RELATED, ON WHICH EMISSIONS WERE DETERMINED AND LABEL AS EXHIBIT 220-6.

[1]PROVIDE UNCONTROLLED EMISSIONS IF CONTROL EQUIPMENT IS USED. OTHERWISE, PROVIDE ACTUAL EMISSIONS TO THE ATMOSPHERE, INCLUDING INDOORS. CHECK BOX TO SPECIFY.
[2]CAS - CHEMICAL ABSTRACT SERVICE NUMBER.
[3]PLEASE PROVIDE ANY OTHER EMISSION RATE WHICH IS COMMONLY USED, REQUIRED BY A SPECIFIC LIMITATION OR THAT WAS MEASURED (E.G., PPM, GR/DSCF, ETC.).
[4]DM - DETERMINATION METHOD: 1) STACK TEST, 2) MATERIAL BALANCE, 3) STANDARD EMISSION FACTOR (AP-42 OR AIRS, 4) ENGINEERING ESTIMATE, 5) SPECIAL EMISSION FACTOR (NOT AP-42 OR AIRS).
[5]RATE - ALLOWABLE EMISSION RATE OR STANDARD SPECIFIED BY MOST STRINGENT APPLICABLE RULE.

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EXHAUST POINT INFORMATION

THIS SECTION SHOULD NOT BE COMPLETED IF EMISSIONS ARE EXHAUSTED THROUGH AIR POLLUTION CONTROL EQUIPMENT.

39) FLOW DIAGRAM DESIGNATION OF EXHAUST POINT:
See figure 1.

40) DESCRIPTION OF EXHAUST POINT (STACK, VENT, ROOF MONITOR. INDOORS, ETC.). IF THE EXHAUST POINT DISCHARGES INDOORS, DO NOT COMPLETE THE REMAINING ITEMS.
Varies

41) DISTANCE TO NEAREST PLANT BOUNDARY FROM EXHAUST POINT DISCHARGE (FT):
Varies

42) DISCHARGE HEIGHT ABOVE GRADE (FT):
Varies

43) GOOD ENGINEERING PRACTICE (GEP) HEIGHT, IF KNOWN (FT):

44) DIAMETER OF EXHAUST POINT (FT): NOTE: FOR A NON CIRCULAR EXHAUST POINT, THE DIAMETER IS 1.128 TIMES THE SQUARE ROOT OF THE AREA. N/A

45) EXIT GAS FLOW RATE	a) MAXIMUM (ACFM): N/A	b) TYPICAL (ACFM): N/A
46) EXIT GAS TEMPERATURE	a) MAXIMUM (°F): N/A	b) TYPICAL (°F): N/A

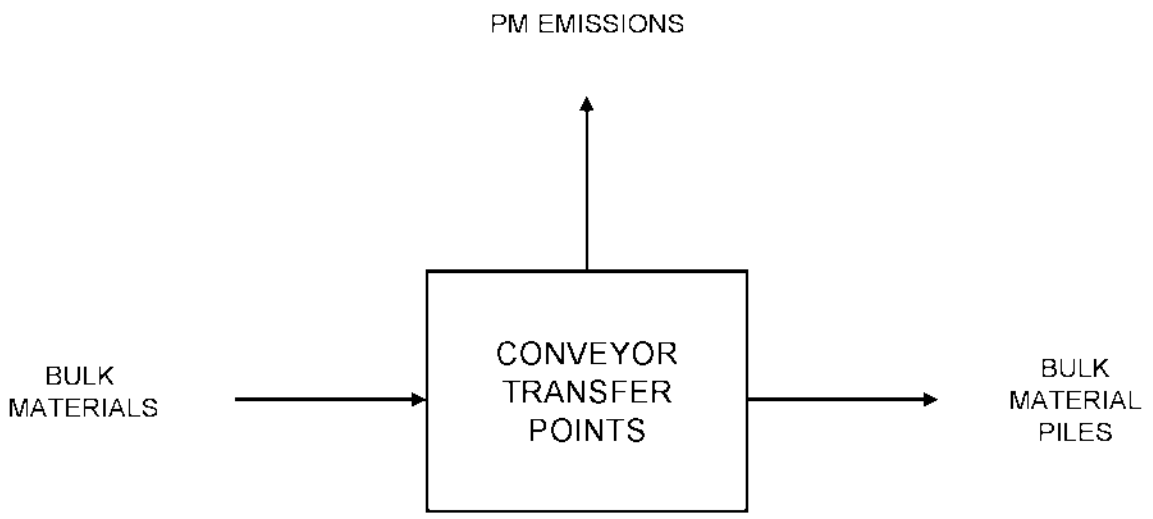
47) DIRECTION OF EXHAUST (VERTICAL, LATERAL, DOWNWARD):
N/A

48) LIST ALL EMISSION UNITS AND CONTROL DEVICES SERVED BY THIS EXHAUST POINT:

	NAME	FLOW DIAGRAM DESIGNATION
a)	See Table 13	
b)		
c)		
d)		
e)		

THE FOLLOWING INFORMATION NEED ONLY BE SUPPLIED IF READILY AVAILABLE.

49a) LATITUDE:	b) LONGITUDE:	
50) UTM ZONE:	b) UTM VERTICAL (KM):	c) UTM HORIZONTAL (KM):



Note: End loaders transfer stored materials to transport vehicle.

figure 1

CONVEYOR TRANSFER POINTS PROCESS FLOW DIAGRAM
CONSTRUCTION PERMIT APPLICATION
DTE Chicago Fuels Terminal, LLC
Chicago, Illinois

KM00000424

TABLE 1

PROCESS UNITS POTENTIAL TO EMIT CALCULATIONS

DESCRIPTION	MAXIMUM MATERIAL HANDLING RATE[1]		PARTICLE SIZE MULTIPLIER[2]		EMISSION FACTORS[3]			CONTROL		PM EMISSION RATE		PM_{10} EMISSION RATE	
	ton/hr	ton/yr	PM	PM_{10}	PM	PM_{10}	UNITS	TYPE	EFFIC.	lb/day	ton/yr	lb/day	ton/yr
Coal/Petcoke Unloading Emissions													
BC to C (Loading Coal/Petcoke)	2,000	2,550,000	0.742	0.350	0.0004	0.00052	lb/ton	Water Suppression	70.0%	2.05	0.37	0.96	0.18
KU/PC to C (Loading Coal/Petcoke)	2,000	2,550,000	0.742	0.350	0.0004	0.00052	lb/ton	Water Suppression	70.0%	2.05	0.37	0.96	0.18
KU/PC to C (Loading Coal/Petcoke)	2,000	2,550,000	0.742	0.350	0.0004	0.00052	lb/ton	Baghouse	90.0%	0.41	0.07	0.19	0.04
KU/PC to C 7 (Coal/Petcoke)	2,000	17,520,000	0.742	0.350	0.0004	0.00052	lb/ton	Water Suppression	70.0%	14.28	2.59	6.73	1.22
KU/PC to C 8 (Coal/Petcoke)	2,000	17,520,000	0.742	0.350	0.0004	0.00052	lb/ton	Water Suppression	70.0%	14.28	2.59	6.73	1.22
									Emissions From Coal/Petcoke Unloading : Total>>	*35.0*	*6.4*	*16.6*	*3.0*
Coal/Petcoke Conveyor Transfer Point Emissions													
C 1 to C 2	2,500	2,190,000	0.742	0.350	0.0004	0.00028	lb/ton	Water Suppression	50.0%	6.42	1.17	3.03	0.55
C 2 to S 1	1,000	35,040,000	0.742	0.350	0.0004	0.00028	lb/ton	Water Suppression	50.0%	30.85	5.63	14.55	2.66
C 2 to C 2	1,000	35,040,000	0.742	0.350	0.0004	0.00028	lb/ton	Water Suppression	50.0%	30.85	5.63	14.55	2.66
C 6 to S 5	2,500	2,190,000	0.742	0.350	0.0004	0.00028	lb/ton	Water Suppression	50.0%	6.42	1.17	3.03	0.55
C 1 to C 4	2,500	2,190,000	0.742	0.350	0.0004	0.00028	lb/ton	Water Suppression	50.0%	6.42	1.17	3.03	0.55
C 4 to C 6	2,500	2,190,000	0.742	0.350	0.0004	0.00028	lb/ton	Water Suppression	50.0%	6.42	1.17	3.03	0.55
C 6 to S 2	2,500	2,190,000	0.742	0.350	0.0004	0.00028	lb/ton	Water Suppression	50.0%	6.42	1.17	3.03	0.55
AC 1 to C 5	3,000	26,280,000	0.742	0.350	0.0004	0.00028	lb/ton	Water Suppression	50.0%	22.62	4.13	10.67	1.95
AC 2 to C 5	3,000	26,280,000	0.742	0.350	0.0004	0.00028	lb/ton	Water Suppression	50.0%	22.62	4.13	10.67	1.95
AC 3 to C 5	3,000	26,280,000	0.742	0.350	0.0004	0.00028	lb/ton	Water Suppression	50.0%	22.62	4.13	10.67	1.95
AC 4 to C 5	3,000	26,280,000	0.742	0.350	0.0004	0.00028	lb/ton	Water Suppression	50.0%	22.62	4.13	10.67	1.95
C 7 to C 9	2,000	7,592,000	0.742	0.350	0.0004	0.00028	lb/ton	Water Suppression	50.0%	5.98	2.76	7.23	.39
C 8 to C 10	2,000	7,592,000	0.742	0.350	0.0004	0.00028	lb/ton	Water Suppression	50.0%	5.98	2.76	7.23	.39
C 9 to C 11	2,000	7,592,000	0.742	0.350	0.0004	0.00028	lb/ton	Water Suppression	50.0%	5.98	2.76	7.23	.39
C 10 to C 11	2,000	7,592,000	0.742	0.350	0.0004	0.00028	lb/ton	Water Suppression	50.0%	5.98	2.76	7.23	.39
C 11 to LP 1	2,000	7,592,000	0.742	0.350	0.0004	0.00028	lb/ton	Water Suppression	50.0%	5.98	2.76	7.23	.39
LP 1 to C 12	2,000	7,592,000	0.742	0.350	0.0004	0.00028	lb/ton	Water Suppression	50.0%	5.98	2.76	7.23	.39
C 12 to SILO P 1	2,000	7,592,000	0.742	0.350	0.0004	0.00028	lb/ton	Water Suppression	50.0%	15.98	2.76	7.23	.39

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TABLE 1

PROCESS UNITS POTENTIAL TO EMIT CALCULATIONS

DESCRIPTION	MAXIMUM MATERIAL HANDLING RATE[1]		PARTICLE SIZE MULTIPLIER[2]		EMISSION FACTORS[3]			CONTROL		PM EMISSION RATE		PM_{10} EMISSION RATE	
	ton/hr	ton/yr	PM	PM_{10}	PM	PM_{10}	UNITS	TYPE	EFFIC.	lb/day	ton/yr	lb/day	ton/yr
[illegible]	2,000	17,520,000	0.740	0.340	0.00064	0.00022	lb/ton	Water Suppression	80.0%	18.28	2.99	7.23	1.32
[illegible]	2,000	17,520,000	0.740	0.340	0.00064	0.00022	lb/ton	Water Suppression	80.0%	18.28	2.99	7.23	1.32
[illegible]	1,000	8,760,000	0.740	0.340	0.00064	0.00022	lb/ton	Water Suppression	80.0%	7.04	1.29	3.01	0.55
[illegible]	1,000	8,760,000	0.740	0.340	0.00064	0.00022	lb/ton	Water Suppression	80.0%	7.04	1.29	3.01	0.55
[illegible]	1,000	8,760,000	0.740	0.340	0.00064	0.00022	lb/ton	Water Suppression	80.0%	7.04	1.29	3.01	0.55
Emissions From Coal/Petcoke Transfer Points: Total=>										*408.7*	*74.6*	*193.3*	*35.3*
Coal/Petcoke Portable Conveyor Emissions													
PC [illegible] Drop Point	2,500	21,900,000	0.740	0.340	0.00064	0.00022	lbs/ton	Water Suppression	80.0%	19.13	3.49	9.05	1.65
PC 2 Drop Point	2,500	21,900,000	0.740	0.340	0.00064	0.00022	lbs/ton	Water Suppression	80.0%	19.13	3.49	9.05	1.65
PC 3 Drop Point	2,500	21,900,000	0.740	0.340	0.00064	0.00022	lbs/ton	Water Suppression	80.0%	19.13	3.49	9.05	1.65
PC 4 Drop Point	2,500	21,900,000	0.740	0.340	0.00064	0.00022	lbs/ton	Water Suppression	80.0%	19.13	3.49	9.05	1.65
PC 5 Drop Point	2,500	21,900,000	0.740	0.340	0.00064	0.00022	lbs/ton	Water Suppression	80.0%	19.13	3.49	9.05	1.65
PC 6 Drop Point	2,500	21,900,000	0.740	0.340	0.00064	0.00022	lbs/ton	Water Suppression	80.0%	19.13	3.49	9.05	1.65
PC 7 Drop Point	2,500	21,900,000	0.740	0.340	0.00064	0.00022	lbs/ton	Water Suppression	80.0%	19.13	3.49	9.05	1.65
PC 8 Drop Point	2,500	21,900,000	0.740	0.340	0.00064	0.00022	lbs/ton	Water Suppression	80.0%	19.13	3.49	9.05	1.65
PC 9 Drop Point	2,500	21,900,000	0.740	0.340	0.00064	0.00022	lbs/ton	Water Suppression	80.0%	19.13	3.49	9.05	1.65
PC [illegible] Drop Point	2,500	21,900,000	0.740	0.340	0.00064	0.00022	lbs/ton	Water Suppression	80.0%	19.13	3.49	9.05	1.65
PC [illegible] Drop Point	2,500	21,900,000	0.740	0.340	0.00064	0.00022	lbs/ton	Water Suppression	80.0%	19.13	3.49	9.05	1.65
PC 12 Drop Point	2,500	21,900,000	0.740	0.340	0.00064	0.00022	lbs/ton	Water Suppression	80.0%	19.13	3.49	9.05	1.65
[illegible] to PC (LID)	2,500	21,900,000	0.740	0.340	0.00064	0.00022	lbs/ton	Water Suppression	80.0%	19.13	3.49	9.05	1.65
[illegible] to PC (LID)	2,500	21,900,000	0.740	0.340	0.00064	0.00022	lbs/ton	Water Suppression	80.0%	19.13	3.49	9.05	1.65
[illegible] to PC (LID)	2,500	21,900,000	0.740	0.340	0.00064	0.00022	lbs/ton	Water Suppression	80.0%	19.13	3.49	9.05	1.65
Emissions From Coal/Petcoke Portable Conveyor Transfer Points: Total=>										*286.5*	*52.3*	*135.5*	*24.7*

KM0000426

TABLE 1

PROCESS UNITS POTENTIAL TO EMIT CALCULATIONS

DESCRIPTION	MAXIMUM MATERIAL HANDLING RATE[1]		PARTICLE SIZE MULTIPLIER[2]		EMISSION FACTORS[3]			CONTROL		PM EMISSION RATE		PM_{10} EMISSION RATE	
	ton/hr	ton/yr	PM	PM_{10}	PM	PM_{10}	UNITS	TYPE	EFFIC.	lb/day	ton/yr	lb/day	ton/yr
Coal/Petcoke Stacker Emissions													
S-1 to CLP-1	1,000	35,040,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	30.56	5.58	1.15	2.01
S-1 to CLP-1	4,000	35,040,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	61.11	11.16	2.30	4.02
S-2 to CLP-2	2,500	21,900,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	38.20	6.97	1.44	2.51
S-2 to CLP-2	4,000	21,900,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	61.11	11.16	2.30	4.02
S-3 to CLP-1	2,500	21,900,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	38.20	6.97	1.44	2.51
S-3 to CLP-1	4,000	21,900,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	61.11	11.16	2.30	4.02
S-4 to CLP-2	2,500	21,900,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	38.20	6.97	1.44	2.51
S-4 to CLP-2	4,000	21,900,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	61.11	11.16	2.30	4.02
S-5 to CLP-1	2,500	21,900,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	38.20	6.97	1.44	2.51
S-5 to CLP-1	4,000	21,900,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	61.11	11.16	2.30	4.02
S-6 to CLP-2	2,500	21,900,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	38.20	6.97	1.44	2.51
S-6 to CLP-2	4,000	21,900,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	61.11	11.16	2.30	4.02
S-7 to CLP-1	2,500	21,900,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	38.20	6.97	1.44	2.51
S-7 to CLP-1	4,000	21,900,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	61.11	11.16	2.30	4.02
S-8 to CLP-2	2,500	21,900,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	38.20	6.97	1.44	2.51
S-8 to CLP-2	4,000	21,900,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	61.11	11.16	2.30	4.02
S-9 to CLP-1	2,000	7,920,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	15.28	2.79	0.58	1.01
S-9 to CLP-1	4,000	15,840,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	30.56	5.58	1.15	2.01
S-10 to CLP-2	2,000	7,920,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	15.28	2.79	0.58	1.01
S-10 to CLP-2	4,000	15,840,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	30.56	5.58	1.15	2.01
S-11 to CLP-1	2,000	7,920,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	15.28	2.79	0.58	1.01
S-11 to CLP-1	4,000	15,840,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	30.56	5.58	1.15	2.01
S-12 to CLP-2	2,000	7,920,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	15.28	2.79	0.58	1.01
S-12 to CLP-2	4,000	15,840,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	30.56	5.58	1.15	2.01
Emissions From Coal/Petcoke Stacker: Total>>										*450.7*	*82.3*	*213.2*	*38.9*
Coal/Petcoke Loadout Emissions Emissions													
Coal Loadout to S-1	1,000	35,040,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	30.56	5.58	1.15	2.01
Coal/Petcoke Loadout to CLP-2	550	4,818,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	4.20	0.77	.88	0.38
Petcoke Loadout to S-1	1,000	35,040,000	0.742	0.350	0.00064	0.00220	lb/ton	Water Suppression	50.0%	30.56	5.58	1.15	2.01
Emissions From Coal/Petcoke Loadout: Total>>										*65.3*	*11.9*	*30.9*	*5.6*
Coal/Petcoke Emissions: Total>>										*1236.2*	*227.4*	*589.4*	*107.6*
Salt Handling Emissions													
S-13 to SLP-1 (Salt)	3,500	30,660,000	0.742	0.350	0.00064	0.00220	lb/ton	None	0.0%	53.47	9.76	25.26	4.61

KM00000427

TABLE 1

PROCESS UNITS POTENTIAL TO EMIT CALCULATIONS

DESCRIPTION	MAXIMUM MATERIAL HANDLING RATE[1]		PARTICLE SIZE MULTIPLIER[2]		EMISSION FACTORS[3]			CONTROL		PM EMISSION RATE		PM_{10} EMISSION RATE	
	ton/hr	ton/yr	PM	PM_{10}	PM	PM_{10}	UNITS	TYPE	EFFIC.	lb/day	ton/yr	lb/day	ton/yr
8 Vermeer Transfer Points	2,000	21,900,000	0.740	0.340	0.000064	0.000030	lb/ton	None	0.0%	611.11	111.56	280.84	51.28
Emissions From Salt Handling: Total>>										611.11	111.56	280.84	51.28
Soil Crushing/Screening Emissions													
SPCS (Crushing)	110	1,226,400			0.00660	0.00330	lb/ton	Water Suppression	50.0%	3.63	1.01	1.82	0.51
SPCS (Screening)	110	1,226,400			0.00067	0.00034	lb/ton	Water Suppression	50.0%	1.13	0.21	0.57	0.10
Emissions From Soil Crushing/Screening: Total>>										6.7	1.2	2.3	0.4
								Facility Total>>		1917.4	349.9	906.0	165.3

1. The throughput rate is based on 8,760 hours/year of operation.
2. Aerodynamic Particulate Size Multiplier (k) per AP-42 Section 13.2.4.3, Aggregate Handling and Storage Piles, 11/06
3. Emission factor for material handling emissions calculated per Equation 1 of AP-42 Section 13.2.4.3, Aggregate Handling and Storage Piles.
4. http://www.ndcrcaa.gov/caf/departofcorrections/caf/avgwind.htm

Assumptions:
BACKGROUND DATA
Coal/Pet Coke moisture content (weighted average): 10.0%
Operating Schedule: 24 hours/day
Operating Schedule: 365 days/year
Operating Schedule: 8,760 hours/year
Mean wind speed: 10.8 mph

The coal and pet coke that are received at the facility have numerous ways of being conveyed through the facility. To be conservative in calculating the emissions, the portable conveyors were chosen as the main method of moving the materials from the receiving areas.

Facility has a water suppression system to control particulate matter emissions.

Coal and pet coke received at the facility have an average moisture content of 18.5% and 10.0% respectively. Emissions were calculated based on 10% throughput of pet coke as a worst case scenario.

KM0000428

TABLE 2

FUGITIVE POTENTIAL TO EMIT CALCULATIONS

DESCRIPTION	MAXIMUM MATERIAL HANDLING RATE[1]		PARTICULATE SIZE MULTIPLIER[2]		EMISSION FACTORS			CONTROL		PM EMISSION RATE		PM_{10} EMISSION RATE	
	ton/hr	ton/yr	PM	PM_{10}	PM	PM_{10}	UNITS	TYPE	EFFIC.	lb/day	ton/yr	lb/day	ton/yr
Storage Pile Emissions													
CP-1 [7]	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-2 [7]	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-3 [7]	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-4 [7]	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-5 [7]	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-6 [7]	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-7 [7]	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-8 [7]	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-9 [7]	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-10 [7]	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-11 [7]	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-12 [7]	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-13 [7]	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-14 [7]	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-15 [7]	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-16	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-17	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-18	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-19	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-20	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-21	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-22	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-23	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-24	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-25	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-26	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-27	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-28	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-29	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-30	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-31	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-32	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-33	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-34	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-35	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-36	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-37	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-38	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-39	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	176.66	24.74	87.77	12.29
CP-40	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	36.56	24.74	87.77	0.37
CP-41 [7]	N/A	N/A	1.000	0.500	4847.6	2423.8	lb/acre	Water Suppression	75.0%	33.89	8.18	16.91	3.09
									Storage Pile Emissions: Total>>	*3016.0*	*550.4*	*1508.0*	*275.2*

KM0000429

DESCRIPTION	MAXIMUM MATERIAL HANDLING RATE[1]		PARTICULATE SIZE MULTIPLIER[2]		EMISSION FACTORS			CONTROL		PM EMISSION RATE		PM_{10} EMISSION RATE	
	ton/hr	ton/yr	PM	PM_{10}	PM	PM_{10}	UNITS	TYPE	EFFIC.	lb/day	ton/yr	lb/day	ton/yr
Reclaim Belt Loading Emissions													
RC-1 Loaded by Dozer/End Loader	3,000	8,760,000	0.740	0.350	0.000064	0.000030	lb/ton	Water Suppression	50.0%	22.92	1.99	10.84	0.95
RC-2 Loaded by Dozer/End Loader	3,000	8,760,000	0.740	0.350	0.000064	0.000030	lb/ton	Water Suppression	50.0%	22.92	1.99	10.84	0.95
RC-3 Loaded by Dozer/End Loader	3,000	8,760,000	0.740	0.350	0.000064	0.000030	lb/ton	Water Suppression	50.0%	22.92	1.99	10.84	0.95
RC-4 Loaded by Dozer/End Loader	3,000	8,760,000	0.740	0.350	0.000064	0.000030	lb/ton	Water Suppression	50.0%	22.92	1.99	10.84	0.95
Front End Loader Roadway Emissions	N/A	N/A	4.900	1.500	8.0	2.2	lb/VMT	Water Suppression	75.0%	251.05	46.47	65.89	11.99
Front End Loader Roadway Emissions	N/A	N/A	4.900	1.500	8.5	2.2	lb/VMT	Water Suppression	75.0%	254.05	46.47	65.89	11.99
RC-5 Loaded by Dozer	3,000	8,760,000	0.740	0.350	0.000064	0.000030	lb/ton	Water Suppression	50.0%	15.28	1.99	7.23	0.95
RC-6 Loaded by Dozer	1,000	8,760,000	0.740	0.350	0.000064	0.000030	lb/ton	Water Suppression	50.0%	7.64	1.99	3.61	0.95
RC-7 Loaded by Dozer	1,000	8,760,000	0.740	0.350	0.000064	0.000030	lb/ton	Water Suppression	50.0%	7.64	1.99	3.61	0.95
									Reclaim Belt Loading Emissions: Total>>	*631.5*	*102.7*	*189.2*	*28.6*
Truck Loading Emissions													
Salt Loaded by End Loader	550	4,818,000	0.740	0.350	0.000064	0.000030	lb/ton	None	0.0%	8.40	1.99	3.97	0.94
Coal Loaded by End Loader	479	4,196,000	0.740	0.350	0.000064	0.000030	lb/ton	Water Suppression	50.0%	3.63	0.86	1.72	0.41
									Truck Loading Emissions: Total>>	*12.0*	*2.2*	*5.7*	*1.0*
Roadway Emissions													
Inbound Coal Truck Traffic	N/A	N/A	4.900	1.500	0.0	1.7	lb/VMT	Fugitive Dust Management Plan	75.0%	0.00	0.00	0.00	0.00
Outbound Coal Truck Traffic	N/A	N/A	4.900	1.500	0.0	1.7	lb/VMT	Fugitive Dust Management Plan	75.0%	1074.83	196.12	257.28	50.09
Outbound Salt Truck Traffic	N/A	N/A	4.900	1.500	0.0	1.7	lb/VMT	Fugitive Dust Management Plan	75.0%	244.0	227.29	331.00	58.56
									Roadway Emissions: Total>>	*2318.9*	*423.2*	*598.2*	*109.2*
									Facility Total>>	**5978.5**	**1078.5**	**2301.1**	**414.0**

1. Line acuity rate is based on 4,200 hours/year of operation.

2. Aerodynamic Particulate Size Multiplier (k) per AP-42 Section 13.2.4.3, Aggregate Handling and Storage Piles, 11/06

3. Mean Wind Speed (U) (estimate).

4. Emission factor for material handling emissions calculated per Equation 1 of AP-42 Section 13.2.4.3, Aggregate Handling and Storage Piles.

5. Emission factor for unpaved road emissions calculated per Equation AP-42 Section 13.2.2, Unpaved Roads.

6. Enter National Weather Service (estimate).

7. From Air Pollution Engineering Manual and References Section 9.3, (http://www.wrapair.org/forums/dejf/fdh/content/CE8-Storage%20Pile%20Wind%20Erosion%20Exp.pdf)
EP (lb/year/acre surface) = 1.7(s/1.5)(365-p)(U-15)/235)(2/15)

Coal and petcoke received at the Facility have an average moisture content of 8.0% and 10.0% respectively. Emissions were calculated based on 100% throughput of petcoke as a worst-case scenario.

Assumptions:

COAL BACKGROUND DATA

Coal/Pet Coke moisture content (weighted average) = 10.0%
Salt content of coal = 0.0%

END LOADER/DOZER OPERATIONS

Front End Loaders/Dozer (Storage Piles) = 24 hours/day
Front End Loaders/Dozer (Reclaim) = 24 hours/day
Operating Schedule = 24 hours/day
Operating Schedule = 365 days/year
Operating Schedule = 8,760 hours/year
Front End Loader/Dozer speed = 5.0 mph
VMT of Front End Loader/Dozer (Storage Piles) = 120.0 miles/day
VMT of Front End Loader/Dozer (Reclaim) = 120.0 miles/day
Front End Loader/Dozer Average Weight (Cat 980) = 78 tons

STORAGE PILE INFORMATION

Surface area of storage piles (Coal) = 40.0 acres
Surface area of storage piles (Coke) = 40.0 acres
Surface area of storage piles (Salt) = 10.0 acres
Days in storage pile = 365 days
Number of days with rain > 0.01 inch = 117 days
Mean wind speed[1] = 12.0 mph
Percent of time unobstructed wind > 12 mph = 31.0%

INBOUND COAL TRUCK BACKGROUND DATA

Delivery truck tare weight = 16 tons
Maximum full truck weight = 38 tons
Average truck weight = 22 tons
Maximum facility input = 35,040,000 ton/year
Maximum truck loadout = 4,161,000 ton/year
Number of coal trucks = 189,214 trucks/year
Miles per trip = 0.8 miles
Miles per day = 63.41 miles/day
Miles per year = 23,171 miles/year

OUTBOUND COAL TRUCK BACKGROUND DATA

Delivery truck tare weight = 16 tons
Maximum full truck weight = 38 tons
Average truck weight = 22 tons
Maximum facility output = 35,040,000 ton/year
Maximum truck delivery = 4,161,000 ton/year
Number of coal trucks = 189,214 trucks/year
Miles per trip = 0.8 miles
Miles per day = 63.4 miles/day
Miles per year = 23,171 miles/year

SALT HAULING TRUCK BACKGROUND DATA

Delivery truck tare weight = 16 tons
Maximum full truck weight = 38 tons
Average truck weight = 22 tons
Maximum facility output = 4,8[illegible]5,000 ton/year
Maximum truck loading = 4,815,000 ton/year
Number of coal trucks = 344,143 trucks/year
Miles per trip = 0.8 miles
Miles per day = 73.13 miles/day
Miles per year = 26,714 miles/year

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TABLE 3

POTENTIAL TO EMIT CALCULATIONS
DIESEL GENERATORS

Unit Description	Unit ID	Prime Power (hp)	Emission Factor (lb/hp-hr)					
			NOx^a	CO^a	$SO_2{}^b$	PM^a	$PM_{10}{}^a$	VOM^a
			0.015	0.00815	**	0.0005	0.0005	0.00033
			Emissions (lb/hr)					
Diesel Generator 1	DG-1	118	1.77	0.96	0.021	0.06	0.06	0.04
Diesel Generator 2	DG-2	118	1.77	0.96	0.021	0.06	0.06	0.04
Diesel Generator 3	DG-3	118	1.77	0.96	0.021	0.06	0.06	0.04
Totals (lb/hr)			5.31	2.89	0.06	0.18	0.18	0.12
Totals (ton/yr) [c]			23.26	12.64	0.28	0.78	0.78	0.51

Unit Description	Unit ID	Prime Power (hp)	Emission Factor (lb/hp-hr)					
			NOx^a	CO^a	$SO_2{}^b$	PM^a	$PM_{10}{}^a$	VOM^a
			0.015	0.00573	**	0.0003	0.0003	0.00033
			Emissions (lb/hr)					
Diesel Generator 4	DG-4	500	7.50	2.86	0.043	0.15	0.15	0.17
Diesel Generator 5	DG-5	500	7.50	2.86	0.043	0.15	0.15	0.17
Diesel Generator 6	DG 6	500	7.50	2.86	0.043	0.15	0.15	0.17
Diesel Generator 7	DG-7	500	7.50	2.86	0.043	0.15	0.15	0.17
Totals (lb/hr)			30.00	11.45	0.17	0.60	0.60	0.66
Totals (ton/yr) [c]			131.40	50.17	0.75	2.63	2.63	2.89

Unit Description	Unit ID	Prime Power (hp)	Emission Factor (lb/hp-hr)					
			NOx^a	CO^a	$SO_2{}^b$	PM^a	$PM_{10}{}^a$	VOM^a
			0.015	0.00815	**	0.0005	0.0005	0.00033
			Emissions (lb/hr)					
Air Compressor	AC-1	100	1.50	0.82	0.02	0.05	0.05	0.03
Totals (lb/hr)			1.50	0.82	0.02	0.05	0.05	0.03
Totals (ton/yr) [c]			6.57	3.57	0.09	0.22	0.22	0.14

TABLE 3

POTENTIAL TO EMIT CALCULATIONS
DIESEL GENERATORS

Unit Description	Unit ID	Prime Power (hp)	Emission Factor (lb/hp-hr)					
			NO_X [a]	CO [a]	SO_2 [b]	PM [a]	PM_{10} [d]	VOM [a]
			0.015	0.00903	**	0.001	0.001	0.00033
			Emissions (lb/hr)					
Light Standard	LS-1	15	0.23	0.14	0.01	0.02	0.02	0.005
Light Standard	LS-2	15	0.23	0.14	0.01	0.02	0.02	0.005
Light Standard	LS-3	15	0.23	0.14	0.01	0.02	0.02	0.005
Light Standard	LS-4	15	0.23	0.14	0.01	0.02	0.02	0.005
Light Standard	LS-5	15	0.23	0.14	0.01	0.02	0.02	0.005
Totals (lb/hr)			1.13	0.68	0.05	0.08	0.08	0.02
Totals (ton/yr) [c]			4.93	2.97	0.23	0.33	0.33	0.11

Unit Description	Unit ID	Prime Power (hp)	Emission Factor (lb/hp-hr)					
			NO_X [a]	CO [a]	SO_2 [b]	PM [a]	PM_{10} [d]	VOM [a]
			0.015	0.00709	**	0.0013	0.0013	0.00033
			Emissions (lb/hr)					
Diesel Water Pump	DWP 1	20	0.30	0.22	0.01	0.03	0.03	0.01
Totals (lb/hr)			0.30	0.22	0.01	0.03	0.03	0.01
Totals (ton/yr) [c]			0.08	0.05	0.003	0.01	0.01	0.002

Facility Emissions (ton/yr)	**166.23**	**69.39**	**1.36**	**3.96**	**3.96**	**3.66**

PTE Emissions Assumptions:

[a] Calculated using NSPS emission factors for stationary combustion sources (40 CFR Part 89, Section 112). VOM emission factor from Permit #070500082 issued on May 21, 2009.

[b] Calculated using low sulfur diesel fuel and formula used in Permit #070500082 issued on May 21, 2009 with revised diesel fuel consumption data as follows:

500 HP Engine	20 gal/hr
100 & 118 HP Engines	10 gal/hr
15 & 20 HP Engines	5 gal/hr

[c] Hours of operation 8,760 hr/yr
500 hr/yr (For emergency diesel water pump only.)

[d] It is assumed that PM_{10} emissions are equal to PM.

Example Calculation

500 HP Diesel Engine NO_X Emissions

500 horsepower x 0.015 lb NO_x per horsepower hour x 8,760 hr/yr / 2,000 lb/ton = 32.85 ton/yr NO_x

Conversion of NSPS Emission Factors

NO_X = 9.2 g/kW-hr or 6.9 g/HP-hr

6.9 g/HP-hr / 454 g per pound = 0.015 lb/hp-hr

TABLE 3A

POTENTIAL TO EMIT HAP CALCULATIONS
DIESEL GENERATORS

CAS No.	*Pollutant*	*Diesel Engines*		
		Emission Factor[a] *(lb/hp-hr)*	*Emission Rate*[b] *(lb/hr)*	*Emission Rate*[c] *(ton/yr)*
71-43-2	Benzene	6.56E-06	1.67E-02	7.32E-02
108-88-3	Toluene	2.88E-06	7.33E-03	3.21E-02
1330207	Xylene	2.00E-06	5.11E-03	2.24E-02
106-99-0	1,3-Butadiene	2.75E-07	7.01E-04	3.07E-03
50-00-0	Formaldehyde	8.29E-06	2.11E-02	9.26E-02
75070	Acetaldehyde	5.39E-06	1.37E-02	6.02E-02
107028	Acrolein	6.50E-07	1.66E-03	7.26E-03
91-20-3	Naphthalene	5.96E-07	1.52E-03	6.66E-03
		HAP Totals:	**6.79E-02**	**2.97E-01**

[a] AP-42, Fifth Edition, Volume I, Section 3.3, Gasoline and Industrial Engines (October 1996)

[b] Diesel Fuel-Fired Engines maximum heat input 2549 Horsepower

[c] Diesel Fuel-Fired Engines maximum hours of operation 8760 hr/yr

Emission Factor Conversion Factor 0.007

Calculated by dividing the emission factor for Nox (lb/hp-hr) into the NO_x emission factor (lb/MMBtu). This provides a conversion factor for use with HAP emission calculation.
0.031 lb/hp-hr / 4.41 lb/MMBtu = 0.007

TABLE 4

PTE EMISSIONS SUMMARY

Emission Point	*Emissions (ton/yr)*					
	NOx	*CO*	SO_2	*PM*	PM_{10}	*VOM*
Process				349.93	165.35	
Generator	166.23	69.39	1.36	3.96	3.96	3.66
Total	**166.23**	**69.39**	**1.36**	**353.89**	**169.30**	**3.66**

TABLE 5

MAXIMUM PROCESS UNITS EMISSION CALCULATIONS

DESCRIPTION	MAXIMUM MATERIAL HANDLING RATE[1]		PARTICLE SIZE MULTIPLIER[2]		EMISSION FACTORS[3]			CONTROL		PM EMISSION RATE		PM_{10} EMISSION RATE	
	ton/hr	ton/yr	PM	PM_{10}	PM	PM_{10}	UNITS	TYPE	EFFIC.	lb/day	ton/yr	lb/day	ton/yr
Coal/Petcoke Unloading Emissions													
BU-1 to C-(1-6) (Coal/Petcoke)	266	1,117,200	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	1.02	0.18	0.48	0.08
RU/TU-1 to C-(1-6) (Coal/Petcoke)	266	1,117,200	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	1.02	0.18	0.48	0.08
RU/TU-1 to C-(1-6) (Coal/Petcoke)	266	1,117,200	0.740	0.350	0.00064	0.00030	lbs/ton	Baghouse	90.0%	0.20	0.04	0.10	0.02
RU-2 to C-7 (Coal/Petcoke)	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63
RU-3 to C-8 (Coal/Petcoke)	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63
								Emissions From Coal/Petcoke Unloading : Total>>		17.5	3.1	8.3	1.4
Coal/Petcoke Conveyor Transfer Point Emissions													
C-1 to C-2	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
C-2 to S-1	4,000	11,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	15.28	1.75	7.23	0.83
C-3 to C-2	4,000	11,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	15.28	1.75	7.23	0.83
C-6 to S-3	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
C-1 to C-4	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
C-4 to C-5	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
C-5 to S-2	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
RC-1 to C-3	3,000	11,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	11.46	1.75	5.42	0.83
RC-2 to C-3	3,000	11,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	11.46	1.75	5.42	0.83
RC-3 to C-3	3,000	11,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	11.46	1.75	5.42	0.83
RC-4 to C-3	3,000	11,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	11.46	1.75	5.42	0.83
C-7 to C-9	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63
C-8 to C-10	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63
C-9 to C-11	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63
C-10 to C-11	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63
C-11 to TP-1	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63
TP-1 to C-12	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63
C-12 to STCP-1	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63

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TABLE 5

MAXIMUM PROCESS UNITS EMISSION CALCULATIONS

DESCRIPTION	MAXIMUM MATERIAL HANDLING RATE[1]		PARTICLE SIZE MULTIPLIER[2]		EMISSION FACTORS[3]			CONTROL		PM EMISSION RATE		PM_{10} EMISSION RATE	
	ton/hr	ton/yr	PM	PM_{10}	PM	PM_{10}	UNITS	TYPE	EFFIC.	lb/day	ton/yr	lb/day	ton/yr
SFTP-1 to S-4	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63
DSH-1 to C-3	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63
RC-5 to C-3	1,000	4,200,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	3.82	0.67	1.81	0.32
RC-6 to C-3	1,000	4,200,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	3.82	0.67	1.81	0.32
RC-7 to C-3	1,000	4,200,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	3.82	0.67	1.81	0.32
								Emissions From Coal/Petcoke Transfer Points: Total>>		204.3	32.9	96.6	15.6
Coal/Petcoke Portable Conveyor Emissions													
PC-1 Drop Point	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
PC-2 Drop Point	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
PC-3 Drop Point	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
PC-4 Drop Point	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
PC-5 Drop Point	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
PC-6 Drop Point	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
PC-7 Drop Point	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
PC-8 Drop Point	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
PC-9 Drop Point	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
PC-10 Drop Point	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
PC-11 Drop Point	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
PC-12 Drop Point	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
PFH-1 to PC-(1-12)	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
PF-1 to PC-(1-12)	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
RPCS-1 to PC-(1-12)	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
								Emissions From Coal/Petcoke Portable Conveyor Transfer Points: Total>>		143.2	25.1	67.7	11.9

KM00000437

TABLE 5

MAXIMUM PROCESS UNITS EMISSION CALCULATIONS

DESCRIPTION	MAXIMUM MATERIAL HANDLING RATE[1]		PARTICLE SIZE MULTIPLIER[2]		EMISSION FACTORS[3]			CONTROL		PM EMISSION RATE		PM_{10} EMISSION RATE	
	ton/hr	ton/yr	PM	PM_{10}	PM	PM_{10}	UNITS	TYPE	EFFIC.	lb/day	ton/yr	lb/day	ton/yr
Coal/Petcoke Stacker Emissions													
S-1 to CEP-5	4,000	11,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	15.28	1.75	7.23	0.83
S-1 to CEP-4	4,000	11,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	15.28	1.75	7.23	0.83
S-2 to CEP-2	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
S-2 to CEP-3	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
S-3 to CEP-1	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
S-3 to CEP-4	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
S-1 to CEP-6	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
S-1 to CEP-7	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
S-1 to CEP-8	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
S-1 to CEP-9	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
S-1 to CEP-10	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
S-1 to CEP-11	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
S-1 to CEP-12	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
S-1 to CEP-13	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
S-1 to CEP-14	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
S-1 to CEP-15	2,500	10,500,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.67	4.52	0.79
S-4 to CEP-1	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63
S-4 to CEP-2	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63
S-4 to CEP-3	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63
S-4 to CEP-4	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63
S-4 to CEP-5	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63
S-4 to CEP-6	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63
S-4 to CEP-7	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63
S-4 to DSEU-1	2,000	8,400,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	1.34	3.61	0.63
								Emissions From Coal/Petcoke Stacker: Total>>		225.3	37.6	106.6	17.8

KM0000438

TABLE 5

MAXIMUM PROCESS UNITS EMISSION CALCULATIONS

DESCRIPTION	MAXIMUM MATERIAL HANDLING RATE[1]		PARTICLE SIZE MULTIPLIER[2]		EMISSION FACTORS[3]			CONTROL		PM EMISSION RATE		PM_{10} EMISSION RATE	
	ton/hr	ton/yr	PM	PM_{10}	PM	PM_{10}	UNITS	TYPE	EFFIC.	lb/day	ton/yr	lb/day	ton/yr
Coal/Petcoke Loadout Emissions Emissions													
Coal Loadout to S-1	4,000	11,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	15.28	1.75	7.23	0.83
Coal/Pet Coke Loadout to U. 2	550	2,310,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	2.10	0.37	0.99	0.17
Petcoke Loadout to S-1	4,000	11,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	15.28	1.75	7.23	0.83
									Emissions From Coal/Petcoke Loadout: Total>>	32.7	3.9	15.4	1.8
									Coal/Petcoke Emissions: Total>>	623.7	102.5	294.7	48.5
Salt Handling Emissions													
BU-1 to SP-1 (Salt)	3,500	250,000	0.740	0.350	0.00064	0.00030	lbs/ton	None	0.0%	26.74	0.08	12.65	0.04
16 Various Transfer Points	2,500	250,000	0.740	0.350	0.00064	0.00030	lbs/ton	None	0.0%	305.56	1.27	144.52	0.60
									Emissions From Salt Handling: Total>>	332.3	1.4	157.2	0.6
Soil Crushing/Screening Emissions													
RPCS-1 (Crushing)	140	306,600			0.0033	0.00101	lbs/ton	Water Suppression	50.0%	2.77	0.25	0.85	0.08
RPCS-1 (Screening)	140	306,600			0.00067	0.00034	lbs/ton	Water Suppression	50.0%	0.56	0.05	0.29	0.03
									Emissions From Soil Crushing/Screening: Total>>	3.3	0.3	1.1	0.1
									Facility Total>>	**958.7**	**104.1**	**453.0**	49.2

1. The hourly rate is based on 4,200 hours/year of operation.
2. Aerodynamic Particulate Size Multiplier (k) per AP-42 Section 13.2.4.3, Aggregate Handling and Storage Piles, 11/06
3. Emission factor for material handling emissions calculated per Equation 1 of AP-42 Section 13.2.4.3, Aggregate Handling and Storage Piles.
4. http://www.ncdc.noaa.gov/oa/climate/online/ccd/avgwind.html

Assumptions:

BACKGROUND DATA

Coal/Pet Coke moisture content (weighted average) : 10.0%
Operating Schedule = 12 hours/day
Operating Schedule = 350 days/year
Operating Schedule = 4,200 hours/year
Mean wind speed[4] = 10.3 mph

The coal and petcoke that are received at the facility have numerous ways of being conveyed through the facility. To be conservative in calculating the emissions, the portable conveyors were chosen as the main method of moving the materials from the receiving areas.

Facility has a water suppression system to control particulate matter emissions.

Coal and petcoke received at the facility have an average moisture content of 18.3% and 10.0% respectively. Emissions were calculated based on 100% throughput of petcoke as a worst case scenario.

KM0000439

TABLE 6

MAXIMUM FUGITIVE EMISSIONS CALCULATIONS

DESCRIPTION	MAXIMUM MATERIAL HANDLING RATE [1]		PARTICLE SIZE MULTIPLIER [3]		EMISSION FACTORS			CONTROL		PM EMISSION RATE		PM_{10} EMISSION RATE	
	ton/hr	ton/yr	PM	PM_{10}	PM	PM_{10}	UNITS	TYPE	EFFIC.	lb/day	ton/yr	lb/day	ton/yr
Storage Pile Emissions													
CLP-1 [2]	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CLP-2 [2]	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CLP-3 [2]	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CLP-4 [2]	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CLP-5 [2]	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CLP-6 [2]	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CLP-7 [2]	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CLP-8 [2]	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CLP-9 [2]	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CLP-10 [2]	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CLP-11 [2]	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CLP-12 [2]	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CLP-13 [2]	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CLP-14 [2]	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CLP-15 [2]	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CFP 1	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CFP 2	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CFP 3	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CFP 4	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CFP 5	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86

KM0000440

DESCRIPTION	MAXIMUM MATERIAL HANDLING RATE [1]		PARTICLE SIZE MULTIPLIER [2]		EMISSION FACTORS			CONTROL		PM EMISSION RATE		PM_{10} EMISSION RATE	
	tons/hr	tons/year	PM	PM_{10}	PM	PM_{10}	UNITS	TYPE	EFFIC.	lb/day	tpy	lb/day	tpy
CEP 6	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
CEP 7	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	129.98	23.72	64.99	11.86
SP-1 [7]	N/A	N/A	1.000	0.500	4744.2	2372.1	lbs/acre	Water Suppression	75.0%	32.49	5.93	16.25	2.97
									Storage Pile Emissions: Total>>	*2892.0*	*527.8*	*1446.0*	263.9
Reclaim Belt Loading Emissions													
RC 1 Loaded by Dozer/End Loader [4]	3,000	2,750,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	11.46	0.44	5.42	0.21
RC 2 Loaded by Dozer/End Loader [4]	3,000	2,750,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	11.46	0.44	5.42	0.21
RC 3 Loaded by Dozer/End Loader [4]	3,000	2,750,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	11.46	0.44	5.42	0.21
RC 4 Loaded by Dozer/End Loader [4]	3,000	2,750,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	11.46	0.44	5.42	0.21
Front End Loader Roadway Emissions [6]	N/A	N/A	4.900	1.500	8.5	2.2	lbs/VMT	Water Suppression	75.0%	127.32	22.28	32.85	5.75
Front End Loader Roadway Emissions [6]	N/A	N/A	4.900	1.500	8.5	2.2	lbs/VMT	Water Suppression	75.0%	127.32	22.28	32.85	5.75
RC 5 Loaded by Dozer [4]	2,000	2,750,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.44	3.61	0.21
RC 6 Loaded by Dozer [4]	1,000	2,750,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	3.82	0.44	1.81	0.21
RC 7 Loaded by Dozer [4]	1,000	2,750,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	3.82	0.44	1.81	0.21
									Reclaim Belt Loading Emissions: Total>>	*315.8*	*47.6*	*94.6*	*12.9*
Truck Loading Emissions													
Salt Loaded by End Loader [5]	550	250,000	0.740	0.350	0.00064	0.00030	lbs/ton	None	0.0%	4.20	0.08	1.99	0.04
Coal Loaded by End Loader [4]	475	1,995,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	1.81	0.32	0.86	0.15
									Truck Loading Emissions: Total>>	*6.0*	*0.4*	*2.8*	*0.2*
Roadway Emissions													
Inbound Coal Truck Traffic [3]	N/A	N/A	4.900	1.500	6.6	1.7	lbs/VMT	Fugitive Dust Management Plan	75.0%	296.27	51.85	76.43	13.37
Outbound Coal Truck Traffic [3]	N/A	N/A	4.900	1.500	6.6	1.7	lbs/VMT	Fugitive Dust Management Plan	75.0%	296.27	51.85	76.43	13.37
Outbound Salt Truck Traffic [3]	N/A	N/A	4.900	1.500	6.6	1.7	lbs/VMT	Fugitive Dust Management Plan	75.0%	67.33	11.78	17.37	3.04
									Roadway Emissions: Total>>	*659.9*	*115.5*	*170.2*	29.8
									Facility Total>>	**3873.7**	**691.3**	**1713.7**	**306.8**

KM0000441

1. The hourly rate is based on 4,200 hours/year of operation.
2. Aerodynamic Particulate Size Multiplier (k) per AP-42 Section 13.2.4.3, Aggregate Handling and Storage Piles, 11/06
3. Mean Wind Speed (U) (estimate).
4. Emission factor for material handling emissions calculated per Equation 1 of AP-42 Section 13.2.4.3, Aggregate Handling and Storage Piles.
5. Emission factor for unpaved road emissions calculated per Equation AP-42 Section 13.2.2, Unpaved Roads.
6. From National Weather Service (estimate).
7. From Air Pollution Engineering Manual and References Section 9.3. (http://www.wrapair.org/forums/dejf/fdh/content/Ch9-Storage_Pile_Wind%20Erosion_Rev06.pdf)
   TSP (lb/year/acrea surface) = 1.7(s/1.5)(365|365-p|/235)(f/15)

Coal and pet coke received at the Facility have an average moisture content of 18.3% and 10.0% respectively. Emissions were calculated based on 100% throughput of pet coke as a worst-case scenario.

Assumptions:

COAL BACKGROUND DATA

Coal/Pet Coke moisture content (weighted average) : 10.0%
Silt content of coal = 5.0%

END LOADER/DOZER OPERATIONS

Front End Loaders/Dozer (Storage Piles) = 12 hours/day
Front End Loaders/Dozer (Reclaim) = 12 hours/day
Operating Schedule = 12 hours/day
Operating Schedule = 350 days/year
Operating Schedule = 4,200 hours/year
Front End Loader/Dozer speed = 5.0 mph
VMT of Front End Loader/Dozer (Storage Piles) = 60.0 miles/day
VMT of Front End Loader/Dozer (Reclaim) = 60.0 miles/day
Front End Loader/Dozer Average Weight (Cat 980) = 39 tons

STORAGE PILE INFORMATION

Surface area of storage piles (Coal) = 40.0 acres
Surface area of storage piles (Coke) = 40.0 acres
Surface area of storage piles (Salt) = 10.0 acres
Days in storage pile = 350 days
Number of days[6] with rain > 0.01 inch = 117 days
Mean wind speed[3] = 10.3 mph
Percent of time[7] winds > 12 mph = 34.0%

INBOUND COAL TRUCK BACKGROUND DATA

Delivery truck tare weight= 15 tons
Maximum full truck weight= 29 tons
Average truck weight= 22 tons
Maximum facility input= 11,000,000 tons/year
Maximum truck loadout= 1,100,000 tons/year
Number of coal trucks= 78,571 trucks/year
Miles per trip= 0.8 miles
Miles per day= 179.6 miles/day
Miles per year= 62,857 miles/year

OUTBOUND COAL TRUCK BACKGROUND DATA

Delivery truck tare weight= 15 tons
Maximum full truck weight= 29 tons
Average truck weight= 22 tons
Maximum facility output= 11,000,000 ton/year
Maximum truck delivery = 1,100,000 ton/year
Number of coal trucks= 78,571 trucks/year
Miles per trip= 0.8 miles
Miles per day= 179.6 miles/day
Miles per year= 62,857 miles/year

SALT HAULING TRUCK BACKGROUND DATA

Delivery truck tare weight= 15 tons
Maximum full truck weight= 29 tons
Average truck weight= 22 tons
Maximum facility output= 250,000 ton/year
Maximum truck loading= 250,000 ton/year
Number of coal trucks= 17,857 trucks/year
Miles per trip= 0.8 miles
Miles per day= 40.8 miles/day
Miles per year= 14,286 miles/year

KM0000442

TABLE 7

MAXIMUM EMISSION CALCULATIONS
DIESEL GENERATORS

Unit Description	Unit ID	Prime Power (hp)	Emission Factor (lb/hp-hr)					
			NOx^a	CO^a	$SO_2{}^b$	PM^a	$PM_{10}{}^d$	VOM^a
			0.015	0.00815	**	0.0005	0.0005	0.00033
			Emissions (lb/hr)					
Diesel Generator 1	DG 1	118	1.77	0.96	0.021	0.06	0.06	0.04
Diesel Generator 2	DG 2	118	1.77	0.96	0.021	0.06	0.06	0.04
Diesel Generator 3	DG 3	118	1.77	0.96	0.021	0.06	0.06	0.04
Totals (lb/hr)			5.31	2.89	0.06	0.18	0.18	0.12
Totals (ton/yr) [c]			11.15	6.06	0.13	0.37	0.37	0.25

Unit Description	Unit ID	Prime Power (hp)	Emission Factor (lb/hp-hr)					
			NOx^a	CO^a	$SO_2{}^b$	PM^a	$PM_{10}{}^d$	VOM^a
			0.015	0.00573	**	0.0003	0.0003	0.00033
			Emissions (lb/hr)					
Diesel Generator 4	DG-4	500	7.50	2.86	0.043	0.15	0.15	0.17
Diesel Generator 5	DG-5	500	7.50	2.86	0.043	0.15	0.15	0.17
Diesel Generator 6	DG-6	500	7.50	2.86	0.043	0.15	0.15	0.17
Diesel Generator 7	DG-7	500	7.50	2.86	0.043	0.15	0.15	0.17
Totals (lb/hr)			30.00	11.45	0.17	0.60	0.60	0.66
Totals (ton/yr) [c]			63.00	24.05	0.36	1.26	1.26	1.39

Unit Description	Unit ID	Prime Power (hp)	Emission Factor (lb/hp-hr)					
			NOx^a	CO^a	$SO_2{}^b$	PM^a	$PM_{10}{}^d$	VOM^a
			0.015	0.00815	**	0.0005	0.0005	0.00033
			Emissions (lb/hr)					
Air Compressor	AC-1	100	1.50	0.82	0.02	0.05	0.05	0.03
Totals (lb/hr)			1.50	0.82	0.02	0.05	0.05	0.03
Totals (ton/yr) [c]			3.15	1.71	0.04	0.11	0.11	0.07

TABLE 7

MAXIMUM EMISSION CALCULATIONS
DIESEL GENERATORS

Unit Description	Unit ID	Prime Power (hp)	Emission Factor (lb/hp-hr)					
			NOx^a	CO^a	$SO_2{}^b$	PM^a	$PM_{10}{}^d$	VOM^a
			0.015	0.00903	**	0.001	0.001	0.00033
			Emissions (lb/hr)					
Light Standard	LS-1	15	0.23	0.14	0.01	0.02	0.02	0.005
Light Standard	LS-2	15	0.23	0.14	0.01	0.02	0.02	0.005
Light Standard	LS-3	15	0.23	0.14	0.01	0.02	0.02	0.005
Light Standard	LS-4	15	0.23	0.14	0.01	0.02	0.02	0.005
Light Standard	LS-5	15	0.23	0.14	0.01	0.02	0.02	0.005
Totals (lb/hr)			1.13	0.68	0.05	0.08	0.08	0.02
Totals (ton/yr) [c]			2.36	1.42	0.11	0.16	0.16	0.05

Unit Description	Unit ID	Prime Power (hp)	Emission Factor (lb/hp-hr)					
			NOx^a	CO^a	$SO_2{}^b$	PM^a	$PM_{10}{}^d$	VOM^a
			0.015	0.00979	**	0.0013	0.0013	0.00033
			Emissions (lb/hr)					
Diesel Water Pump	DWP 1	20	0.30	0.22	0.01	0.03	0.03	0.01
Totals (lb/hr)			0.30	0.22	0.01	0.03	0.03	0.01
Totals (ton/yr) [c]			0.08	0.05	0.003	0.01	0.01	0.002
Facility Emissions (ton/yr)			**79.74**	**33.30**	**0.65**	**1.90**	**1.90**	**1.75**

Maximum Emissions Assumptions:

[a] Calculated using NSPS emission factors for stationary combustion sources (40 CFR Part 89, Section 112). VOM emission factor from Permit #07050082 issued on May 21, 2009.

[b] Calculated using low sulfur diesel fuel and formula used in Permit #07050082 issued on May 21, 2009 with revised diesel fuel consumption data as follows:

500 HP Engine	20 gal/hr
100 & 118 HP Engines	10 gal/hr
15 & 20 HP Engines	5 gal/hr

[c] Hours of operation 4,200 hr/yr
500 hr/yr (For emergency diesel water pump only.)

[d] It is assumed that PM_{10} emissions are equal to PM.

Example Calculation

500 HP Diesel Engine NO_X Emissions

500 horsepower x 0.015 lb NO_X per horsepower hour x 4,200 hr/yr / 2,000 lb/ton = 15.75 ton/yr NO_X

Conversion of NSPS Emission Factors

NO_X = 9.2 g/kW-hr or 6.9 g/HP-hr

6.9 g/HP hr /454 g per pound = 0.015 lb/hp hr

TABLE 8

FESOP REQUESTED LIMITATION AND
FEE ALLOWABLE EMISSIONS SUMMARY

Emission Point	*Emissions (ton/yr)*					
	NOx	*CO*	SO_2	*PM*	PM_{10}	*VOM*
Process				104.14	49.22	
Generator	79.74	33.30	0.65	1.90	1.90	1.75
Total	**79.74**	**33.30**	**0.65**	**106.04**	**51.12**	**1.75**

Based on limiting operations to 4,200 hours per year.

TABLE 9

TYPICAL PROCESS UNITS EMISSION CALCULATIONS

DESCRIPTION	MAXIMUM MATERIAL HANDLING RATE[1]		PARTICLE SIZE MULTIPLIER[2]		EMISSION FACTORS[3]			CONTROL		PM EMISSION RATE		PM_{10} EMISSION RATE	
	ton/hr	ton/yr	PM	PM_{10}	PM	PM_{10}	UNITS	TYPE	EFFIC.	lb/day	ton/yr	lb/day	ton/yr
Coal/Petcoke Unloading Emissions													
BL-1 to C-(1-6) (Coal/Petcoke)	266	829,920	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	1.02	0.13	0.48	0.06
RU/TU-1 to C-(1-6) (Coal/Petcoke)	266	829,920	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	1.02	0.13	0.48	0.06
RU/TU-1 to C-(1-6) (Coal/Petcoke)	266	829,920	0.740	0.350	0.00061	0.00030	lbs/ton	Baghouse	90.0%	0.20	0.03	0.10	0.01
RU-2 to C-7 (Coal/Petcoke)	2,000	6,240,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.99	3.61	0.47
RU-3 to C-8 (Coal/Petcoke)	2,000	6,240,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.99	3.61	0.47
									Emissions From Coal/Petcoke Unloading : Total>>	17.5	2.3	8.3	1.1
Coal/Petcoke Conveyor Transfer Point Emissions													
C-1 to C-2	2,500	7,800,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	1.24	4.52	0.59
C-2 to S-1	4,000	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	15.28	0.32	7.23	0.15
C-3 to C-2	4,000	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	15.28	0.39	7.23	0.18
C-6 to S-3	2,500	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.32	4.52	0.15
C-1 to C-4	2,500	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.39	4.52	0.18
C-4 to C-5	2,500	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.32	4.52	0.15
C-5 to S-2	2,500	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.39	4.52	0.18
RC-1 to C-3	3,000	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	11.46	0.32	5.42	0.15
RC-2 to C-3	3,000	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	11.46	0.39	5.42	0.18
RC-3 to C-3	3,000	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	11.46	0.32	5.42	0.15
RC-4 to C-3	3,000	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	11.46	0.39	5.42	0.18
C-7 to C-9	2,000	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.32	3.61	0.15
C-8 to C-10	2,000	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.39	3.61	0.18
C-9 to C-11	2,000	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.32	3.61	0.15
C-10 to C-11	2,000	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.39	3.61	0.18
C-11 to TP-1	2,000	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.32	3.61	0.15
TP-1 to C-12	2,000	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.39	3.61	0.18
C-12 to SFTP-1	2,000	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.32	3.61	0.15
SFTP-1 to S-4	2,000	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.39	3.61	0.18

KM0000446

TABLE 9

TYPICAL PROCESS UNITS EMISSION CALCULATIONS

DESCRIPTION	*MAXIMUM MATERIAL HANDLING RATE* [1]		*PARTICLE SIZE MULTIPLIER* [2]		*EMISSION FACTORS* [3]			*CONTROL*		*PM EMISSION RATE*		*PM_{10} EMISSION RATE*	
	ton/hr	*ton/yr*	*PM*	*PM_{10}*	*PM*	*PM_{10}*	*UNITS*	*TYPE*	*EFFIC.*	*lb/day*	*ton/yr*	*lb/day*	*ton/yr*
DSH-1 to C-3	2,000	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.32	3.61	0.15
RC-5 to C-3	2,000	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.32	3.61	0.15
RC-6 to C-3	1,000	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	3.82	0.32	1.81	0.15
RC-7 to C-3	1,000	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	3.82	0.32	1.81	0.15
Emissions From Coal/Petcoke Transfer Points: Total>>										208.2	8.2	98.5	3.9
Coal/Petcoke Portable Conveyor Emissions													
PC-1 Drop Point	2,500	3,900,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.62	4.52	0.29
PC-2 Drop Point	2,500	3,900,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.62	4.52	0.29
PC-3 Drop Point	2,500	3,900,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.62	4.52	0.29
PC-4 Drop Point	2,500	3,900,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.62	4.52	0.29
PC-5 Drop Point	2,500	3,900,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.62	4.52	0.29
PC-6 Drop Point	2,500	3,900,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.62	4.52	0.29
PC-7 Drop Point	2,500	3,900,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.62	4.52	0.29
PC-8 Drop Point	2,500	3,900,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.62	4.52	0.29
PC-9 Drop Point	2,500	3,900,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.62	4.52	0.29
PC-10 Drop Point	2,500	3,900,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.62	4.52	0.29
PC-11 Drop Point	2,500	3,900,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.62	4.52	0.29
PC-12 Drop Point	2,500	3,900,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.62	4.52	0.29
PEH-1 to PC-(1-12)	2,500	3,900,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.62	4.52	0.29
PF-1 to PC-(1-12)	2,500	3,900,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.62	4.52	0.29
RPCS-1 to PC-(1-12)	2,500	3,900,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.62	4.52	0.29
Emissions From Coal/Petcoke Portable Conveyor Transfer Points: Total>>										143.2	9.3	67.7	4.4

KM0000447

TABLE 9

TYPICAL PROCESS UNITS EMISSION CALCULATIONS

DESCRIPTION	MAXIMUM MATERIAL HANDLING RATE[1]		PARTICLE SIZE MULTIPLIER[2]		EMISSION FACTORS[3]			CONTROL		PM EMISSION RATE		PM_{10} EMISSION RATE	
	ton/hr	ton/yr	PM	PM_{10}	PM	PM_{10}	UNITS	TYPE	EFFIC.	lb/day	ton/yr	lb/day	ton/yr
Coal/Petcoke Stacker Emissions													
S-1 to CLP-5	4,000	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	15.28	0.32	7.23	0.15
S-1 CLP-4	4,000	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	15.28	0.39	7.23	0.15
S-2 to CLP-2	2,500	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.32	4.52	0.15
S-2 to CLP-3	2,500	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.39	4.52	0.15
S-3 to CLP-1	2,500	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.32	4.52	0.15
S-3 to CLP-4	2,500	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.39	4.52	0.15
S-1 to CLP-6	2,500	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.32	4.52	0.15
S-1 to CLP-7	2,500	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.39	4.52	0.15
S-1 to CLP-8	2,500	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.32	4.52	0.15
S-1 to CLP-9	2,500	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.39	4.52	0.15
S-1 to CLP-10	2,500	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.32	4.52	0.15
S-1 to CLP-11	2,500	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.39	4.52	0.15
S-1 to CLP-12	2,500	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.32	4.52	0.15
S-1 to CLP-13	2,500	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.39	4.52	0.15
S-1 to CLP-14	2,500	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.32	4.52	0.15
S-1 to CLP-15	2,500	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	9.55	0.39	4.52	0.15
S-4 to CEP-1	2,000	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.32	3.61	0.15
S-4 to CEP-2	2,000	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.39	3.61	0.15
S-4 to CLP-3	2,000	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.32	3.61	0.15
S-4 to CEP-4	2,000	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.39	3.61	0.15
S-4 to CEP-5	2,000	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.32	3.61	0.15
S-4 to CEP-6	2,000	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.39	3.61	0.15
S-4 to CEP-7	2,000	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.32	3.61	0.15
S-4 to DSH-1	2,000	2,000,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	7.64	0.39	3.61	0.15
									Emissions From Coal/Petcoke Stacker: Total>>	225.3	7.6	106.6	3.6

KM0000448

TABLE 9

TYPICAL PROCESS UNITS EMISSION CALCULATIONS

DESCRIPTION	MAXIMUM MATERIAL HANDLING RATE[1]		PARTICLE SIZE MULTIPLIER[2]		EMISSION FACTORS[3]			CONTROL		PM EMISSION RATE		PM_{10} EMISSION RATE	
	ton/hr	ton/yr	PM	PM_{10}	PM	PM_{10}	UNITS	TYPE	EFFIC.	lb/day	ton/yr	lb/day	ton/yr
Coal/Petcoke Loadout Emissions Emissions													
Coal Loadout to S-1	4,000	1,300,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	15.28	0.21	7.23	0.10
Coal/Pet Coke Loadout to TL-2	550	200,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	2.10	0.03	0.99	0.02
Pet Coke Loadout to S-1	4,000	1,300,000	0.740	0.350	0.00064	0.00030	lbs/ton	Water Suppression	50.0%	15.28	0.21	7.23	0.10
									Emissions From Coal/Petcoke Loadout: Total>>	32.7	0.4	15.4	0.2
									Coal/Petcoke Emissions: Total>>	626.9	27.9	296.5	13.2
Salt Handling Emissions													
BL-1 to SP-1 (Salt)	3,500	175,000	0.740	0.350	0.00064	0.00030	lbs/ton	None	0.0%	26.74	0.06	12.65	0.03
16 Various Transfer Points	2,500	2,000,000	0.740	0.350	0.00061	0.00030	lbs/ton	None	0.0%	19.10	0.64	9.03	0.30
									Emissions From Salt Handling: Total>>	45.8	0.7	21.7	0.3
Soil Crushing/Screening Emissions													
RPCS-1 (Crushing)	140	218,400			0.0033	0.00101	lbs/ton	Water Suppression	50.0%	2.77	0.18	0.85	0.06
RPCS-1 (Screening)	140	218,400			0.00067	0.00034	lbs/ton	Water Suppression	50.0%	0.56	0.04	0.29	0.02
									Emissions From Soil Crushing/Screening: Total>>	3.3	0.2	1.1	0.1
									Facility Total>>	**676.1**	**28.8**	**319.3**	**13.6**

1. The hourly rate is based on 3,120 hours/year of operation.
2. Aerodynamic Particulate Size Multiplier (k) per AP-42 Section 13.2.4.3, Aggregate Handling and Storage Piles, 11/06
3. Emission factor for material handling emissions calculated per Equation 1 of AP-42 Section 13.2.4.3, Aggregate Handling and Storage Piles.
4. http://www.ncdc.noaa.gov/oa/climate/online/ccd/avgwind.html

Assumptions:

BACKGROUND DATA

Coal/Pet Coke moisture content (weighted average) : 10.0%
Operating Schedule – 12 hours/day
Operating Schedule – 260 days/year
Operating Schedule – 3,120 hours/year
Mean wind speed[4] – 10.3 mph

The coal and petcoke that are received at the facility have numerous ways of being conveyed through the facility. To be conservartive in calculating the emissions, the portable conveyors were chosen as the main method of moving the materials from the receiving areas.

Facility has a water suppression system to control particulate matter emissions.

Coal and pet coke received at the Facility have an average moisture content of 18.3% and 10.0% respectively. Emissions were calculated based on 100% throughput of pet coke as a worst-case scenario.

KM00000449

TABLE 10

TYPICAL FUGITIVE EMISSIONS CALCULATIONS

DESCRIPTION	MAXIMUM HOURLY MATERIAL HANDLING RATE [1]		PARTICULATE SIZE MULTIPLIER [2]		EMISSION FACTORS			CONTROL		PM EMISSION RATE		PM_{10} EMISSION RATE	
	ton/hr	ton/yr	PM	PM_{10}	PM	PM_{10}	UNITS	TYPE	EFFIC.	lb/day	ton/yr	lb/day	ton/yr
Storage Pile Emissions													
CEP-1 [7]	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-2 [7]	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-3 [7]	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-4 [7]	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-5 [7]	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-6 [7]	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-7 [7]	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-8 [7]	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-9 [7]	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-10 [7]	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-11 [7]	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-12 [7]	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-13 [7]	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-14 [7]	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-15 [7]	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-1	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-2	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-3	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-4	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-5	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-6	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
CEP-7	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	36.36	34.74	87.77	12.97
SP- [7]	N/A	N/A	1.000	0.500	4847.8	2423.8	lbs/acre	Water Suppression	75.0%	33.89	6.18	16.81	3.09
									Storage Pile Emissions Total>>	*3016.0*	*550.4*	*1508.0*	*275.2*

DESCRIPTION	MAXIMUM HOURLY MATERIAL HANDLING RATE[1]		PARTICULATE SIZE MULTIPLIER[2]		EMISSION FACTORS			CONTROL		PM EMISSION RATE		PM_{10} EMISSION RATE	
	tons/hr	tons/year	PM	PM_{10}	PM	PM_{10}	UNITS	TYPE	EFFIC.	lb/day	tpy	lb/day	tpy
Reclaim Belt Loading Emissions													
SC1 Loaded by Dozer/End Loader[4]	3,000	500,000	0.740	0.350	0.0026	0.0012	lbs/ton	Water Suppression	50.0%	11.46	0.96	5.42	0.92
SC2 Loaded by Dozer/End Loader[4]	3,000	500,000	0.740	0.350	0.0026	0.0012	lbs/ton	Water Suppression	50.0%	11.46	0.96	5.42	0.92
SC3 Loaded by Dozer/End Loader[4]	3,000	500,000	0.740	0.350	0.0026	0.0012	lbs/ton	Water Suppression	50.0%	11.46	0.96	5.42	0.92
SC4 Loaded by Dozer/End Loader[4]	3,000	500,000	0.740	0.350	0.0026	0.0012	lbs/ton	Water Suppression	50.0%	11.46	0.96	5.42	0.92
Front End Loader[5] Roadway Emissions	N/A	N/A	4.800	.500	6.5	2.2	lbs/VMT	Water Suppression	75.0%	97.50	8.55	32.85	2.97
Front End Loader[5] Roadway Emissions	N/A	N/A	4.800	.500	6.5	2.2	lbs/VMT	Water Suppression	75.0%	97.50	8.55	32.85	2.97
SC5 Loaded by Dozer[4]	2,000	500,000	0.740	0.350	0.0026	0.0012	lbs/ton	Water Suppression	50.0%	7.64	0.68	3.61	0.61
SC6 Loaded by Dozer[4]	1,000	500,000	0.740	0.350	0.0026	0.0012	lbs/ton	Water Suppression	50.0%	3.82	0.68	1.81	0.61
SC7 Loaded by Dozer[4]	1,000	500,000	0.740	0.350	0.0026	0.0012	lbs/ton	Water Suppression	50.0%	3.82	0.68	1.8	0.61
									Reclaim Belt Loading Emissions: Total>>	*315.8*	*33.7*	*94.6*	*8.8*
Truck Loading Emissions													
Salt Loaded by End Loader[4]	950	1,710,000	0.740	0.350	0.0026	0.0012	lbs/ton	None	0.0%	4.20	0.60	1.99	0.28
Coal Loaded by End Loader[4]	475	1,482,000	0.740	0.350	0.0026	0.0012	lbs/ton	Water Suppression	50.0%	1.8	0.24	0.86	0.1
									Truck Loading Emissions: Total>>	*6.0*	*0.8*	*2.8*	*0.4*
Roadway Emissions													
Inbound Coal Truck Traffic[7]	N/A	N/A	4.800	1.800	9.8	1.7	lbs/AXL	Fugitive Dust Management Plan	75.0%	72.81	9.43	18.71	2.43
Outbound Coal Truck Traffic[7]	N/A	N/A	4.800	1.800	9.8	1.7	lbs/AXL	Fugitive Dust Management Plan	75.0%	72.81	9.43	18.71	2.43
Outbound Salt Truck Traffic[7]	N/A	N/A	4.800	1.800	9.8	1.7	lbs/AXL	Fugitive Dust Management Plan	75.0%	63.16	8.26	16.37	2.13
									Roadway Emissions: Total>>	*208.5*	*27.1*	*53.8*	*7.0*
									Facility Total>>	**3546.2**	**612.0**	**1659.2**	**291.4**

1. Hourly rate is based on 3,500 hours/year of operation.

2. Aerodynamic Particulate Size Multiplier (k) per AP-42 Section 13.2.4.3, Aggregate Handling and Storage Piles, 11/06

3. Mean Wind Speed (u) (estimate).

4. Emission factor for material handling emissions calculated per Equation 1 of AP-42 Section 13.2.4.3, Aggregate Handling and Storage Piles.

5. Emission factor for unpaved road emissions calculated per Equation 1a of AP-42 Section 13.2.2, Unpaved Roads.

6. From National Weather Service (estimate).

7. From Air Pollution Engineering Manual and References Section 9.3, (http://www.wrapair.org/forums/dejf/LFP/content/C09-Storage_Pile_Wind%20Erosion_Rev0b.pdf)

"S" (lb/year/acre surface) = 1.7(s/1.5)(365-p)/235)(f/15)

Coal and pet coke received at the facility has an average moisture content of 16.3% and 10.0% respectively. Emissions were calculated based on 100% throughput of pet coke as a worst-case scenario.

Assumptions:

COAL BACKGROUND DATA

Coal/Pet Coke moisture content (weighted average) = 10.0%
Silt content of coal = 5.0%

END LOADER/DOZER OPERATIONS

Front End Loaders/Dozer (Storage Piles) = 12 hours/day
Front End Loaders/Dozer (Reclaim) = 2 hours/day
Operating Schedule = 2 hours/day
Operating Schedule = 260 days/year
Operating Schedule = 3,120 hours/year
Front End Loader/Dozer speed = 5.0 mph
VMT of front end loader/dozer (Storage Piles) = 60.0 miles/day
VMT of Front End Loader/Dozer (Reclaim) = 60.0 miles/day
Front End Loader/Dozer Average Weight (Cat 980C) = 39 tons

STORAGE PILE INFORMATION

Surface area of storage piles (Coal) = 40.0 acres
Surface area of storage piles (Coke) = 40.0 acres
Surface area of storage piles (Salt) = 10.0 acres
Days in storage pile = 365 days
Number of days[1] with rain > 0.01 inch = 97 days
Year wind speed[2] = 10.3 mph
Percent of time[3] winds > 12 mph = 34.0%

INBOUND COAL TRUCK BACKGROUND DATA

Delivery truck tare weight = 15 tons
Maximum full truck weight = 29 tons
Average truck weight = 22 tons
Maximum facility input = 2,200,000 tons/year
Maximum truck loading = 200,000 tons/year
Number of coal trucks = 4,286 trucks/year
Miles per trip = 0.8 miles
Miles per day = 44.0 miles/day
Miles per year = 1,429 miles/year

OUTBOUND COAL TRUCK BACKGROUND DATA

Delivery truck tare weight = 15 tons
Maximum full truck weight = 29 tons
Average truck weight = 22 tons
Maximum facility output = 2,200,000 tons/year
Maximum truck delivery = 200,000 tons/year
Number of coal trucks = 14,286 trucks/year
Miles per trip = 0.8 miles
Miles per day = 44.0 miles/day
Miles per year = 14,429 miles/year

SALT HAULING TRUCK BACKGROUND DATA

Delivery truck tare weight = 15 tons
Maximum full truck weight = 29 tons
Average truck weight = 22 tons
Maximum facility output = 175,000 tons/yr
Maximum truck loading = 75,000 tons/yr
Number of coal trucks = 3,500 trucks/year
Miles per trip = 0.8 miles
Miles per day = 38.5 miles/day
Miles per year = 10,000 miles/year

TABLE 11

TYPICAL EMISSION CALCULATIONS
DIESEL GENERATORS

Unit Description	Unit ID	Prime Power (hp)	Emission Factor (lb/hp-hr)					
			NOx^a	CO^a	$SO_2{}^b$	PM^a	$PM_{10}{}^d$	VOM^a
			0.015	0.00815	**	0.0005	0.0005	0.00033
			Emissions (lb/hr)					
Diesel Generator 1	DG-1	118	1.77	0.96	0.021	0.06	0.06	0.01
Diesel Generator 2	DG-2	118	1.77	0.96	0.021	0.06	0.06	0.01
Diesel Generator 3	DG-3	118	1.77	0.96	0.021	0.06	0.06	0.01
Totals (lb/hr)			5.31	2.89	0.06	0.18	0.18	0.12
Totals (ton/yr) [c]			8.28	4.50	0.10	0.28	0.28	0.18

Unit Description	Unit ID	Prime Power (hp)	Emission Factor (lb/hp-hr)					
			NOx^a	CO^a	$SO_2{}^b$	PM^a	$PM_{10}{}^d$	VOM^a
			0.015	0.00573	**	0.0003	0.0003	0.00033
			Emissions (lb/hr)					
Diesel Generator 4	DG-4	500	7.50	2.86	0.043	0.15	0.15	0.17
Diesel Generator 5	DG-5	500	7.50	2.86	0.043	0.15	0.15	0.17
Diesel Generator 6	DG-6	500	7.50	2.86	0.043	0.15	0.15	0.17
Diesel Generator 7	DG-7	500	7.50	2.86	0.043	0.15	0.15	0.17
Totals (lb/hr)			30.00	11.45	0.17	0.60	0.60	0.66
Totals (ton/yr) [c]			46.80	17.87	0.27	0.91	0.91	1.03

Unit Description	Unit ID	Prime Power (hp)	Emission Factor (lb/hp-hr)					
			NOx^a	CO^a	$SO_2{}^b$	PM^a	$PM_{10}{}^d$	VOM^a
			0.015	0.00815	**	0.0005	0.0005	0.00033
			Emissions (lb/hr)					
Air Compressor	AC-1	100	1.50	0.82	0.02	0.05	0.05	0.03
Totals (lb/hr)			1.50	0.82	0.02	0.05	0.05	0.03
Totals (ton/yr) [c]			2.31	1.27	0.03	0.08	0.08	0.05

TABLE 11

TYPICAL EMISSION CALCULATIONS
DIESEL GENERATORS

Unit Description	Unit ID	Prime Power (hp)	Emission Factor (lb/hp-hr)					
			NO_x [a]	CO [a]	SO_2 [b]	PM [a]	PM_{10} [d]	VOM [a]
			0.015	0.00903	**	0.001	0.001	0.00033
			Emissions (lb/hr)					
Light Standard	LS 1	15	0.23	0.14	0.01	0.02	0.02	0.005
Light Standard	LS 2	15	0.23	0.14	0.01	0.02	0.02	0.005
Light Standard	LS-3	15	0.23	0.14	0.01	0.02	0.02	0.005
Light Standard	LS-4	15	0.23	0.14	0.01	0.02	0.02	0.005
Light Standard	LS 5	15	0.23	0.14	0.01	0.02	0.02	0.005
Totals (lb/hr)			1.13	0.68	0.05	0.08	0.08	0.02
Totals (ton/yr) [c]			1.76	1.06	0.08	0.12	0.12	0.01

Unit Description	Unit ID	Prime Power (hp)	Emission Factor (lb/hp-hr)					
			NO_x [a]	CO [a]	SO_2 [b]	PM [a]	PM_{10} [d]	VOM [a]
			0.015	0.01019	**	0.0013	0.0013	0.00033
			Emissions (lb/hr)					
Diesel Water Pump	DWP 1	20	0.30	0.22	0.01	0.03	0.03	0.01
Totals (lb/hr)			0.30	0.22	0.01	0.03	0.03	0.01
Totals (ton/yr) [c]			0.01	0.03	0.001	0.003	0.003	0.001

Facility Emissions (ton/yr)	**59.22**	**24.72**	**0.48**	**1.41**	**1.41**	**1.30**

Maximum Emissions Assumptions:

[a] Calculated using NSPS emission factors for stationary combustion sources (40 CFR Part 89, Section 112). VOM emission factor from Permit #07050082 issued on May 21, 2009.

[b] Calculated using low sulfur diesel fuel and formula used in Permit #07050082 issued on May 21, 2009 with revised diesel fuel consumption data as follows:

500 HP Engine	20 gal/hr
100 & 118 HP Engines	10 gal/hr
15 & 20 HP Engines	5 gal/hr

[c] Hours of operation 3,120 hr/yr
250 hr/yr (For emergency diesel water pump only.)

[d] It is assumed that PM_{10} emissions are equal to PM.

Example Calculation

500 HP Diesel Engine NO_X Emissions

500 horsepower x 0.015 lb NO_x per horsepower hour x 3,120 hr/yr / 2,000 lb/ton = 11.7 ton/yr NO_x

Conversion of NSPS Emission Factors

NO_X – 9.2 g/kW hr or 6.9 g/HP hr

6.9 g/HP-hr / 454 g per pound = 0.015 lb/hp-hr

TABLE 12

TYPICAL EMISSIONS SUMMARY

Emission Point	*Emissions (ton/yr)*					
	NOx	*CO*	SO_2	*PM*	PM_{10}	*VOM*
Process				28.82	13.60	
Generator	59.22	24.72	0.48	1.41	1.41	1.30
Total	**59.22**	**24.72**	**0.48**	**30.23**	**15.01**	**1.30**

TABLE 13

LISTING OF EMISSION UNITS

Process Equipment	*Unit Designation*	*Submittal*	*Permit #*
Unloading Operations			
Barge Unloader	BU-1	Existing	
Rail/Truck Unloader	RU/TU-1	Existing	
Rail Unloader 2	RU-2	Existing	7050082
Rail Unloader 3	RU-3	Existing	7050082
Conveyor Operations			
Conveyor 1	C-1	Existing	
Conveyor 2	C-2	Existing	
Conveyor 3	C-3	Existing	
Conveyor 4	C-4	Existing	
Conveyor 5	C-5	Existing	
Conveyor 6	C-6	Existing	
Conveyor 7	C-7	Existing	7050082
Conveyor 8	C-8	Existing	7050082
Conveyor 9	C-9	Existing	7050082
Conveyor 10	C-10	Existing	7050082
Conveyor 11	C-11	Existing	7050082
Conveyor 12	C-12	Existing	7050082
Reclaim Conveyor 1	RC-1	Existing	
Reclaim Conveyor 2	RC-2	Existing	
Reclaim Conveyor 3	RC-3	Existing	
Reclaim Conveyor 4	RC-4	Existing	
Reclaim Conveyor 5	RC-5	Existing	7050082
Reclaim Conveyor 6	RC-6	Existing	7050082
Reclaim Conveyor 7	RC-7	Existing	7050082
Portable Conveyor 1	PC-1	Existing	7050082
Portable Conveyor 2	PC-2	Existing	7050082
Portable Conveyor 3	PC-3	Existing	7050082
Portable Conveyor 4	PC-4	Existing	7050082
Portable Conveyor 5	PC-5	Existing	7050082
Portable Conveyor 6	PC-6	Existing	7050082
Portable Conveyor 7	PC-7	Existing	7050082
Portable Conveyor 8	PC-8	Existing	7050082
Portable Conveyor 9	PC-9	Proposed	
Portable Conveyor 10	PC-10	Proposed	
Portable Conveyor 11	PC-11	Proposed	
Portable Conveyor 12	PC-12	Proposed	
Transfer Hopper Operations			
Direct Ship Hopper 1	DSH-1	Existing	7050082
Portable Feed Hopper	PFH-1	Existing	7050082
Portable Feeder	PF-1	Existing	7050082
Rental Portable Crusher/Screen	RPCS-1	Existing	7050082
Transfer Point 1	TP-1	Existing	7050082
Stacker Feed Transfer Point	SFTP-1	Existing	7050082

TABLE 13

LISTING OF EMISSION UNITS

Process Equipment	*Unit Designation*	*Submittal*	*Permit #*
Stacker Operations			
Stacker 1/Barge & Rail Loadout	S-1	Existing	
Stacker 2	S-2	Existing	
Stacker 3	S-3	Existing	
Stacker 4	S-4	Existing	7050082
Storage Pile Operations			
Coal Pile 1	CLP-1	Existing	
Coal Pile 2	CLP 2	Existing	
Coal Pile 3	CLP 3	Existing	
Coal Pile 4	CLP 4	Existing	
Coal Pile 5	CLP 5	Existing	
Coal Pile 6	CLP 6	Proposed	
Coal Pile 7	CLP 7	Proposed	
Coal Pile 8	CLP 8	Proposed	
Coal Pile 9	CLP 9	Proposed	
Coal Pile 10	CLP 10	Proposed	
Coal Pile 11	CLP 11	Proposed	
Coal Pile 12	CLP 12	Proposed	
Coal Pile 13	CLP 13	Proposed	
Coal Pile 14	CLP 14	Proposed	
Coal Pile 15	CLP 15	Proposed	
Salt Pile 1	SP-1	Existing	7050082
Coke Pile 1	CEP 1	Existing	7050082
Coke Pile 2	CEP 2	Existing	7050082
Coke Pile 3	CEP 3	Existing	7050082
Coke Pile 4	CEP 4	Proposed	
Coke Pile 5	CEP 5	Proposed	
Coke Pile 6	CEP 6	Proposed	
Coke Pile 7	CEP 7	Proposed	
Diesel Generators			
Diesel Generator - 118 HP (1)	DG-1	Existing	7050082
Diesel Generator - 118 HP (2)	DG-2	Existing	7050082
Diesel Generator - 118 HP (3)	DG-3	Existing	7050082
Diesel Generator - 500 HP (4)	DG-4	Existing	7050082
Diesel Generator - 500 HP (5)	DG-5	Existing	7050082
Diesel Generator - 500 HP (6)	DG-6	Existing	7050082
Diesel Generator - 500 HP (7)	DG-7	Existing	7050082
Air Compressor - 100 HP	AC-1	Proposed	
Light Standard - 15 HP	LS-1	Proposed	
Light Standard - 15 HP	LS-2	Proposed	
Light Standard - 15 HP	LS-3	Proposed	
Light Standard - 15 HP	LS-4	Proposed	
Light Standard - 15 HP	LS-5	Proposed	
Diesel Water Pump - 20 HP	DWP-1	Existing	7050082

Exhibit P

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January 31, 2014

By FedEx and Electronic Mail

Attn: Compliance Tracker, AE-17J
Air Enforcement and Compliance Assurance Branch
U.S. Environmental Protection Agency
Region 5
77 W. Jackson Boulevard
Chicago, IL 60604

Nicole Cantello
Bonnie Bush
U.S. Environmental Protection Agency
77 West Jackson Boulevard
Chicago, Illinois 60647
Cantello.Nicole@epa.gov
Bush.Bonnie@epa.gov

Re: Koch Mineral Services – Response to EPA Information Request Dated December 30, 2013

Dear Ms. Cantello and Ms. Bush:

This letter and its attachments are hereby submitted as a response to the above-referenced December 30, 2013 request for information, issued by the United States Environmental Protection Agency ("EPA") to Koch Mineral Services, LLC pursuant to Section 114(a) of the Clean Air Act, 42 U.S.C. § 7414(a). We note that Koch Mineral Services, LLC is a holding company that does not itself conduct any activities relevant to this information request, and are instead offering this response on behalf of Koch Minerals, LLC (a direct subsidiary of Koch Mineral Services, LLC) and its affiliates KCBX Terminals Company and The C. Reiss Coal Company (collectively for purposes of responding to EPA's requests, "Koch Minerals").

In your electronic message of January 14, 2014, EPA agreed to certain modifications and clarifications of the original information request. Koch Minerals' understanding of the requests as modified is indicated with respect to each request below.

Koch Minerals has engaged in considerable effort to ensure that its submissions are complete, responsive, and useful to the Agency. Koch Minerals makes the following general qualifications and objections to EPA's request:

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- Koch Minerals objects to the request insofar as it seeks privileged information, including any and all communications and documents that are protected from disclosure by either the attorney-client communication privilege or attorney work-product doctrine.

- Koch Minerals objects to the request to the extent it improperly seeks information beyond the scope of EPA's authority under Section 114(a) of the Clean Air Act, 42 U.S.C. § 7414(a), and therefore is not a proper exercise of EPA's information-gathering authority.

- Koch Minerals objects to the request to the extent it is vague, ambiguous, overbroad, or unduly burdensome.

- Koch Minerals reserves the right to supplement and revise its response, and reserves the right to assert additional objections as it continues to evaluate its response.

- Koch Minerals requests confidential treatment for the documents and information designated as "confidential business information" ("CBI") to the extent information in the files and documents is designated confidential.

Accordingly, notwithstanding the foregoing, and without waiving any of the foregoing qualifications and objections, below Koch Minerals has included the relevant numbered request followed by Koch Minerals' response.[1] The numbers of the responses below correspond to the numbers of the specific request included in Appendix B of the December 30, 2013 request.

Request No. 1:

Provide a list of all locations in Region 5 that Koch owned or operated for storage of petroleum coke from 2004 through the present. For each location, identify the following:

a. The owner or operator of the petroleum coke storage or handling during the entire period you owned or handled petroleum coke at that site;
b. The dates Koch first and last stored or handled petroleum coke at the site and all intervening dates when shipments were accepted at the site and when shipments were transported off the site;
c. The dates and amounts (in tons) of each shipment from 2009 to the present; and
d. Detailed descriptions of any measures taken to prevent fugitive emissions from each pile.

Response to Request No. 1:

As reflected in EPA's January 14th electronic message, Koch Minerals understands this Request to require it to identify, as to sites that Koch Minerals owned or operated in Region 5:

a. The owner(s) or operator(s) of such sites at which Koch Minerals staged or handled petroleum coke since January 1, 2004;

[1] For all attached electronic files, KCBX has scanned the files for viruses using Symantec Endpoint Protection in accordance with the instructions in Appendix A of the information request.

b. For the sites identified in (a) above, the first and last date petroleum coke was staged or handled there;
c. For the sites identified in (a) above for the period 2009 to the present, the monthly throughput expressed in tons of petroleum coke; and
d. For the sites identified in (a) above, descriptions of the measures taken to prevent fugitive emissions from piles.

Koch Minerals notes that subsection (a) appears to inadvertently omit the word "site" from "the owner or operator of the petroleum coke storage or handling [site] during the entire period you owned or handled petroleum coke at that site," and interprets that portion of the request accordingly.

Koch Minerals objects to this Request to the extent it implies that Koch Minerals "stores" or accepts for "storage" any petroleum coke. For purposes of identifying responsive information, Koch Minerals interprets these terms to refer to staging, rather than storage, of petroleum coke.

Koch Minerals owned or operated the following sites within Region 5 from January 1, 2004 until the present where petroleum coke was staged or handled.

1. **KCBX North (3259 E. 100th St., Chicago, Illinois – Owned and operated by KCBX Terminals Company.** Koch Minerals presently stages and handles petroleum coke at this facility. Upon information and belief, Koch Minerals has staged and handled petroleum coke at this site since January 1, 2004. Therefore, for purposes of this request, the date petroleum coke was first staged or handled at this facility is January 1, 2004. Further, please note that Koch Minerals purchased and began to operate the facility in 1990. Koch Minerals would have staged and handled petroleum coke at this facility from time to time between the date of purchase and December 31, 2003. However, Koch Minerals is unable to identify with precision or certainty when it might have received the first shipment of petroleum coke at the facility because Koch Minerals, in accordance with its record retention policy, has not retained the records sufficient to definitively state an exact date. Total monthly throughput of petroleum coke from January 2009 through December 2013 is set forth in the spreadsheet designated "KM00000001_Native_Format" (with a duplicate provided in bates-numbered pdf format), attached hereto on Disc 1 in an electronic file folder labeled Response #1c. A detailed description of the measures taken to prevent fugitive emissions from piles at the site is contained in a document designated "KM00000017," attached hereto on Disc 1 in an electronic file folder labeled Response #1d.

2. **KCBX South (10730 S. Burley Ave., Chicago, Illinois) – Owned by KM Railways, LLC and operated by KCBX Terminals Company.** Koch Minerals presently stages and handles petroleum coke at this facility. Koch Minerals acquired the facility on December 20, 2012. It has staged and handled petroleum coke at the facility from that date. The first shipment of petroleum coke from this facility was on or about December 21, 2012. Total monthly throughput of petroleum coke from December 2012 through December 2013 is

set forth in the spreadsheet designated "KM00000001_Native_Format" (with a duplicate provided in bates-numbered pdf format), attached hereto on Disc 1 in an electronic file folder labeled Response #1c. A detailed description of the measures taken to prevent fugitive emissions from piles at the site is contained in the document designated "KM00000031," attached hereto on Disc 1 in an electronic file folder labeled Response #1d.

3. **Duluth (50th Avenue West & LeSure, Duluth, Minnesota)** – Owned and operated by The C. Reiss Coal Company. Koch Minerals presently stages and handles petroleum coke at this facility. Koch Minerals has staged and handled petroleum coke at this site since January 1, 2004. Therefore, for purposes of this request, the date petroleum coke was first staged or handled at this facility is January 1, 2004. Further, please note that Koch Minerals purchased and began to operate the facility in December 1986. Koch Minerals would have staged and handled petroleum coke at this facility from time to time between the date of purchase and December 31, 2003. However, Koch Minerals is unable to identify with precision or certainty when it might have received the first shipment because Koch Minerals, in accordance with its record retention policy, has not retained the records sufficient to definitively state an exact date. Total monthly throughput of petroleum coke from January 2009 through December 2013 is set forth in the spreadsheet designated "KM00000001_Native_Format" (with a duplicate provided in bates-numbered pdf format), attached hereto on Disc 1 in an electronic file folder labeled Response #1c. A detailed description of the measures taken to prevent fugitive emissions from piles at the site is contained in the document designated "KM00000003," attached hereto on Disc 1 in an electronic file folder labeled Response #1d.

4. **Green Bay (111 W. Mason St., Green Bay, Wisconsin)** – Owned and operated by The C. Reiss Coal Company. Koch Minerals presently stages and handles petroleum coke at this facility. Koch Minerals has staged and handled petroleum coke at this site since January 1, 2004. Therefore, for purposes of this request, the date petroleum coke was first staged or handled at this facility is January 1, 2004. Further, please note that Koch Minerals purchased and began to operate the facility in 1986. Koch Minerals would have staged and handled petroleum coke at this facility from time to time between the date of purchase and December 31, 2003. However, Koch Minerals is unable to identify with precision or certainty when it might have received the first shipment of petroleum coke at the facility because Koch Minerals, in accordance with its record retention policy, has not retained the records sufficient to definitively state an exact date. Total monthly throughput of petroleum coke from January 2009 through December 2013 is set forth in the spreadsheet designated "KM00000001_Native_Format" (with a duplicate provided in bates-numbered pdf format), attached hereto on Disc 1 in an electronic file folder labeled Response #1c. A detailed description of the measures taken to prevent fugitive emissions from piles at the site is contained in the document designated "KM00000008," attached hereto on Disc 1 in an electronic file folder labeled Response #1d.

Scott Lebbin (Vice-President of Operations – Koch Minerals, LLC), William Reiss (President – The C. Reiss Coal Company), Robert Valley (Dock Superintendent – The C. Reiss Coal Company), Richard Schlies (Manager of Transportation – Koch Minerals, LLC), Kathy Meese (Administrative Assistant – The C. Reiss Coal Company), Roberta Peterson (Administrative Clerk – KCBX Terminals Company), Christian Zuidmulder (Operations Supervisor – The C. Reiss Coal Company), Pete Rotundo (Distribution Manager – KCBX Terminals Company), Mark Cummings (Manager of Bulk Sales & Dev. – The C. Reiss Coal Company), Terry Steinert (Environmental Compliance Manager – Koch Minerals, LLC), John Hydock (Controller – Koch Minerals, LLC), Tom Kramer (General Manager – KCBX Terminals Company), Kermit Altendorfer (General Manager North American Marketing – Koch Carbon, LLC), Dave Emmerich (Operations Manager – The C. Reiss Coal Company) and Michelle Joki (Office Supervisor – The C. Reiss Coal Company) were consulted in preparation of this response and the appendices attached hereto.

Request No. 2:

Identify all locations owned or operated by Koch currently used for petroleum coke storage or handling in Region 5.

Response to Request No. 2:

Koch Minerals objects to this Request to the extent it implies that Koch Minerals "stores" or accepts for "storage" any petroleum coke. For purposes of identifying responsive information, Koch Minerals interprets these terms to refer to staging, rather than storage, of petroleum coke. The following facilities are currently used for petroleum coke staging and handling:

KCBX North (Chicago, Illinois)
KCBX South (Chicago, Illinois)
Duluth (Duluth, Minnesota)
Green Bay (Green Bay, Wisconsin)

Scott Lebbin (Vice-President of Operations – Koch Minerals, LLC), William Reiss (President – The C. Reiss Coal Company), Robert Valley (Dock Superintendent – The C. Reiss Coal Company) and Richard Schlies (Manager of Transportation – Koch Minerals, LLC) were consulted in preparation of this response.

Request No. 3:

Identify all locations owned or operated by Koch where future petroleum coke storage or handling is planned, permitted, or zoned in Region 5. Continue to identify and notify EPA of such sites through December 31, 2015. For each location, identify the date Koch plans to use the location and the date when operations commence. Provide an explanation for how and why the location was chosen.

Response to Request No. 3:

Koch Minerals objects to this Request as improperly issued under Clean Air Act Section 114(a), 42 U.S.C. § 7414(a), because the information sought is not necessary to serve any of the purposes outlined in Section 114(a)(i), (ii), or (iii). Any future petroleum coke staging or handling by Koch Minerals is not currently subject to regulation under the Clean Air Act and therefore is not within the scope of EPA's authority under Section 114(a). Koch Minerals further objects to the request insofar as EPA seeks to require Koch Minerals to "[c]ontinue to identify and notify EPA of such sites through December 31, 2015," as beyond the scope of EPA's Clean Air Act Section 114(a) authority. Furthermore, information regarding "how and why" any location for petroleum coke staging or handling "was chosen" is not relevant to Clean Air Act compliance and therefore is also outside EPA's Section 114(a) authority.

In its January 14th electronic message, EPA modified this request to require Koch Minerals to submit documents regarding "locations where there is a current permit application, current permit or current permit that does not prohibit the storage of petcoke." It is Koch Minerals' understanding that air permits issued by state and federal authorities do not typically "prohibit" the handling of a bulk material. Nonetheless, Koch Minerals responds that, in addition to the four sites identified in its response to Request 1, it owns and operates four additional facilities within Region 5 that could at least potentially stage or handle petroleum coke at some point in the future.

Ashland (601 ½ Lake Shore Drive, Ashland, WI)
Escanaba Dock 1 (Power Plant Road, Escanaba, MI)
Escanaba Dock 2 (1010 3rd Avenue North, Escanaba, MI)
Manitowoc (937 S. Fifth St., Manitowoc, WI)

Relevant permitting documents and/or applications for each respective facility are attached hereto on Disc 1 in an electronic file folder labeled Response #3 (KM00000044-KM00000478).

In addition to the sites identified above, Koch Minerals or its affiliates own the following industrial sites within Region 5 that do not involve the handling of petroleum coke:

Benton Facility, 5182 State Highway 37, Benton, IL 62812 (Magnetite Handling Facility)
Clarkson Dock, end of 11th Ave. East, Ashland, Wisconsin 54806 (Koch Minerals is not presently operating this site and has not since at least January 1, 2004)
Superior-Berwind Dock, Adjacent to 3200 Winter Street, Superior, Wisconsin 54880 (Koch Minerals has not operated this site since the early 1980s)
Sault Ste. Marie Dock, South Street, Sault Ste. Marie, MI 49783 (Koch Minerals has not operated this site since the 1990s)

Koch Minerals or its affiliates also own real estate located at 2400 Winter Street, Superior, WI 54880, which it leases to a third party. That third party has informed Koch Minerals that it has not handled petroleum coke at the property at any time since January 1, 2004. Koch Minerals does not have specific information as to whether the facility has permits to handle petroleum coke.

Scott Lebbin (Vice-President of Operations – Koch Minerals, LLC), William Reiss (President – The C. Reiss Coal Company), Robert Valley (Dock Superintendent – The C. Reiss Coal Company) and Richard Schlies (Manager of Transportation – Koch Minerals, LLC) were consulted in preparation of this response and the appendices attached hereto.

Koch Minerals welcomes further discussion with EPA regarding the purpose and scope of this Request.

Request No. 4:

For all petroleum coke Koch owns or owned that was stored or handled by Detroit Bulk Storage at 115 Rosa Parks Boulevard, Detroit, Michigan, identify each location to which that petroleum coke has been transported. Provide the name of the entity that owns each location with the complete address along with copies of all supporting documentation.

Response to Request No. 4:

In its January 14th electronic message, EPA modified this request to require Koch Minerals to submit "information regarding the users or end users in Region 5 only." Further, EPA clarified that Koch Minerals should submit "just locations" of users, and that EPA "do[es] not require all back up information."

Koch Minerals responds that it does not own and has never owned any petroleum coke that was stored or handled by Detroit Bulk Storage at 115 Rosa Parks Boulevard, Detroit, Michigan.

David Stout (General Manager West Coast Pet Coke – Koch Carbon, LLC), Kathy Jordan (Carbon Process Improvement Manager – Koch Carbon, LLC, Michael Albrecht (Manager, North American Pet Coke Marketing – Koch Carbon, LLC) were consulted in preparation of this response.

Request No. 5:

For all petroleum coke Koch owns or owned that was stored or handled by Detroit Bulk Storage in River Rouge, Michigan, identify each location to which that petroleum coke has been transported. Provide the name of the entity that owns each location with the complete address along with copies of all supporting documentation.

Response to Request No. 5:

In its January 14th electronic message, EPA modified this request to require Koch Minerals to submit "information regarding the users or end users in Region 5 only." Further, EPA clarified that KCBX should submit "just locations" of users, and that EPA "do[es] not require all back up information."

Koch Minerals responds that it does not own and has never owned any petroleum coke

that was stored or handled by Detroit Bulk Storage in River Rouge, Michigan.

David Stout (General Manager West Coast Pet Coke – Koch Carbon, LLC), Kathy Jordan (Carbon Process Improvement Manager – Koch Carbon, LLC, and Michael Albrecht (Manager, North American Pet Coke Marketing – Koch Carbon, LLC) were consulted in preparation of this response.

The certification requested in the December 30, 2013 information request is attached hereto.

Koch Minerals stands willing to discuss the foregoing responses and the attached appendices with EPA at a mutually convenient time.

Sincerely,

Adam M. Kushner

Partner
adam.kushner@hoganlovells.com
(202) 637-5724

Enclosures

Koch Minerals Certification of January 31, 2014

Response To

EPA's December 30, 2013 Clean Air Act Section 114(a) Information Request

I certify under penalty of law that I have examined and am familiar with the information in the enclosed documents, including all attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are, to the best of my knowledge and belief, true and complete. I am aware that there are significant penalties for knowingly submitting false statements and information, including the possibility of fines or imprisonment pursuant to Section 113(c)(2) of the Clean Air Act and 18 U.S.C. §§ 1001 and 1341.

Scott Lebbin
Vice President of Operations
Koch Minerals, LLC

	KCBX N	KCBX N	Green Bay	Green Bay	Duluth	Duluth
2009	IN	OUT	IN	OUT	IN	OUT
Jan	74768	3039	29211	13461	2901	3007
Feb	65265	3486	28839	12603	1521	1417
Mar	100071	61699	6480	14249	0	1952
Apr	135371	108189	10080	12714	25	1897
May	83543	105611	15930	7058	0	0
Jun	74900	156503	0	18203	0	1784
Jul	83451	77846	20272	16419	278	2893
Aug	71757	90320	9	16329	3174	2407
Sep	55724	40215	15763	13909	2696	1739
Oct	48550	75041	28537	12020	2055	1851
Nov	34424	90756	29665	13397	2033	1739
Dec	45696	2049	4575	15554	0	3337
TOTAL	**873,520**	**814,754**	**189,361**	**165,916**	**14,683**	**24,023**

	KCBX N	KCBX N	Green Bay	Green Bay	Duluth	Duluth
2010	IN	OUT	IN	OUT	IN	OUT
Jan	26886	0	788	11683	3378	2637
Feb	16795	0	814	14915	2756	2089
Mar	20460	8047	3163	14518	4335	2698
Apr	22232	50151	15098	15295	630	1193
May	59248	80420	5596	10464	2967	2266
Jun	64875	132197	11970	16449	2775	2814
Jul	57626	61985	10890	11656	705	2292
Aug	85909	59379	24519	14219	374	681
Sep	72593	90898	12600	16352	402	0
Oct	83568	116145	6570	7485	452	0
Nov	73172	71369	35606	14014	1597	2604
Dec	73905	48760	18995	14333	3361	2160
TOTAL	**657,269**	**719,351**	**146,609**	**161,383**	**23,732**	**21,434**

	KCBX N	KCBX N	Green Bay	Green Bay	Duluth	Duluth
2011	IN	OUT	IN	OUT	IN	OUT
Jan	50267	9899	0	13018	4957	1596
Feb	29205	2731	0	8722	1331	804
Mar	64508	27328	6816	13449	3490	404
Apr	71942	82925	7844	3605	0	586
May	109385	99013	7008	2998	25	1122
Jun	68118	163913	12480	6385	0	0
Jul	102558	65800	25754	13494	0	0
Aug	105455	102741	7008	17695	0	790
Sep	100077	136912	0	16137	0	813
Oct	118582	60268	6528	9339	0	678
Nov	126033	151946	18685	14446	0	490
Dec	73532	82326	19391	11181	0	543
TOTAL	**1,019,662**	**985,802**	**111,514**	**130,469**	**9,803**	**7,826**

	KCBX N	KCBX N	KCBX S	KCBX S	Green Bay	Green Bay	Duluth	Duluth
2012	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Jan	68316	37061	0	0	0	12336	2450	746
Feb	34483	0	0	0	0	5774	2088	600
Mar	42750	80348	0	0	20352	11601	0	499
Apr	63471	44894	0	0	13632	11710	0	471
May	43064	70783	0	0	20297	12024	0	331
Jun	59160	63293	0	0	22792	11431	0	283
Jul	98543	134066	0	0	14180	15228	1301	280
Aug	109769	76470	0	0	15688	17612	0	247
Sep	69462	29313	0	0	15476	13183	0	255
Oct	90940	117583	0	0	31376	10658	0	239
Nov	67672	92037	0	0	7632	15268	0	332
Dec	42698	70011	13766	0	0	14349	0	396
TOTAL	**790,328**	**815,859**	**13,766**	**-**	**161,425**	**151,174**	**5,839**	**4,679**

	KCBX N	KCBX N	KCBX S	KCBX S	Green Bay	Green Bay	Duluth	Duluth
2013	IN	OUT	IN	OUT	IN	OUT	IN	OUT
Jan	63322	24817	18093	0	0	16981	0	248
Feb	49628	0	0	0	0	11503	0	245
Mar	20980	56530	0	136	7844	15576	0	294
Apr	80498	86047	0	3241	15199	11128	0	381
May	108659	87731	0	3649	14112	11557	0	295
Jun	95696	112636	12588	2623	29589	11292	0	297
Jul	80916	69860	35077	0	14650	16993	0	315
Aug	140795	150245	15769	52409	16465	16084	0	228
Sep	104834	59955	13403	40631	20279	10587	0	334
Oct	122115	173618	24843	21327	12560	17422	0	86
Nov	57321	40402	32248	40276	32248	13588	0	0
Dec	76187	138227	78525	66190	0	15488	0	0
TOTAL	**1,000,951**	**1,000,068**	**230,546**	**230,482**	**162,946**	**168,199**	**-**	**2,723**

Exhibit Q

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Dec 1 Actual Temp 44° Lo 30° Hist. Avg. 40° Lo 28°	**2** Actual Temp 43° Lo 33° Hist. Avg. 40° Lo 27°	**3** Actual Temp 51° Lo 37° Hist. Avg. 40° Lo 27°	**4** Actual Temp 57° Lo 42° Hist. Avg. 39° Lo 26°	**5** Actual Temp 42° Lo 22° Hist. Avg. 39° Lo 26°	**6** Actual Temp 22° Lo 14° Hist. Avg. 38° Lo 26°	**7** Actual Temp 21° Lo 9° Hist. Avg. 38° Lo 25°
8 Actual Temp 25° Lo 16° Hist. Avg. 37° Lo 25°	**9** Actual Temp 26° Lo 3° Hist. Avg. 37° Lo 24°	**10** Actual Temp 22° Lo 1° Hist. Avg. 37° Lo 24°	**11** Actual Temp 21° Lo 2° Hist. Avg. 36° Lo 24°	**12** Actual Temp 20° Lo -3° Hist. Avg. 36° Lo 24°	**13** Actual Temp 31° Lo 15° Hist. Avg. 36° Lo 23°	**14** Actual Temp 30° Lo 23° Hist. Avg. 35° Lo 23°
15 Actual Temp 24° Lo 12° Hist. Avg. 35° Lo 23°	**16** Actual Temp 22° Lo 12° Hist. Avg. 35° Lo 22°	**17** Actual Temp 33° Lo 16° Hist. Avg. 34° Lo 22°	**18** Actual Temp 34° Lo 16° Hist. Avg. 34° Lo 22°	**19** Actual Temp 43° Lo 34° Hist. Avg. 34° Lo 22°	**20** Actual Temp 37° Lo 34° Hist. Avg. 34° Lo 21°	**21** Actual Temp 36° Lo 32° Hist. Avg. 34° Lo 21°
22 Actual Temp 35° Lo 26° Hist. Avg. 33° Lo 21°	**23** Actual Temp 27° Lo 0° Hist. Avg. 33° Lo 21°	**24** Actual Temp 19° Lo -1° Hist. Avg. 33° Lo 20°	**25** Actual Temp 27° Lo 19° Hist. Avg. 33° Lo 20°	**26** Actual Temp 36° Lo 15° Hist. Avg. 33° Lo 20°	**27** Actual Temp 44° Lo 26° Hist. Avg. 33° Lo 20°	**28** Actual Temp 51° Lo 34° Hist. Avg. 32° Lo 20°
29 Actual Temp 39° Lo 12° Hist. Avg. 32° Lo 20°	**30** Actual Temp 15° Lo 3° Hist. Avg. 32° Lo 19°	**31** Actual Temp 14° Lo 4° Hist. Avg. 32° Lo 19°	**Jan 1** Actual Temp 24° Lo 14° Hist. Avg. 32° Lo 19°	**2** Actual Temp 22° Lo 5° Hist. Avg. 32° Lo 19°	**3** Actual Temp 20° Lo -2° Hist. Avg. 32° Lo 19°	**4** Actual Temp 33° Lo 20° Hist. Avg. 32° Lo 19°

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Dec 29 Actual Temp 39° Lo 12° Hist. Avg. 32° Lo 20°	30 Actual Temp 15° Lo 3° Hist. Avg. 32° Lo 19°	31 Actual Temp 14° Lo 4° Hist. Avg. 32° Lo 19°	Jan 1 Actual Temp 24° Lo 14° Hist. Avg. 32° Lo 19°	2 Actual Temp 22° Lo 5° Hist. Avg. 32° Lo 19°	3 Actual Temp 20° Lo -2° Hist. Avg. 32° Lo 19°	4 Actual Temp 33° Lo 20° Hist. Avg. 32° Lo 19°
5 Actual Temp 31° Lo -1° Hist. Avg. 32° Lo 19°	6 Actual Temp -1° Lo -15° Hist. Avg. 32° Lo 18°	7 Actual Temp 5° Lo -11° Hist. Avg. 32° Lo 18°	8 Actual Temp 15° Lo -2° Hist. Avg. 32° Lo 18°	9 Actual Temp 29° Lo 2° Hist. Avg. 31° Lo 18°	10 Actual Temp 42° Lo 29° Hist. Avg. 31° Lo 18°	11 Actual Temp 41° Lo 31° Hist. Avg. 31° Lo 18°
12 Actual Temp 44° Lo 29° Hist. Avg. 31° Lo 18°	13 Actual Temp 47° Lo 28° Hist. Avg. 31° Lo 18°	14 Actual Temp 35° Lo 22° Hist. Avg. 31° Lo 18°	15 Actual Temp 22° Lo 16° Hist. Avg. 31° Lo 18°	16 Actual Temp 35° Lo 20° Hist. Avg. 31° Lo 18°	17 Actual Temp 21° Lo 13° Hist. Avg. 31° Lo 18°	18 Actual Temp 21° Lo 11° Hist. Avg. 31° Lo 18°
19 Actual Temp 39° Lo 11° Hist. Avg. 31° Lo 18°	20 Actual Temp 37° Lo 20° Hist. Avg. 31° Lo 18°	21 Actual Temp 20° Lo 1° Hist. Avg. 31° Lo 18°	22 Actual Temp 15° Lo 1° Hist. Avg. 31° Lo 18°	23 Actual Temp 11° Lo -3° Hist. Avg. 31° Lo 18°	24 Actual Temp 28° Lo -6° Hist. Avg. 31° Lo 18°	25 Actual Temp 33° Lo 7° Hist. Avg. 32° Lo 18°
26 Actual Temp 32° Lo 6° Hist. Avg. 32° Lo 18°	27 Actual Temp 6° Lo -7° Hist. Avg. 32° Lo 18°	28 Actual Temp 4° Lo -11° Hist. Avg. 32° Lo 18°	29 Actual Temp 22° Lo 1° Hist. Avg. 32° Lo 18°	30 Actual Temp 33° Lo 19° Hist. Avg. 32° Lo 18°	31 Actual Temp 28° Lo 19° Hist. Avg. 32° Lo 18°	Feb 1 Actual Temp 32° Lo 23° Hist. Avg. 32° Lo 19°

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Jan 26 Actual Temp 32° Lo 6° Hist. Avg. 32° Lo 18°	27 Actual Temp 6° Lo -7° Hist. Avg. 32° Lo 18°	28 Actual Temp 4° Lo -11° Hist. Avg. 32° Lo 18°	29 Actual Temp 22° Lo 1° Hist. Avg. 32° Lo 18°	30 Actual Temp 33° Lo 19° Hist. Avg. 32° Lo 18°	31 Actual Temp 28° Lo 19° Hist. Avg. 32° Lo 18°	Feb 1 Actual Temp 32° Lo 23° Hist. Avg. 32° Lo 19°
2 Actual Temp 23° Lo 7° Hist. Avg. 32° Lo 19°	3 Actual Temp 22° Lo 1° Hist. Avg. 33° Lo 19°	4 Actual Temp 25° Lo 10° Hist. Avg. 33° Lo 19°	5 Actual Temp 25° Lo 9° Hist. Avg. 33° Lo 19°	6 Actual Temp 12° Lo -1° Hist. Avg. 33° Lo 20°	7 Actual Temp 11° Lo -3° Hist. Avg. 33° Lo 20°	8 Actual Temp 17° Lo 6° Hist. Avg. 34° Lo 20°
9 Actual Temp 20° Lo 7° Hist. Avg. 34° Lo 20°	10 Actual Temp 13° Lo -2° Hist. Avg. 34° Lo 20°	11 Actual Temp 15° Lo -4° Hist. Avg. 34° Lo 21°	12 Actual Temp 23° Lo 2° Hist. Avg. 35° Lo 21°	13 Actual Temp 34° Lo 15° Hist. Avg. 35° Lo 21°	14 Actual Temp 22° Lo 13° Hist. Avg. 35° Lo 21°	15 Actual Temp 24° Lo 6° Hist. Avg. 36° Lo 22°
16 Actual Temp 28° Lo 18° Hist. Avg. 36° Lo 22°	17 Actual Temp 29° Lo 22° Hist. Avg. 36° Lo 22°	18 Actual Temp 45° Lo 23° Hist. Avg. 37° Lo 22°	19 Actual Temp 45° Lo 32° Hist. Avg. 37° Lo 23°	20 Actual Temp 51° Lo 35° Hist. Avg. 37° Lo 23°	21 Actual Temp 37° Lo 28° Hist. Avg. 38° Lo 23°	22 Actual Temp 35° Lo 23° Hist. Avg. 38° Lo 24°
23 Actual Temp 29° Lo 16° Hist. Avg. 38° Lo 24°	24 Actual Temp 25° Lo 13° Hist. Avg. 39° Lo 24°	25 Actual Temp 24° Lo 7° Hist. Avg. 39° Lo 25°	26 Actual Temp 19° Lo 1° Hist. Avg. 40° Lo 25°	27 Actual Temp 19° Lo 6° Hist. Avg. 40° Lo 25°	28 Actual Temp 32° Lo 6° Hist. Avg. 40° Lo 26°	Mar 1 Actual Temp 32° Lo 12° Hist. Avg. 41° Lo 26°

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Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Feb 23 Actual Temp 29° Lo 16° Hist. Avg. 38° Lo 24°	24 Actual Temp 25° Lo 13° Hist. Avg. 39° Lo 24°	25 Actual Temp 24° Lo 7° Hist. Avg. 39° Lo 25°	26 Actual Temp 19° Lo 1° Hist. Avg. 40° Lo 25°	27 Actual Temp 19° Lo 6° Hist. Avg. 40° Lo 25°	28 Actual Temp 32° Lo 6° Hist. Avg. 40° Lo 26°	Mar 1 Actual Temp 32° Lo 12° Hist. Avg. 41° Lo 26°
2 Actual Temp 16° Lo 5° Hist. Avg. 41° Lo 26°	3 Actual Temp 20° Lo 1° Hist. Avg. 42° Lo 27°	4 Actual Temp 27° Lo 12° Hist. Avg. 42° Lo 27°	5 Actual Temp 24° Lo 20° Hist. Avg. 42° Lo 27°	6 Actual Temp 32° Lo 16° Hist. Avg. 43° Lo 28°	7 Actual Temp 46° Lo 20° Hist. Avg. 43° Lo 28°	8 Actual Temp 39° Lo 23° Hist. Avg. 44° Lo 28°
9 Actual Temp 42° Lo 21° Hist. Avg. 44° Lo 28°	10 Actual Temp 54° Lo 41° Hist. Avg. 44° Lo 29°	11 Actual Temp 51° Lo 33° Hist. Avg. 45° Lo 29°	12 Actual Temp 34° Lo 18° Hist. Avg. 45° Lo 30°	13 Actual Temp 39° Lo 14° Hist. Avg. 46° Lo 30°	14 Actual Temp 54° Lo 38° Hist. Avg. 46° Lo 30°	15 Actual Temp 40° Lo 28° Hist. Avg. 46° Lo 30°
16 Actual Temp 29° Lo 19° Hist. Avg. 47° Lo 31°	17 Actual Temp 39° Lo 20° Hist. Avg. 47° Lo 31°	18 Actual Temp 51° Lo 30° Hist. Avg. 48° Lo 32°	19 Actual Temp 47° Lo 35° Hist. Avg. 48° Lo 32°	20 Actual Temp 48° Lo 31° Hist. Avg. 48° Lo 32°	21 Actual Temp 58° Lo 33° Hist. Avg. 49° Lo 32°	22 Actual Temp 42° Lo 29° Hist. Avg. 49° Lo 33°
23 Actual Temp 30° Lo 21° Hist. Avg. 50° Lo 33°	24 Actual Temp 37° Lo 20° Hist. Avg. 50° Lo 34°	25 Actual Temp 31° Lo 21° Hist. Avg. 50° Lo 34°	26 Actual Temp 39° Lo 17° Hist. Avg. 51° Lo 34°	27 Actual Temp 54° Lo 35° Hist. Avg. 51° Lo 35°	28 Actual Temp 55° Lo 34° Hist. Avg. 52° Lo 35°	29 Actual Temp 41° Lo 28° Hist. Avg. 52° Lo 35°
30 Actual Temp 57° Lo 25° Hist. Avg. 52° Lo 36°	31 Actual Temp 68° Lo 44° Hist. Avg. 53° Lo 36°	Apr 1 Actual Temp 57° Lo 34° Hist. Avg. 53° Lo 36°	2 Actual Temp 45° Lo 36° Hist. Avg. 54° Lo 37°	3 Actual Temp 42° Lo 37° Hist. Avg. 54° Lo 37°	4 Actual Temp 46° Lo 35° Hist. Avg. 54° Lo 38°	5 Actual Temp 49° Lo 33° Hist. Avg. 55° Lo 38°

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