TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Kinder Morgan Operating L.P. "C"
501 North 3rd Street
Fernandina Beach, Florida 32034

Nassau Terminal LLC
Facility ID No. 0890440

PROJECT

Project No. 0890440-001-AC
Application for Air Construction Permit
Initial Air Construction Permit
Handling and Transporting of Coal

COUNTY

Nassau, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Waste and Air Resource Management
Northeast District Office
8800 Baymeadows Way, Suite 100
Jacksonville, Florida 32256-7590

8/18/2014

1. GENERAL PROJECT INFORMATION

Air Pollution Regulations

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

Glossary of Common Terms

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of this permit.

Facility Description and Location

Kinder Morgan Operating L.P. "C" is an existing Marine Cargo Handling, which is categorized under Standard Industrial Classification Code No. 4491. The facility is located in Nassau County at 501 North 3rd Street in Fernandina Beach, Florida. The UTM coordinates of the existing facility are Zone 17, 455.74 km East, and 3393.97 km North. This site is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to state and federal Ambient Air Quality Standards (AAQS).

Facility Regulatory Categories

- The facility **is not** a major source of hazardous air pollutants (HAP).
- The facility **has no** units subject to the acid rain provisions of the Clean Air Act.
- The facility **is not** a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility **is not** a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Project Description

Initial Air Construction Permit to re-purpose the facility to also allow the handling and transporting of coal. This operation will consist of trans-loading inbound coal from vessels, via ship-mounted clamshell, up to possibly three hoppers and then to truck(s) for offsite delivery; and also trans-loading of coal via clamshell to a barge for temporary storage. The coal would then be transferred from the barge via clamshell to the hopper(s) and then truck(s) for offsite delivery.

ID No.	Emission Unit Description	
001	Ship offloading of Coal **EP01** Via Clamshell to (Ship-hold/Vessel) **EP02** Clamshell from (Ship-hold/Vessel) to Hopper 1* **EP03** Clamshell from (Ship-hold/Vessel) to Hopper 2* **EP04** Clamshell from (Ship-hold/Vessel) to Hopper 3* **EP05** From Hopper 1* to truck **EP06** From Hopper 2* to truck **EP07** From Hopper 3 to truck	Particulate emissions will be controlled through a combination of best management practices, shielding, and water sprays as needed.
002	Transporting of Coal to Barge **EP01** Via Clamshell to (Ship-hold/Vessel) **EP02** Clamshell to Barge **EP03** Barge to Clamshell **EP04** Clamshell to Hopper 1* **EP05** Clamshell to Hopper 2* **EP06** Clamshell to Hopper 3* **EP07** From Hopper 1* to truck **EP08** From Hopper 2* to truck **EP09** From Hopper 3* to truck	

*****Up to three (3) Hoppers may be installed. Each drop point to the Hopper(s) and each drop from the Hopper(s) to the truck will be a separate emissions point (EP).

Kinder Morgan Operating L.P. "C" is a marine cargo handling facility that currently transfers various types of break-bulk products. These products include, but are not limited to paper products, steel coils, rebar and containers to and from vessels, railcars, and trucks using cranes and various types of mobile equipment. The facility also has an emergency RICE generator that is subject to the requirements of 40 CFR 60 Subpart ZZZZ-National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. This engine is not a source of HAPs. The engine met the categorical exemption from having to obtain an air permit in Rule 62-210.300(3)(a)35., F.A.C.

The facility is within the threshold limits allowed annually. The machine has been in place since 2006 and only has 169.4 hours on it. It is averaging just below 19 hours a year (18.82), 13 of those hours are from a weekly 15 minute test mode. During the test mode the machine burns 5.09 gallons/hour. For the remaining 6 hours throughout the year the machine would be in actual run mode and at 100% utilization it consumes 29.1 gallons per hour. With that being said, annual fuel consumption is approximately 240.77 gallons of diesel fuel (13 hours x 5.09 gallons/hour = 66.17 gallons + 6 hours x 29.1 gallons/hour = 174.6 gallons)."

ID No.	Emission Unit Description
xx	Emergency RICE Engine (4 cycle, 605 HP, Rich burn, Cummins Model No. NTA-885-G5, manufactured 3/6/09)

Processing Schedule

8/1/2014 Received the application for an air pollution construction permit.

8/15/2014 Received Additional Information

SHIP OFFLOADING OF COAL/ TRANS-LOADING OF COAL TO BARGE

SOURCES OF UNCONFINED EMISSIONS

The overall handling of coal:

- The transfer of coal from vessels to clamshell.
- The transfer of coal from clamshell to barge.
- The transfer of coal from clamshell to hopper.
- The transfer of coal from hopper to truck.
- Vehicular movement.

UNCONFINED EMISSIONS OF PARTICULATE MATTER

No person shall cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any activity, including vehicular movement; transportation of materials; construction, alteration, demolition or wrecking; or industrially related activities such as loading, unloading, storing or handling; without taking reasonable precautions to prevent such emissions. Particulate emissions will be controlled through a combination of best management practices, shielding, and water sprays as needed.

- Operate water sprays during coal unloading and transfer operations and on paved roads as needed to maintain the moisture content of the materials to as close to or higher than “as received” levels.
- Keep material transfer points as low as possible (daily, when in operation). Typical drop heights are 10’ for coal.
- Curtail operations during high wind conditions, as necessary.
- Cover the haul trucks upon leaving the facility (daily, when in operation).
- Post speed limit signs on paved roads (permanent).
- Visually inspect ship unloading area (at least twice a day during unloading periods) and take corrective actions as appropriate to minimize visible emissions.
- Implement good housekeeping at all times (daily, when in operation).

- Records of inspections and maintenance will be retained for a minimum of two years, and will be made available to the Department upon request.
- If corrective actions are necessary, maintenance job request will be immediately initiated. These records will also be maintained for a minimum of two years.
- Use of operational controls as necessary (i.e., carefully lowering the clamshell buckets into ship holds, minimizing drop heights, shrouding the hoppers, wind shields, etc.).
- Sweep roadways and other paved areas within Terminal; grounds as necessary to prevent particulate matter from becoming airborne.

2. PSD APPLICABILITY

General PSD Applicability

For areas currently in attainment with the state and federal AAQS or areas otherwise designated as unclassifiable, the Department regulates major stationary sources of air pollution in accordance with Florida's PSD preconstruction review program as defined in Rule 62-212.400, F.A.C. Under preconstruction review, the Department first must determine if a project is subject to the PSD requirements ("PSD applicability review") and, if so, must conduct a PSD preconstruction review. A PSD applicability review is required for projects at new and existing major stationary sources. In addition, proposed projects at existing minor sources are subject to a PSD applicability review to determine whether potential emissions *from the proposed project itself* will exceed the PSD major stationary source thresholds. A facility is considered a major stationary source with respect to PSD if it emits or has the potential to emit:

- 250 tons per year or more of any regulated air pollutant; or
- 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the following 28 PSD-major facility categories: fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), Kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants, fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants and charcoal production plants.

Once it is determined that a project is subject to PSD preconstruction review, the project emissions are compared to the "significant emission rates" defined in Rule 62-210.200, F.A.C. for the following pollutants: carbon monoxide (CO); nitrogen oxides (NO_X); sulfur dioxide (SO_2); particulate matter (PM); particulate matter with a mean particle diameter of 10 microns or less (PM_{10}); volatile organic compounds (VOC); lead (Pb); fluorides (Fl); sulfuric acid mist (SAM); hydrogen sulfide (H_2S); total reduced sulfur (TRS), including H_2S; reduced sulfur compounds, including H_2S; municipal waste combustor organics measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans; municipal waste combustor metals measured as particulate matter; municipal waste combustor acid gases measured as SO_2 and hydrogen chloride (HCl); municipal solid waste landfills emissions measured as non-methane organic compounds (NMOC); and mercury (Hg). In addition, significant emissions rate also means any emissions rate or any net emissions increase associated with a major stationary source or major modification which would construct within 10 kilometers of a Class I area and have an impact on such area equal to or greater than 1 $\mu g/m^3$, 24-hour average.

If the potential emission exceeds the defined significant emissions rate of a PSD pollutant, the project is considered "significant" for the pollutant and the applicant must employ the Best Available Control Technology (BACT) to minimize the emissions and evaluate the air quality impacts. Although a facility or project may be *major* with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several "significant" regulated pollutants.

PSD Applicability for Project

This facility is a natural minor source with emissions below 100 TPY and is not subject to PSD.

Appendix E
KINDER MORGAN NASSAU TERMINAL
Coal Emissions Calculations
PM and PM10
12-Month Rolling Total Projection

	Type	Particle Size Multiplier (k)	Constant	Mean Wind Speed (U)[1] (mph)	Material Moisture Content (M)[2] (%)	Emission Factor[3] (lbs/ton)	Facility Throughput (tons/yr)	Maximum No. of Transfer / Emission Points[4]	Uncont'd Emissions (tons/yr)	Control Efficiency[5] (%)	Cont'd Emissions (tons/yr)
Material Handled:											
Coal	**PM**	0.74	0.0032	7.8	8.0	6.06E-04	500,000	5	**0.758**	85.00%	**0.114**
	PM10	0.35	0.0032	7.8	8.0	2.87E-04	500,000	5	**0.358**	85.00%	**0.054**

NOTES:

1 - Mean (63 years) annual wind speed of 7.8 MPH speed obtained from sercc.com.

2 - The moisture content in each batch of material received is variable. The mean moisture content from the manufacturer is used here in conjunction with other conservative parameters to represent emissions.

3 - Emissions are based on the material handling drop/batch point equation in AP-42, 13.2.4, "Aggregate Handling and Storage Piles."
Emissions = $k(0.0032)[(U/5)^{1.3}/(M/2)^{1.4}]$.

4 - Maximum number of transfer points is used to represent the worst case total material pathway scenario. Each transfer point is a point at which PM can potentially be

5 - The control efficiency is based on the following: 50% control efficiency for BMPs, shielding, and 70% for water sprays. Overall control efficiency calcuation: [(1-0.5) x (1-0.7)] = 0.15. Overall Control Efficiency = 1 - 0.15 = 85%.

Appendix E
KINDER MORGAN NASSAU TERMINAL

Fugitive Roadway Emissions (Paved Roads)

Paved Road Emissions	Constant k (lb/VMT)	Silt Loading (sL) (g/m2)	Mean Vehicle Weight (W) (tons)	Number of Wet Days (P)	Number of Days (N)	Emission Factor (lb/VMT)	Annual Miles Traveled	Uncontrolled Emissions (tpy)	Controlled Emissions (tpy)
PM	0.011	0.4	36	120	365	0.17	6,000	0.51	0.15
PM_{10}	0.0022	0.4	36	120	365	0.03	6,000	0.10	0.03

Calculation Basis:

$E = [k(sL)^{0.91} \times (W)^{1.02}](1 - P/4N)$ *Reference: AP 42, 13.2.1, Paved Roads, Jan. 2011, Equation (2)*

Roads are subject to natural mitigation due to rainfall and other precipitation

Where:

E = particulate emission factor
k = particle size multiplier for particle size range and units of interest
sL = road surface silt loading (grams per square meter) (g/m2) *Default for low ADT public roads under normal conditions*
W = average weight (tons) of the vehicles traveling the road unloaded and loaded.
S = average speed (mph) of the vehicles traveling the road
P = number of "wet" days with at least 0.01 in of precipitation during the averaging period *Reference: AP 42, 13.2.1, Paved Roads, Jan. 2011, Figure 13.2.1-2*
N = number of days in the averaging period, 365 days for annual

Note: Roadways will be wetted with the water truck as needed to control emissions from the truck transfer operations. It is assumed this will have an efficiency of 70%.

*The Coal handling emissions are estimated using factors from Assessment of Coal Dust Emissions from Power Plants for PSD Permit Applications, G. McVehil and T.A. Umenhofer, April 1981; and AP-42, Sections 11.2.3, Supplement A for wind erosion from active stockpiles and Supplement B for conveyors; AP-42, Section 11.2.1 for Unpaved Roads.

3. APPLICATION REVIEW

Discussion of Emissions

PM/PM10

State Requirements

Rules 62-296.320(4)(c), F.A.C. Unconfined Emissions of Particulate Matter.

This facility is subject to the General Visible Emissions limit. No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity equal to or greater than 20% opacity. EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C. This regulation does not impose a specific testing requirement. [Rule 62-296.320(4)(b)1, F.A.C.] The Department may require a special compliance test in accordance with Rule 62 297.310(7)(b), F.A.C.

This facility **is not** subject to 40 CFR 60, Subpart Y- Standards of Performance for Coal Preparation and Processing Plants because it is not a coal preparation or processing plant as seen below in the definitions.

40 CFR 60.251 Definitions:

(e) *Coal preparation and processing plant* means any facility (excluding underground mining operations) which prepares coal by one or more of the following processes: breaking, crushing, screening, wet or dry cleaning, and thermal drying.

(f) *Coal processing and conveying equipment* means any machinery used to reduce the size of coal or to separate coal from refuse, and the equipment used to convey coal to or remove coal and refuse from the machinery. This includes, but is not limited to, breakers, crushers, screens, and conveyor belts. Equipment located at the mine face is not considered to be part of the coal preparation and processing plant.

In accordance with Rule 62-296.700(2)(b), F.A.C., Exemptions. The following facilities and emissions units which are located within a particulate matter air quality maintenance area or area of influence are exempt from the provisions of this rule: (a) Any facility with total maximum ***allowable emissions*** of particulate matter of less than 15 tons per year and 5 pounds per hour.

Since Kinder Morgan's PM maximum potential to emit is less than 15 tons per year and 5 pounds per hour, they are exempt from RACT Rule 62-296.711 Materials Handling, Sizing, Screening, Crushing and Grinding Operations.

Other Draft Permit Requirements

The maximum process rate to the ship offloading and transportation system (EU001 and 002) is estimated to be 500,000 tons per year of coal.

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. Leslie Maybin is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Florida Department of Environmental Protection (Department), Northeast District Office, Waste and Air Resource Management's mailing address 8800 Baymeadows Way, Suite 100, Jacksonville, Florida 32256.