



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

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STATEMENT OF LEGAL AND FACTUAL BASIS

Perdue Grain and Oilseed, LLC
501 Barnes Road, Chesapeake, Virginia 23324
Permit No. (TRO- 60277)

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Perdue Grain and Oilseed, LLC has applied for a Title V Operating Permit for its Chesapeake facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Permit Writer:

Laura D. Corl
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Date: **March 31, 2015**

Regional Air Permits
Manager:

Troy D. Breathwaite

Date: **March 31, 2015**

Regional Director:

Maria R. Nold

Date: _____

I. FACILITY INFORMATION

Permittee

Perdue Grain and Oilseed, LLC
501 Barnes Road
Chesapeake, Virginia 23324

Responsible Official

Wayne Black
Director of Environmental Affairs

Facility

Perdue Grain and Oilseed, LLC
501 Barnes Road
Chesapeake, Virginia 23324

Contact Person

America Dowdie
Environmental Contact
757-494-5562

County-Plant Identification Number: 51-550-00038

NAICS/SIC: 311224/2075 Soybean Oil Mills
115114/0723 Grain Receiving and Drying

Facility Description:

This facility originally was two separate plants, one that received and shipped out grains and the other a soybean processing plant to manufacture both soybean oil and soybean meal. The facilities became so interdependent that in 2010, it was determined that these operations were one facility.

The grain side of the operation is a bulk grain transfer facility.

Grain receiving - Grain is received at the facility by truck, rail, barge and vessels. Grain is tested for various criteria and stored in the appropriate tanks. Particulate from all emission points are controlled by fabric filters.

Grain handling - Grain is transferred as needed to insure the quality of the each grain for shipment. Tanks may be blended for maximum quality. Particulate from all emission points are controlled by fabric filters.

Grain Shipping - Grain is loaded on vessels, barges, railcars and trucks (international and domestic) to meet the customer's needs. Grain is conveyed from the various storage tanks to the loading area. Particulate emissions are controlled by fabric filters and cyclones.

Grain Drying - Soybeans are dried to meet the requirements and sent to the oil plant for processing. All other grains are dried as needed for customers and shipped by marine vessels. Particulate from all emission points are controlled by cyclones and fabric filters.

The other half of the plant consists of a soybean oil processing plant, where the facility receives cleaned, dried and conditioned soybeans from the grain side, and produces both soybean oil and soybean meal from the incoming product. There are three distinct parts of the process:

Soybean Preparation - This involves receiving the cleaned and dried raw soybeans, then cracking, dehulling and flaking (thinly slicing) the soybeans. There are two products resulting from this process: pelletized hulls and flakes of soybean meal. The hulls are ground up, pelletized, stored and then stored in preparation for shipment. The flaked soybeans are transferred to the soybean oil extraction section. Particulate emissions are generated from these processes: storage tanks, conveyors, process vents and loading operations. Most of these units have either a fabric filter, cyclones, or both to control these emissions.

Oil Production and Soybean Oil Extraction - Mixtures of hexanes are used as a solvent to extract soybean oil from the soybean flakes. The extraction process produces a soybean oil/hexane mixture and hexane-laden flakes. Hexane from each product is recovered for reuse from a totally enclosed distillation system involving the following stages: an extraction step, hexane recovery units, condensers, solvent-hexane separators and hexane accumulation tanks. Hexane not removed is emitted to the atmosphere through the final vent and as fugitive emissions from leaks. Soybean Oil is the product of this operation which is stored on site until ready for shipment. Emissions from these processes include VOC and n-Hexane, which is a Hazardous Air Pollutant (HAP). The VOC and Hexane are controlled by the solvent recovery system.

Soybean Meal Processing - The hexane laden flakes go through a Desolventizer-Toaster (to remove the solvent from the flakes) and a dryer-cooler, where the hexane is driven off, collected and routed to the solvent recovery system. The spent flakes are then ground (after hexane has been removed) into a meal. The meal is sprayed lightly with soybean oil and is stored on-site and then conveyed to the container loading area for shipment. The emissions from this section of the plant include Particulate, VOCs and n-Hexane emissions which are controlled by cyclones and fabric filters. The VOC emissions are not controlled if they don't go into the solvent recovery system.

Additional operations at the plant consist of steam generation. The facility uses a natural gas fired boiler for steam generation. The natural gas fired boiler can use No. 2 fuel oil in the event of gas curtailment. Other operations include the storage of raw soybeans, soybean oil, the pelletizing of hulls and dust and the shipping of the pelletized hulls.

This facility is a Title V major source of PM, PM₁₀, PM_{2.5}, VOC and HAPs. This source is located in an attainment area for all pollutants, and is a PSD major source. The source is subject to NSPS Subpart DD, *Standards of Performance for Grain Elevators*, MACT GGGG, *National Emission Standards for Hazardous Air Pollutants: Solvent Extraction for Vegetable Oil Production* and MACT DDDDD, *National Emission Standards for Hazardous Air Pollutants: Industrial, Commercial, and Institutional Boilers and Process Heaters*. The facility is currently permitted under one federally enforceable State Operating Permit (SOP) dated February 19, 2009 (bulk grain terminal) and three minor NSR permits dated October 5, 2009 (hull pelletizer), September 4, 2014 (meal throughput, meal domes, dryer/cooler and desolventizer toaster) and February 4, 2013 (back-up boiler).

This permit is the renewal of the current Title V permit and a significant modification to the same permit to incorporate the increase in fuel usage, the addition of the Desolventizer toaster, the addition of the expander cooler, the addition of a new 2 garner scale in place of the whole bean tank in the soybean oil processing facility and an increase in throughput of soybeans and meal. The coal fired boiler has been removed because it has been permanently shutdown and the PSD permit for it has been revoked.

II. COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

III. EMISSIONS INVENTORY

Below is a summary of the actual emissions from the facility.

2013 Actual Emissions

	2013 Criteria Pollutant Emission in Tons/Year						
	VOC	PM	PM ₁₀	CO	NO _x	PM _{2.5}	SO ₂
Facility Wide	406	171	54	29	20	4	0.2

2013 Facility Hazardous Air Pollutant Emissions

Pollutant	2014 Hazardous Air Pollutant Emission in Tons/Yr
n-Hexane	171

IV. EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID	Vent and Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Efficiency	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment – Grain Side								
EU 31	S31	Shanzer Column Grain Dryer, Model 8P7, NSPS Subpart DD (2008)	39.5 mmBtu/hr	24 mesh screen airs and cyclone	PCD 31	95%	PM/PM10	February 19, 2009
EU 32	S32	Shanzer Column Grain Dryer, Model 8P7, NSPS Subpart DD (2009)	39.5 mmBtu/hr	24 mesh screen airs and cyclone	PCD32	95%	PM/PM10	February 19, 2009
Grain Handling – Grain Side								
EU 33	S33	Truck/Container Loadout Station (2007)	200 ton/hr	Fabric Filter (Carter Day)	PCD 33	99%	PM/PM10	February 19, 2009
EU 34	S34	Neuero Marine Vessel Unloading Station (2002)	550 ton/hr	Fabric Filter (Neuero)	PCD 34	99%	PM/PM10	February 19, 2009
EU 35A	S35A	Marine Vessel Loading - Two Arms (1979)	1680 ton/hr	Fabric Filter (Carter Day)	PCD 35A	99%	PM/PM10	February 19, 2009
EU 35B	S35B	Marine Vessel Loading – Two Arms (1979)	1680 ton/hr	Fabric Filter (Carter Day)	PCD 35B	99%	PM/PM10	February 19, 2009
EU 36	S36	New Truck Unloading Station – Two Bays (2002)	1120 ton/hr	Fabric Filter (Carter Day)	PCD 36	99%	PM/PM10	
EU 37	S37	Old Truck Unloading Station - Two Bays (1979)	600 ton/hr	Fabric Filter (Carter Day)	PCD 37	99%	PM/PM10	February 19, 2009
EU 38A	S38	Rail Car Unloading Station (1979)	1390 ton/hr	Fabric Filter (Carter Day)	PCD 38	99%	PM/PM10	February 19, 2009
EU 38B	S38	Rail Car Loading Station (1979)	600 ton/hr					
EU 38C	S38&39	Steel Storage Silos (1957)	5.0 Million Bushels		PCD 38 & 39			
EU 38D	S38&39	Weigh Stations for Loading/Unloading (1979)	1680 ton/hr					
EU 40A	S40	Turnheads For Concrete Storage Silos (1979)	1680 ton/hr	Fabric Filter (Carter Day)	PCD 40	99%	PM/PM10	February 19, 2009
EU 40B	S40	Concrete Storage Silos(1979)	1.5 Million Bushels					
EU 41	S41	Ship Loading Gallery (1979)	1680 ton/hr	Fabric Filter (Carter Day)	PCD 41	99%	PM/PM10	February 19, 2009
EU 42	S42	Internal Grain Transfer Operations	1680 ton/hr	Fabric Filter (Carter Day)	PCD 42	99%	PM/PM10	February 19, 2009
EU-46	S 38/39	Dust Tank A (2008)	22 TPH	Fabric Filter (Carter Day)	PCD 38/39	99%	PM/PM10	September 4, 2014
EU-47	S 38/39	Dust Tank B (2008)	22 TPH	Fabric Filter (Carter Day)	PCD 38/39	99%	PM/PM10	September 4, 2014
EU-48	S 48	Tank 100	900 TPH	None: Open Vent-	-	-	-	-
EU-49	S 49	Tank 200	900 TPH	None: Open Vent-	-	-	-	-
EU-50	S 50	Tank 300	900 TPH	None: Open Vent-	-	-	-	-
EU-51	S 51	Tank 400	900 TPH	None: Open Vent-	-	-	-	-
EU-52	S 52	Tank 500	900 TPH	None: Open Vent-	-	-	-	-
EU-53	S 53	Tank 600	150 TPH	None: Open Vent-	-	-	-	-
Fuel Burning Equipment – Oilseed Side								
EU 30	S30	Natural gas-fired rental boiler, < 100 mmBtu/hr, NSPS Dc, MACT DDDDD	96 mmBtu/hr	Low NOx burners	-	-	-	February 4, 2013
Oilseed Plant – Oilseed Side								
EU1	S1	Tank 31; Dried bean storage	125 ton/hr	None: Open Vent-	-	-	-	-
EU2	S2	Tank 32; Dried bean storage	125 ton/hr	None: Open Vent-	-	-	-	-
EU3	S3	Tank 33; Dried bean storage	125 ton/hr	None: Open Vent-	-	-	-	-
EU4	S4	Tank 34; Dried bean storage	125 ton/hr	None: Open Vent-	-	-	-	-
EU5	S5	Tank 35; Dried bean storage	125 ton/hr	None: Open Vent-	-	-	-	-
EU6	S6	Tank 40; Dried bean storage	125 ton/hr	None: Open Vent-	-	-	-	-
EU7	S7	Tank 41; Dried bean storage	125 ton/hr	None: Open Vent-	-	-	-	-
EU8	S8	Tank 42; Dried bean storage	125 ton/hr	None: Open Vent-	-	-	-	-

Emission Unit ID	Vent and Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Efficiency	Pollutant Controlled	Applicable Permit Date
EU9	S9	Tank 43; Dried bean storage	125 ton/hr	None: Open Vent-	-	-	-	-
EU10	S10	Tank 44; Dried bean storage	125 ton/hr	None: Open Vent-	-	-	-	-
EU-45	S11	Compuweigh Two Garner Scale - (2014)	300 ton/hr	Fabric filter - Whole bean dust collector Pneumafil 11.5-316-8	PCD 11	99%	PM/PM10	September 4, 2014
EU 11B	S11	Whole bean cleaning to include aspirator	125 ton/hr	Fabric filter - Whole bean dust collector Pneumafil 11.5-316-8				-
EU 11C	S11	Dehulling-5 primary soybean rolling/cracking rollers with 5 aspirators	125 ton/hr	Cyclone to fabric filter – Primary dehulling cyclone - Escher Wyss Cyclone Z1-200 to fabric filter Pneumafil 11.5-316-8				-
EU 11D	S11	Dehulling-2 secondary hull cracking impactors (east & west) with 4 aspirators	119 ton/hr	Cyclone to fabric filter – Secondary dehulling cyclone - Escher Wyss Cyclone Z1-200 to fabric filter Pneumafil 11.5-316-8				-
EU 11E	S11	Hull cleaning - coarse hull aspirator	5.0 ton/hr	Whole bean dust collector Pneumafil 11.5-316-8				-
EU 11F	S11	Hull cleaning - mids hull aspirator	2.0 ton/hr	Whole bean dust collector Pneumafil 11.5-316-8				October 5, 2009
EU 12A	S12	Ground Hull Tank A	21.3 ton/hr	Ground hull dust collector - fabric filter Rolfes (Model 42-RLP-10) (Alanco)	PCD 12	99%	PM/PM10	October 5, 2009
EU 12B	S12	Ground Hull Tank B	21.3 ton/hr					-
EU 12C	S12	Grain Dust Transfer Line to Ground Hull Tanks	21 ton/day					-
EU 13A	S13	Flakers/discharge drag (North) (A to F); soybean flaking	61 ton/hr	Flaker aspiration cyclone Carter Day 56 HV	PCD 13A	95%	PM/PM10	-
EU 13B	S13	Flakers/discharge drag (South) (H to N); soybean flaking	61 ton/hr	Flaker aspiration cyclone Carter Day 56 HV	PCD 13B	95%	PM/PM10	-
EU 44	S44A-D	RosKamp Expander After Cooler (2014)	105 ton/hr	Four cyclones (Two each in parallel)	PCD 44A-D	95%	PM/PM10	September 4, 2014
EU 14A	S14	Extractor	70 ton/hr meal 125 ton/hr soybeans	Crown Mineral Oil Recovery System	PCD 14	95%	VOC, HEXANE	-
EU 14B	S14	Desolventizer toaster (2012)	70 ton/hr meal 125 ton/hr soybeans					-
EU 14C	S14	Miscella Tank	70 ton/hr meal 125 ton/hr soybeans					-
EU 14D	S14	Solvent Water Separator	70 ton/hr meal 125 ton/hr soybeans					-
EU 14E	S14	Small Hexane Tank	70 ton/hr meal 125 ton/hr soybeans					-
EU 14F	S14	Large Hexane Tank	70 ton/hr meal 125 ton/hr soybeans					-
EU 14G	S14	1st Stage RFE	70 ton/hr meal 125 ton/hr soybeans					-
EU 14H	S14	2nd Stage RFE	70 ton/hr meal 125 ton/hr soybeans					-
EU 14I	S14	Finished Oil Stripper	70 ton/hr meal 125 ton/hr soybeans					-
EU 15	S15	DeSmet dryer/cooler; soybean meat drying and cooling (2003)	96 ton/hr	Dryer cooler cyclone – East (Kice CKS 132)	PCD 15	95%	PM/PM10	September 4, 2014
EU 16	S16	DeSmet dryer/cooler; soybean meat drying and cooling (2003)	96 ton/hr	Dryer cooler cyclone - West (Kice CKS 132)	PCD 16	95%	PM/PM10	September 4, 2014
EU 17A	S17	Meal Sifters	125 ton/hr	Meal grinding dust collector (Alanco 188 RLP8)	PCD 17	99%	PM/PM10	-
EU 17B	S17	Meal Grinders	125 ton/hr					-
EU 17C	S17	Sifter Feed Drag	125 ton/hr					-
EU 17D	S17	Grinder Feed Drag	125 ton/hr					-

Emission Unit ID	Vent and Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Efficiency	Pollutant Controlled	Applicable Permit Date
EU 17E	S17	Grinder Discharge Drag	125 ton/hr					-
EU 18	S18	North meal tank; meal storage	125 ton/hr	None: Open Vent	-	-	-	-
EU 19	S19	South pellet/meal tank; pellet/meal storage	125 ton/hr	None: Open Vent	-	-	-	-
EU 20	S20	Meal shed	125 ton/hr	None: Open Vent	-	-	-	-
EU 21A	S21	Rail Loadout - Meal	125 ton/hr	Loadout dust collector - fabric filter (Alanco 188 RLP8)	PCD 21	99%	PM/PM10	-
EU 21B	S21	Truck Loadout - Meal	125 ton/hr			99%	PM/PM10	-
EU 21C	S21	Merrick Scale - Meal	125 ton/hr			99%	PM/PM10	-
EU 21D	S21	Mettler Scale - Meal	125 ton/hr			99%	PM/PM10	-
EU 22A	S22	Production tank blower; soybean hull pelletizing fines from ground hull tank	21 ton/hr	Hull receiving cyclone dust collector (Kice HRB24-10)	PCD 22	99%	PM/PM10	-
EU 22B	S22	Hull Receiving Bin - Pellet production tank	21 ton/hr	Hull receiving cyclone dust collector (Kice HRB24-10)		99%	PM/PM10	-
EU 23	S23	Pellet cooler; soybean hull pelletizing	15 ton/hr	Pellet cooler cyclone, (Model 1 HE 39), High Efficiency	PCD 23	95%	PM/PM10	-
EU 24	S24	Meal Storage Dome #1 (2012)	250 ton/hr	Bin Vent with fabric Filter	PCD 24	99%	PM/PM10	-
EU 25	S25	Meal Storage Dome #2 (2012)	250 ton/hr	Bin Vent with fabric Filter	PCD 25	99%	PM/PM10	-
EU-26	S26-	Meal Conveyors from Domes to bucket elevator and elevator drop with fabric filter (2012)	750 ton/hr	Bucket elevator fabric filter (Alanco 64 ASTM P10 STY 111)	PCD 26	-	-	-
Miscellaneous Conveyors and Elevator Legs								
C201A	S38	Rail Receiving Belt to C202	35,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 38	99%	PM/PM10	-
C201B	S38	Rail Receiving Belt to C202	35,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 38	99%	PM/PM10	-
C202	S39	Rail Receiving Belt to Leg 31	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 39	99%	PM/PM10	-
C203	S38/39	From Scale Tower to Concrete Tank	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 38/39	99%	PM/PM10	-
C204	S40	From 203 to Turnhead 1	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 40	99%	PM/PM10	-
C205	S40	From Turnhead 1 to Turnhead 2	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 40	99%	PM/PM10	-
C206	S40	From Turnhead 2 to Turnhead 3	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 40	99%	PM/PM10	-
C211	S36	Truck Receiving to Leg 32	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 36	99%	PM/PM10	-
C212	S40	From Leg 32/C233 to Turnhead 1	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 40	99%	PM/PM10	-
C213	S40	From Turnhead 1 to Turnhead 2	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 40	99%	PM/PM10	-
C214	S40	From Turnhead 2 to Turnhead 3	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 40	99%	PM/PM10	-
C217	S34	Barge Unloader to C218	20,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 34	99%	PM/PM10	-
C218	S38	From C217 to Barge Scale	20,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 38	99%	PM/PM10	-
C219	Various	Tank 400 Feed Conveyor	25,000 Bushels/hour	Fabric Filter (Carter Day)	PCD various	99%	PM/PM10	-
C220	Various	Tripper Belt	25,000 Bushels/hour	Fabric Filter (Carter Day)	PCD various	99%	PM/PM10	-
C222	Various	Tank 100 Feed Conveyor	25,000 Bushels/hour	Fabric Filter (Carter Day)	PCD various	99%	PM/PM10	-
C231	S42	Discharge C241-C243 to C232	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 42	99%	PM/PM10	-
C232	S36	From C231 to Scale Tower	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 36	99%	PM/PM10	-
C233	S39	From Scale Tower to Concrete	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 39	99%	PM/PM10	-
C234	Tail S39 Head S38	From Scale Tower to Headhouse	35,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 38/39	99%	PM/PM10	-
C236	S38	Tank 100 Discharge Belt	25,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 38	99%	PM/PM10	-
C237	S38	Tank 400 Discharge Belt	25,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 38	99%	PM/PM10	-
C241	S42	Concrete Drawoff	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 42	99%	PM/PM10	-
C242	S42	Concrete Drawoff	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 42	99%	PM/PM10	-
C243	S42	Concrete Drawoff	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 42	99%	PM/PM10	-
C244	S38	Steel Bin Drawoff	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 38	99%	PM/PM10	-
C245	S42	Meal Shed, Bins 17-20 to C246/231	35,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 42	99%	PM/PM10	-
C246	S36	Discharge C241-C243 to C249	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 36	99%	PM/PM10	-

Emission Unit ID	Vent and Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Efficiency	Pollutant Controlled	Applicable Permit Date
C249	S36	From C246 to Scale Tower	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 36	99%	PM/PM10	-
C250	S38	Shipping, Scale Tower to Headhouse	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 38	99%	PM/PM10	-
C251	S38	Shipping, Headhouse to C252	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 38	99%	PM/PM10	-
C252	S41	Shipping, To C253	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 41	99%	PM/PM10	-
C253	S41	Shipping, Gallery Belt	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 41	99%	PM/PM10	-
C254	S35	Shipping, PECO 1 Belt	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 35	99%	PM/PM10	-
C255	S35	Shipping, PECO 2 Belt	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 35	99%	PM/PM10	-
C261	S39	Screenings, Scale Tower to Concrete	10,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 39	99%	PM/PM10	-
T1	S35/37	Old Truck Dump Tunnel	30,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 35/37	99%	PM/PM10	-
T2	S35	Old Dump Leg to T3	30,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 35	99%	PM/PM10	-
T3	S35	Top of Steel from T2	30,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 35	99%	PM/PM10	-
224	S38	Tank 300 Feed	30,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 38	99%	PM/PM10	-
225	S38	Tank 500 Feed	30,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 38	99%	PM/PM10	-
226	S38	30 Series Feed	10,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 38	99%	PM/PM10	-
227	S38	40 Series Feed	10,046 Bushels/hour	Fabric Filter (Carter Day)	PCD 38	99%	PM/PM10	-
238	S39	Tank 200 Discharge	30,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 39	99%	PM/PM10	-
239	S39	Tank 300 Discharge	30,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 39	99%	PM/PM10	-
240	S39	Tank 500 Discharge	30,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 39	99%	PM/PM10	-
260	S39	Screenings Drag - Scale Tower	10,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 39	99%	PM/PM10	-
262	-	Screenings Drag - Concrete Bins	10,000 Bushels/hour	-	-	-	-	-
Leg31	S38	Rail Receiving	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 38	99%	PM/PM10	-
Leg32	S39	Truck Receiving	60,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 39	99%	PM/PM10	-
Leg34	S38	Lofting Leg (Barge Leg)	30,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 38	99%	PM/PM10	-
Leg35	S33/35	Old Truck Dump	30,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 33/35	99%	PM/PM10	-
Leg36	S39	Screening Leg	10,000 Bushels/hour	Fabric Filter (Carter Day)	PCD 39	99%	PM/PM10	-
Conveyor 200	S 11	High Roller Conveyor	125 TPH	Fabric Filter Whole Bean Dust Collector	PCD 11	99%	PM/PM10	-
Conveyor 202	S11	Tram Roller	125 TPH	Fabric Filter Whole Bean Dust Collector	PCD 11	99%	PM/PM10	-
Conveyor 400	S 11	Bean Scale Discharge Drag	125 TPH	Fabric Filter Whole Bean Dust Collector	PCD 11	99%	PM/PM10	-
Conveyor 550	S 54	Meal Shed Feed Conveyor	125 TPH	None, Open Vent in Meal Shed	-	-	-	-
Dome 1	S 24	Dome 1 Feed Conveyor	125 TPH	Bin Vent with Fabric Filter	PCD 24	99%	PM/PM10	-
Dome 2	S 25	Dome 2 Feed Conveyor	125 TPH	Bin Vent with Fabric Filter	PCD 25	99%	PM/PM 10	-

V. Section III- Fuel Burning Equipment - Grain Dryers

There are two federal regulations applicable to this section of the plant:

- 40 CFR Part 60 Subpart DD - Standards of Performance for Grain Elevators
- 40 CFR Part 64 - Compliance Assurance Monitoring

The following Virginia Administrative Codes are other applicable requirements that apply to the source:

- 9VAC5 Chapter 40, Part I: Special Provisions
- 9VAC5 Chapter 50, Part I: Special Provisions

Limitations - Conditions 1-6 list the limitations associated with the dryers. The column grain dryers are subject to both NSPS Subpart DD and Compliance Assurance Monitoring (CAM). Both grain dryers were replaced recently in either 2008 or 2009. They have a throughput limit for both tons of grain and natural gas, which is the only approved fuel they can fire. The emissions pass through 24 mesh screens and then to cyclones to limit the particulate emissions from the dryers. Condition 5 has been clarified by typing out 'million cubic feet' and Condition 6 has been clarified by adding that the emissions limits are from both the fuel and the natural gas in this permit. NSPS DD limits their opacity to 0% and due to their uncontrolled potential to emit, they are CAM applicable.

Monitoring - Conditions 7-15 are the monitoring conditions. CAM for these units is to verify that there are no visible emissions.

Recordkeeping and Reporting - Conditions 16-19. Conditions 16 a and b have had the units of the throughput added for clarification. The facility must keep records of the fuel usage and how many tons of grain are dried. They also have to keep a log of the visible emission checks. Semi-annual monitoring reports are required for the monitoring of the driers. CAM reports and recordkeeping are also required.

VI. Section IV - Grain Loading and Unloading

There is a federal regulation applicable to this section of the plant:

- 40 CFR Part 60 Subpart DD - Standards of Performance for Grain Elevators
- 40 CFR Part 64 - Compliance Assurance Monitoring

The following Virginia Administrative Codes are other applicable requirements that apply to the source:

- 9VAC5 Chapter 50 Part I: Special Provisions

Limitations - Conditions 20-26 require the various loading and unloading operations to control particulate emissions using fabric filters while these operations are operating. Condition 21 has been changed slightly to read better. Condition 27 requires the facility to limit the fugitive emissions from the dust tanks and other malfunctions where possible by using long socks or shrouds to minimize emissions. Condition 28 requires the use of a differential pressure gauge to monitor the fabric filters. Conditions 29-36 limit the throughputs to the various loading and unloading operations at the facility. Condition 37 lists the emission limits of each of the processes. It has been changed to remove the Column Grain Dryers filterable emission limits because they are included in Condition 5 in Section III. Condition 38 lists the total emission limits for the grain elevator side of the facility. Conditions 39-40 limit the opacity of the various processes.

Monitoring - Conditions 41-51, which include the CAM for the fabric filters and visible emissions monitoring to prove compliance with opacity conditions.

Recordkeeping and Reporting is included in Conditions 52-54, including recordkeeping and reporting for CAM.

VII. Boiler Requirements

There is a federal regulation applicable to this section of the plant:

40 CFR Part 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

40 CFR Part 63 Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

The following Virginia Administrative Codes are other applicable requirements that apply to the source:

9VAC5 Chapter 50 Part I: Special Provisions

Limitations - Conditions 55-63 list all the limitations for the boiler. This renewal incorporates the changes in throughput of natural gas and the addition of distillate oil into the Title V. The size of the rental boiler is limited to less than 98 MMBtu/hr. It is required to burn natural gas only except in times of gas curtailment. The boiler is limited in throughput for both natural gas and distillate oil and when shipments of distillate oil are received they must receive certification that the oil is ultra low sulfur. The emission limitations are listed in Condition 62, based on the throughput of each fuel. The visible emissions limit is listed in Condition 63.

Condition 57 has had the coal fired boiler reference streamlined out. The coal fired boiler was shutdown in early 2014 and the PSD permit was revoked at that time. Changed Condition 60 to correct a typo from the minor NSR permit to list the sulfur content as 15 ppm not ppb. Condition 62 was changed to round up 8.17 lbs/hr of CO to 8.2 lbs/hr for consistency.

Monitoring - Conditions 64-67 are the monitoring conditions for the boiler, which include visible observations of the stack, having a site specific monitoring plan for the opacity, requiring an annual tune-up in accordance with the Boiler MACT and a one-time energy assessment of the boiler. Condition 64 has been corrected to remove a typo. Condition 65 now specifies that the monitoring plan referenced in the condition is an opacity monitoring plan specified in the NSPS.

Recordkeeping - Condition 68 lists the recordkeeping for the boiler.

Reporting - Condition 69-71 list the reporting requirements for the boiler. Because the boiler is a rental boiler, the permittee must notify DEQ if the boiler is removed or a different boiler is brought on site.

VIII. Hull Grinding and Pelletizing Line

There are no federal regulations applicable to this section of the plant:

The following Virginia Administrative Codes are other applicable requirements that apply to this part of the plant:

9VAC5 Chapter 50 Part I: Special Provisions

Limitations are listed in Conditions 72-76. They require the use of cyclones and a bin vent filter to control the particulate emissions from the pelletizer. There is a production limit of how many tons of pellets can be produced along with an emission limit and visible emissions limit for the process.

Monitoring Conditions are listed in Conditions 77-79 requiring visible emissions observations, and monitoring of the bin vent filter.

Recordkeeping is listed in Condition 80 to show compliance with the limitations.

Testing - Condition 81 requires the facility to be constructed such that the hull pelletizer operation can be tested in the future if necessary.

IX. Soybean Oil Plant Requirements

There are three federal regulations applicable to this section of the plant:

40 CFR Part 60 Subpart DD - Standards of Performance for Grain Elevators

40 CFR Part 63 Subpart GGGG - National Emission Standards for Hazardous Air Pollutants: Solvent Extraction for Vegetable Oil Production

40 CFR Part 64 - Compliance Assurance Monitoring

The following Virginia Administrative Codes are other applicable requirements that apply to the source:

9VAC5 Chapter 40, Part I: Special Provisions

9VAC5 Chapter 40, Part II: Visible Emissions and Fugitive Dust/Emissions

9VAC5 Chapter 50, Part I: Special Provisions

Limitations - The Oil plant limitations are listed in Conditions 82-100. This permit also includes the increased throughput of soybeans, soybean meal. A new scale has been added and a new expander after-cooler has also been added from the most recently issued minor NSR permit (September 4, 2014).

The limitations require the use of cyclones and fabric filters for all processes that generate particulate emissions. VOC work practices are included because this area of the facility includes the solvent recovery system. There are limits on soybeans processed, soybean meal production, and a total solvent loss ratio for the plant. Emission limits are listed in Conditions 93-96. MACT GGGG conditions are listed in Conditions 91 and 92. Visible emission limits are listed in Conditions 97-100.

Monitoring Conditions are 101-114. These include visible emission evaluations, monitoring device observations, and monitoring in accordance with MACT GGGG. CAM is also applicable to several units, so CAM conditions are included in Conditions 107-114. Condition 115 requires the physical monitoring of the cyclones for wear.

Recordkeeping and Reporting Conditions are 116-121. The MACT recordkeeping and reporting are listed in Conditions 117-118. CAM reporting and recordkeeping are listed in Conditions 119-121.

Testing Condition is 122 which requires the facility to construct the plant in a way that future testing can be done if requested.

X. Streamlined Requirements

Streamlined out the requirement by reference conditions from the minor NSR permit dated 2/4/2013, for NSPS Dc and MACT 5D.

The initial compliance demonstrations for the driers have been completed, so these conditions (34 & 35) of the 2/19/09 permit have been streamlined out of this permit.

Condition 24 from the 2/19/09 permit has also been streamlined out because all requirements are listed in the permit.

Hull pelletizer - streamlined out the initial notifications because they are complete.

Streamline out the permit invalidation conditions (12 and 13 of minor NSR permit dated 10/5/2009) because they are no longer necessary.

XI. GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

A. Comments on General Conditions

1. Conditions 126-131. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.2-604 and §10.1-1185 of the *Code of Virginia*, and the “Department of Environmental Quality Agency Policy Statement No. 2-09”.

2. Condition 137. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

3. Condition 141. Permit Modification

This general condition cites the sections that follow:

9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources

9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources

9 VAC 5-80-1605. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas

9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

4. Conditions 155-158. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180.

5. Condition 162. Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

XII. STATE ONLY APPLICABLE REQUIREMENTS

The following Virginia Administrative Codes have specific requirements only enforceable by the State and have been identified as applicable by the applicant:

Odor - 9 VAC 5 Chapter 40, Article 2, and 9 VAC 5 Chapter 50, Article 2.

State toxics rule - 9 VAC 5 Chapter 60, Articles 4 and 5.

XIII. FUTURE APPLICABLE REQUIREMENTS

There are no known future applicable requirements.

XIV. INAPPLICABLE REQUIREMENTS

Citation	Title of Citation	Description of Applicability
40 CFR Part 60, Subpart Kb	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984	EU-14 has two hexane tanks both of which are smaller than the applicability of this regulation.

The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20 A4 cannot be included in any Title V permit. This portion of the regulation is not part of the federally approved state implementation plan. The opacity standard applies to existing sources at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9 VAC 5-40-20 E, which state that "At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions."

XV. INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

The facility did not identify any known insignificant emission units.

XVI. PUBLIC PARTICIPATION

The proposed permit will be placed on public notice in the Virginian-Pilot newspaper from Friday, February 13, 2015 to Monday, March 16, 2015.