

217/785-1705

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) -- REVISED

PERMITTEE

Archer Daniels Midland Company
Attn: Miranda Gerard
4666 Faries Parkway
Decatur, Illinois 62525

Application No.: 07070068 I.D. No.: 063060AAS
Applicant's Designation: Conveyors/Drags Date Received: August 15, 2011
Subject: Grain Elevator and Bulk Product
Date Issued: November 3, 2011 Expiration Date: April 26, 2016
Location: 280 South Calhoun Street, Morris, Grundy County

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of:

Three (3) Truck Dump Pits with Baghouse Control;
One (1) Gravity Screener;
Internal Transfer - Enclosed;
One (1) Barge Load-Out Controlled by Baghouse;
Grain Storage (1,231,000 Bushel Capacity);
One (1) 6,000 Bu/Hour Natural Gas-Fired (42.9 mmBtu/Hour) Column Grain Dryer;
Truck Load-Outs with Socks; and
Dry Bulk Handling Dock

pursuant to the above-referenced application. This permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued to limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for Particulate Matter less than 10 microns (PM₁₀)). As a result, the source is excluded from the requirements to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit are described in Attachment A.
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permit(s) for this location.
- 2a. Pursuant to 35 Ill. Adm. Code 212.123(a), no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to 35 Ill. Adm. Code 212.122.

- b. Pursuant to 35 Ill. Adm. Code 212.123(b), the emission of smoke or other particulate matter from any such emission unit may have an opacity greater than 30 percent but not greater than 60 percent for a period or periods aggregating 8 minutes in any 60 minute period provided that such opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 meter (1000 foot) radius from the center point of any other such emission unit owned or operated by such person, and provided further that such opaque emissions permitted from each such emission unit shall be limited to 3 times in any 24 hour period.
- c. Pursuant to 35 Ill. Adm. Code 212.301, no person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity that is visible by an observer looking generally toward the zenith at a point beyond the property line of the source.
- d. Pursuant to 35 Ill. Adm. Code 212.321(a), no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in 35 Ill. Adm. Code 212.321(c).
- e. Housekeeping Practices. Pursuant to 35 Ill. Adm. Code 212.461(b), all grain-handling and grain-drying operations, regardless of size, must implement and use the following housekeeping practices:
 - i. Air pollution control devices shall be checked daily and cleaned as necessary to insure proper operation.
 - ii. Cleaning and Maintenance.
 - A. Floors shall be kept swept and cleaned from boot pit to cupola floor. Roof or bin decks and other exposed flat surfaces shall be kept clean of grain and dust that would tend to rot or become airborne.
 - B. Cleaning shall be handled in such a manner as not to permit dust to escape to the atmosphere.
 - C. The yard and surrounding open area, including but not limited to ditches and curbs, shall be cleaned to prevent the accumulation of rotting grain.
 - iii. Dump Pit.
 - A. Aspiration equipment shall be maintained and operated.
 - B. Dust control devices shall be maintained and operated.

- iv. Head House. The head house shall be maintained in such a fashion that visible quantities of dust or dirt are not allowed to escape to the atmosphere.
 - v. Property. The yard and driveway of any source shall be asphalted, oiled or equivalently treated to control dust.
 - vi. Housekeeping Check List. Housekeeping check lists to be developed by the Illinois EPA shall be completed by the manager and maintained on the premises for inspection by Illinois EPA personnel.
- f. Pursuant to 35 Ill. Adm. Code 212.463(a), unless otherwise exempted pursuant to 35 Ill. Adm. Code 212.461(c) or (d) or allowed to use alternate control according to 35 Ill. Adm. Code 212.461(g), grain-drying operations for which construction or modification commenced prior to June 30, 1975, with a total grain-drying capacity in excess of 750 bushels per hour for 5 percent moisture extraction at manufacturer's rated capacity (using the American Society of Agricultural Engineers Standard 248.2, Section 9, Basis for Stating Drying Capacity of Batch and Continuous-Flow Grain Dryers) shall be operated in such a fashion as to preclude the emission of particulate matter larger than 300 microns mean particle diameter, shall apply for an operating permit pursuant to 35 Ill. Adm. Code 201, and shall comply with the following:
- Column Dryers. The largest effective circular diameter of transverse perforations in the external sheeting of a column dryer shall not exceed 0.094 inch, and the grain inlet and outlet shall be enclosed.
3. Pursuant to 35 Ill. Adm. Code 214.301, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to excess 2000 ppm.
4. This permit is issued based on the source not being subject to the New Source Performance Standards (NSPS) for Grain Elevators, 40 CFR 60 Subpart DD, because the permanent storage capacity is less than 88,100 m³ (ca. 2.5 million U.S. bushels).
- 5a. Pursuant to 35 Ill. Adm. Code 212.314, 35 Ill. Adm. Code 212.301 shall not apply and spraying pursuant to 35 Ill. Adm. Code 212.304 through 212.310 and 35 Ill. Adm. Code 212.312 shall not be required when the wind speed is greater than 40.2 km/hour (25 mph). Determination of wind speed for the purposes of this rule shall be by a one-hour average or hourly recorded value at the nearest official station of the U.S. Weather Bureau or by wind speed instruments operated on the site. In cases where the duration of operations subject to this rule is less than one hour, wind speed may be averaged over the duration of the operations on the basis of on-site wind speed instrument measurements.
- b. Pursuant to 35 Ill. Adm. Code 212.461(a), 35 Ill. Adm. Code 212.302(a), 212.321, and 212.322 shall not apply to grain-handling and grain-drying

operations, portable grain-handling equipment and one-turn storage space.

- c. Pursuant to Section 9(f) of the Illinois Environmental Protection Act (Act), any grain elevator located outside of a major population area, as defined in Section 211.3610 of Title 35 of the Illinois Administrative Code, shall be exempt from the requirements of 35 Ill. Adm. Code 212.462 of Title 35 of the Illinois Administrative Code provided that the elevator:
 - i. Does not violate the prohibitions of Section 9(a) of the Act or have a certified investigation, as defined in 35 Ill. Adm. Code 211.970 of Title 35 of the Illinois Administrative Code, on file with the Illinois EPA and
 - ii. Is not required to obtain a Clean Air Act Permit Program permit pursuant to Section 39.5 of the Act. Notwithstanding the above exemption, new stationary source performance standards for grain elevators, established pursuant to Section 9.1 of the Act and Section 111 of the federal Clean Air Act, shall continue to apply to grain elevators.
- 6a. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.
- b. The baghouses shall be in operation at all times when the associated with the rail dump pits, truck dump pits, and the barge load-out are in operation and emitting air contaminants.
- c. The Permittee shall, in accordance with the manufacturer(s) and/or vendor(s) recommendations, perform periodic maintenance on the baghouses such that the baghouses are kept in proper working condition and not cause a violation of the Illinois Environmental Protection Act or regulations promulgated therein.
- d. Each dump pit shall be inspected for proper operation while receiving is occurring, at least once each week (Monday through Sunday) when grain is received.
- e. The column grain dryer shall only be operated with natural gas as the fuel. The use of any other fuel in the column grain dryer requires that the Permittee first obtain a construction permit from the Illinois EPA and then perform stack testing to verify compliance with all applicable requirements.
- f. Each column dryer shall be inspected for any leaks in the enclosures and proper condition of the external sheeting, on at least an annual basis prior to the harvest season.
- g. The column dryers shall be inspected for visible emissions in the exhaust while drying is occurring, at least once each week when a dryer is operated.

- h. The grain elevator shall be inspected for presence of visible emissions from internal transfer and cleaning, while such activity is occurring, at least once each week when such activity is performed.
- i. Grain load-out socks, sleeves or equivalent devices shall be inspected for proper operation while load-out is occurring, at least once each week when grain load-out is performed.
- j. For purposes of this permit, dry bulk materials are considered to be materials like:
 - i. Dry Distillers Grain (DDG);
 - ii. Cookie Meal;
 - iii. Corn Gluten Meal;
- k. This permit does not authorize physical changes to the facility to handle bulk materials. Any such physical change shall require a construction permit from the Illinois EPA.
- l. This permit does not excuse the Permittee from obtaining other approvals that may be required from the Illinois EPA, Bureau of Land, or other state or federal agencies to handle a new dry bulk material.
- m. The Permittee shall obtain a construction permit from the Illinois EPA prior to receipt and handling of a new dry bulk material that is not listed in Condition 6(j). The application shall include, but not be limited to:
 - i. A description of the material to be handled;
 - ii. The estimated annual amount of material to be handled;
 - iii. Any additional work practices or control devices used to reduce emissions;
 - iv. A copy of a Material Safety Data Sheet (MSDS) for the material to be handled, if available;
 - v. Type(s) and description of emission control method(s) to be used, if any; and
 - vi. The estimated potential emissions from the receipt, storage, and handling of the proposed new material including an indication whether the receipt, storage and handling of the proposed new material will result in an exceedance of the emission limits in Condition 7 of this permit. If the emission limits in Condition 8 will be exceeded by the receipt of a new material, the construction permit application shall request new emission limits for the new material.

- 7a. The amount of material handled by the source shall not exceed the following limits:
- i. The amount of grain received, that is, unloaded in the dump pit areas at the elevator shall not exceed 1,120,000 tons per year.
 - ii. The amount of grain dried shall not exceed 196,000 tons per year.
 - iii. The amount of grain shipped, that is, loaded into a vehicle in the load-out areas at the elevator shall not exceed 1,120,000 tons per year.
 - iv. The amount of bulk product handled shall not exceed 700,000 tons per year.
- b. Emissions and operation of the grain handling shall not exceed the following limits:

Process	Throughput		E M I S S I O N S					
	(T/Mo)	(T/Yr)	(lb/T)	PM		PM ₁₀		(T/Yr)
				(T/Mo)	(T/Yr)	(lb/T)	(T/Mo)	
Truck Dump Pit	186,667	1,120,000	0.18	0.34	2.02	0.059	0.11	0.66
Column Dryer	32,667	196,000	0.22	3.59	21.56	0.055	0.90	5.39
Truck/Barge Loadout	186,667	1,120,000	0.086	4.01	24.08	0.029	1.35	8.12
Enclosed Internal Transfer	578,667	3,472,000	0.061	0.18	1.06	0.034	0.10	0.59
Storage Bin Vents	186,667	1,120,000	0.025	2.33	<u>14.00</u>	0.0063	0.59	<u>3.53</u>
				Total: 62.72				<u>18.29</u>

* One bushel equals 56 pounds

These limits are based on a grain throughput of 1,120,000 tons per year received, standard emission factors (Table 9.9-1, AP-42 Fifth Edition, Volume I, Update 2003, May 2003), 98% control efficiency for baghouse controlled dump pits, 99% control efficiency for enclosed internal transfer and 50% control efficiency for truck loadouts with socks.

- c. Emissions and operation of the bulk material handling shall not exceed the following limits:

Process	Throughput		E M I S S I O N S					
	(T/Mo)	(T/Yr)	(lb/T)	PM		PM ₁₀		(T/Yr)
				(T/Mo)	(T/Yr)	(lb/T)	(T/Mo)	
Truck Dump Pits	116,667	700,000	0.18	0.21	1.26	0.059	0.07	0.41
Truck/Barge Loadout**	16,667	700,000	0.086	2.51	15.05	0.029	0.85	5.08
Enclosed Internal Transfer	361,667	2,170,000	0.27	0.11	0.66	0.135	0.06	0.37
Storage Bin Vents	116,667	700,000	0.025	1.46	<u>8.75</u>	0.0063	0.37	<u>2.21</u>
				Total: 25.72				<u>8.07</u>

These limits are based on a bulk material throughput of 700,000 tons per year received, standard emission factors (Table 9.9-1, AP-42 Fifth Edition, Volume I, Update 2003, May 2003), 98% control efficiency for baghouse controlled dump pits, 99% control efficiency for enclosed internal transfer, and 50% control efficiency for truck loadouts with socks.

d. Emissions and operation of the column grain dryer shall not exceed the following limits:

i. Total Maximum Firing Rate: 42.9 mmBtu/hour.

ii. Emissions from the combustion of natural gas:

<u>Pollutant</u>	<u>Emission Factor</u>		<u>Emissions</u>	
	<u>(Lbs/mmscf)</u>	<u>(Lbs/Hr)</u>	<u>(Tons/Yr)</u>	
Carbon Monoxide (CO)	84	3.60	15.78	
Nitrogen Oxides (NO _x)	100	4.29	18.79	
Particulate Matter (PM)	7.6	0.33	1.43	
Sulfur Dioxide (SO ₂)	0.6	0.03	0.11	
Volatile Organic Material (VOM)	5.5	0.24	1.03	

These limits are based on the maximum fuel usage, 8,760 hours/year of operation, and standard emission factors (Tables 1.4-1 and 1.4-2, AP-42, Fifth Edition, Volume I, Supplement D, July 1998).

e. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).

8a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:

i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing methods of testing and formats for reporting results of testing. Such procedures and revisions thereto, shall not become effective until filed with the Secretary of State, as required by the APA Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.

- ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.
- b. Testing required by Condition 9 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.
- 9. Pursuant to 35 Ill. Adm. Code 212.110(c), upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.
- 10. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.
- 11a. The Permittee shall maintain records of the following items so as to demonstrate compliance with the conditions of this permit:
 - i. Records addressing use of good operating practices for the baghouses:
 - A. Records for periodic inspection of the baghouses with date, individual performing the inspection, and nature of inspection; and
 - B. Records for prompt repair of defects, with identification and description of defect, effect on emissions, date identified, date repaired, and nature of repair.
 - ii. Records of housekeeping check lists completed by the elevator manager.
 - iii. Records for the inspections required by Conditions 6(d), (f), (g), (h) and (i), with date, time and observations if such information is not incorporated in the housekeeping check list.
 - iv. Total grain received, (bushels/month and bushels/year) running total of 12 months of data;
 - vi. Grain dried, (bushels/month and bushels/year) running total of 12 months of data;

- vii. Grain cleaned, (bushels/month and bushels/year) running total of 12 months of data;
 - viii. Grain shipped, (bushels/month and bushels/year) running total of 12 months of data;
 - ix. Bulk material handled, type of material, (tons/month and tons/year) running total of 12 months of data;
 - x. Natural gas consumption of the column grain dryers (mmscf/month and mmscf/year); and
 - xi. Monthly and annual CO, NO_x, PM and PM₁₀, SO₂, and VOM emissions from the source with supporting calculations (tons/month and tons/year).
- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer storage device) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA or USEPA request for records during the course of a source inspection.
12. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.
- 13a. If there is an exceedance of or a deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance or deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or deviation and efforts to reduce emissions and future occurrences.
- b. Two (2) copies of required reports and notifications shall be sent to:
- Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276
- and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

It shall be noted that this permit has been revised to include the operation of two drag conveyors and two augers with no change in emissions.

If you have any questions on this permit, please contact Mike Dragovich at 217/785-1705.

Edwin C. Bakowski, P.E.
Manager, Permit Section
Division of Air Pollution Control

Date Signed: _____

ECB:MJD:jws

cc: Illinois EPA, FOS Region 1
Lotus Notes

Attachment A - Emission Summary

This attachment provides a summary of the maximum emissions from the Grain and Bulk Products Elevator operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. The resulting maximum emissions are below the levels, (e.g., 100 tons per year of PM₁₀) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that less material is handled, and control measures are more effective than required in this permit.

<u>Emission Unit</u>	E M I S S I O N S (Tons/Year)					
	<u>CO</u>	<u>NO_x</u>	<u>PM</u>	<u>PM₁₀</u>	<u>SO₂</u>	<u>VOM</u>
<u>Grain Handling:</u>						
Dump Pits - Straight						
Truck			2.02	0.66		
Column Dryer			21.56	5.39		
Truck/Barge Loadout			24.08	8.12		
Enclosed Internal						
Transfer			1.06	0.59		
Storage Bin Vents			14.00	3.53		
Fuel Combustion in						
Column Grain Dryer	15.78	18.79	1.43	1.43	0.11	1.03
<u>Bulk Handling:</u>						
Truck Dump Pits			1.26	0.41		
Truck/Barge Loadout			15.05	5.08		
Enclosed Internal						
Transfer			0.66	0.37		
Storage Bin Vents			8.75	2.21		
Totals	<u>15.78</u>	<u>18.79</u>	<u>89.87</u>	<u>27.79</u>	<u>0.11</u>	<u>1.03</u>