Facility Name: **Archer Daniels Midland Company (ADM)**
City: Valdosta
County: Lowndes
AIRS #: 04-13-185-00051

Application #: TV-22093
Date Application Received: August 20, 2013
Permit No: 2075-185-0051-V-03-0

Program	Review Engineers	Review Managers
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Introduction

This narrative is being provided to assist the reader in understanding the content of the attached draft Part 70 operating permit. Complex issues and unusual items are explained here in simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. and (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The primary purpose of this permit is to consolidate and identify existing state and federal air requirements applicable to **Archer Daniels Midland Company (ADM)** and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. It initially describes the facility receiving the permit, the applicable requirements and their significance, and the methods for determining compliance with those applicable requirements. This narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

I. Facility Description

A. Facility Identification

1. Facility Name: Archer Daniels Midland Soybean Plant (ADM)

2. Parent/Holding Company Name

Archer Daniels Midland Company

3. Previous and/or Other Name(s)

None applicable

4. Facility Location

1841 Clay Road
Valdosta, Georgia 31601
(Lowndes County)

5. Attainment, Non-attainment Area Location, or Contributing Area

The facility is located in Lowndes County, which is in an attainment area for all criteria pollutants.

B. Site Determination

There are no other facilities which could possibly be contiguous, adjacent and under common control.

C. Existing Permits

Table 1 below lists all current Title V permits, all amendments, 502(b)(10) changes, and off-permit changes, issued to the facility, based on a comparative review of form A.6, Current Permits, of the Title V application and the "Permit" file(s) on the facility found in the Air Branch office.

Table 1: List of Current Permits, Amendments, and Off-Permit Changes

Permit Number and/or Off-Permit Change	Date of Issuance/ Effectiveness	Purpose of Issuance
2075-185-0051-V-02-0	2/23/2009	Permit for the operation of a Soybean Oil Mill, a Cottonseed Oil Mill, and a Vegetable Oil Refinery.
2075-185-0051-V-02-1	12/17/2009	To modify the solvent loss limits (Conditions 3.3.1, 6.1.7, and 6.2.11) in accordance with the consent decree, to modify the method for wood fuel recordkeeping for Boilers B115A, B115B and 630, and to address some administrative changes.
2075-185-0051-V-02-2	02/15/2011	To remove the Cyclone (Control Device ID No. C171) associated the Conditioning (Source Code: C170) of the cottonseed processing plant.
2075-185-0051-V-02-3	3/2/2012	Revision of the periodic reporting deadlines in Conditions 6.1.3, 6.1.4, 6.2.12 and 8.14.1.
2075-185-0051-V-02-4	10/21/2013	Removal of Condition 4.2.11 and the PM_{10} performance testing requirement on the Conditioning System (Source Code: C170) of the cottonseed processing plant.

D. Process Description

1. SIC Codes(s)

The SIC Code for the Soybean Oil Mill is 2074, the SIC Code for the Cottonseed Oil Mill is 2075, and the SIC Code for the Shortening, the Table Oils, and the Margarine & Other Edible Fats & Oil is 2079.

2. Description of Product(s)

The vegetable oil extraction facilities produce raw/crude soybean oil, cottonseed oil, hulls (soybean and cottonseed), oilseed meal (soy meal and cottonseed meal), and cotton lint. The edible oil refinery produces refined vegetable oils (including soybean and cottonseed oil).

3. Overall Facility Process Description

The facility extracts oil from soybeans and cottonseed oil, refines the raw soybean and cottonseed oil, and prepares soybean and cottonseed meals and hulls for loadout. In the soybean processing plant soybeans are received via rail and truck, cleaned, and stored. As needed the beans are dehulled, milled, and conditioned prior to oil extraction using commercial grade hexane. The meal is then desolventized, toasted, dried, and cooled. It is sold as a feed additive. The hexane is removed from the soy meal and the extracted soybean oil. The soybean oil is distilled and refined prior to shipment. The cottonseed processing plant uses the same equipment to process cottonseed. In addition, the seed must be delinted prior to processing. The lint is recovered and baled for sale.

The facility has seven (7) boilers for generating process steam. The Wellons boiler (Source Code: 630) and two Hurst boilers (Source Codes: B115A and B115B) use biomass fuel and can also be fired with oilseed hulls, in loose or pelletized form, and other fuels. The Cleaver-Brooks boiler (Source Code: 640), the CE boiler (Source Code: 650) and the two GTS boilers (Source Codes: 701 and 705) fire natural gas and can burn

distillate fuel oil and vegetable oil as backup fuel. There is a natural gas fired hydrogen generator in the refinery and two natural gas fired grain dryers used for drying soybeans.

4. Overall Process Flow Diagram

The facility provided a process flow diagram in their Title V permit application.

E. Regulatory Status

1. PSD/NSR

The facility is currently a major source under PSD for CO, NO_x and VOC. In 1995, the facility underwent PSD review for VOCs in order to add the Cottonseed Oil Extraction Plant at the site. For PSD purpose, the facility has a limit on the hexane consumption at its oil extraction units in the oil mills. The facility avoided PSD review for PM_{10} emissions by limiting the increase in potential PM_{10} emissions below the PSD significance level of 15 tons per year. The VOC BACT required limiting the solvent loss, the amount of soybeans processed by the oil mills, and the amount of crude vegetable oil processed at the facility. PSD avoidance limits were also set for PM_{10} on the amount of soybeans processed at the two (2) grain dryers at the facility and on NOx and CO emissions from the combustion sources.

2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	Yes	✓		
PM_{10}	Yes	✓		
$PM_{2.5}$	Yes	✓		
SO_2	Yes			✓
VOC	Yes	✓		
NO_x	Yes	✓		
CO	Yes	✓		
TRS	Yes			✓
H_2S	Yes			✓
Individual HAP	Yes	✓		
Total HAPs	Yes	✓		
Total GHGs	Yes			✓

3. MACT Standards

The facility is a Major source of HAPs (n-Hexane emissions exceed 10 tons/year). Thus, the facility is subject to the following MACT standards:

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

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

4. Program Applicability (AIRS Program Codes)

Program Code	Applicable (y/n)
Program Code 6 - PSD	Y
Program Code 8 – Part 61 NESHAP	N
Program Code 9 - NSPS	Y
Program Code M – Part 63 NESHAP	Y
Program Code V – Title V	Y

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

As part of a PSD permit review, ADM has a limit of 1,095,000 tons of soybeans that can be processed at the facility in any 12 consecutive months.

As part of a PSD permit review, ADM has a limit of 1095 million pounds of crude vegetable oil that can be processed at the facility in any 12 consecutive months.

B. Applicable Rules and Regulations

Rules and Regulations Assessment-

The facility is a major source of HAPs and conducts operations covered by 40 CFR 63 Subpart GGGG. Therefore, they are subject to the MACT Standard for Solvent Extraction for Vegetable Oil Production. Since they are subject to this MACT Standard, they are also subject to the General Provisions in 40 CFR 63 Subpart A.

Emission and Operating Standards-

40 CFR 63 Subpart GGGG includes both emission standards and operating requirements. ADM is subject to the applicable HAP emission rates in 40 CFR 63.2840. The exact emission standards are determined by the type and quantity of oilseeds that are processed during a 12-month period.

For soybeans, ADM is subject to a limit of 0.2 gallons of hexane per ton of soybeans processed. This limit applies on a 12-month rolling basis.

For cottonseeds, the limit depends upon the amount of cottonseed oil production during the 12-month period. If ADM processes more than 120,000 tons of cottonseeds they are subject to the limit for large cottonseeds processors. This limit is 0.5 gallons of hexane per ton of cottonseeds processed. This limit applies on a 12-month rolling basis. If ADM processes less than 120,000 tons of cottonseeds they are subject to the limit for small cottonseeds processors. This limit is 0.7 gallons of hexane per ton of cottonseeds processed. This limit applies on a 12-month rolling basis.

C. Compliance Status

The facility did not indicate that they are out of compliance with any applicable rules and regulations in permit application No. 22093.

D. Operational Flexibility

The facility has requested that it be identified as a vegetable oil facility to improve its operational flexibility. The facility extracts oil from soybeans and cottonseeds. The refinery refines the crude/raw soybean, cottonseed and vegetable oil. The facility has not identified any alternate operating scenario in its application. The labeling does not subject the facility to any new applicable requirements or regulations.

E. Permit Conditions

The requirements of Conditions 2.1.1 through 2.2.5 of Permit No. 2075-185-0051-V-02-0 have been carried over to this permit.

Conditions 2.1.1 and 2.1.2 contain the facility wide soybean and vegetable oil production limits, respectively.

Conditions 2.2.1 through 2.2.5 contain requirements for 40 CFR 63 Subpart GGGG, NESHAP for Solvent Extraction for Vegetable Oil Production

III. Regulated Equipment Requirements

A. Brief Process Description

Cottonseed Processing

The raw material is cottonseed, which is brought in by rail cars or trucks. The cottonseed is delinted, flaked, conditioned and sent through expanders/expellers to make collets. The collets are then passed through a shallow bed, percolation type, continuous, counter-current extractor. The extractor is a closed system of hexane and miscella, a mixture of hexane and vegetable oil. The hexane is used to extract the oil from the cottonseed collets. After extraction, the remaining material consists of wet collets and miscella. The miscella drains to the lower compartments of the extractor and is separated in the distillation system. Once the miscella is completely drained from the collets, the collets are transported in a vapor-tight conveyor to the desolventizer-toaster-dryer-cooler (DTDC). In the DTDC the spent collets are introduced to an upper tray which is heated by indirect steam to vaporize any hexane that may remain in the collets. The collets are toasted in the middle trays to improve the quality of the meal. The collets are dried and cooled with hot and ambient air in the final trays of the DTDC. The dryer-cooler section of the DTDC consists of three decks: the top two for drying and the lower deck for cooling. In the dryer decks, hot air is passed through the meal to reduce the moisture in the meal. In the cooling deck, ambient air passes through the meal to cool it. The particulate matter emissions from each deck are controlled by a cyclone. After the DTDC, the meal is sized and ground. The finished meal is then transferred to the storage and loadout area.

The miscella from the extractor is heated in a rising film evaporator to boil off hexane. Caustic is added to the oil rich miscella, combining with impurities in the oil and forming a mixture called a soapstock that is removed from the oil with centrifuges. The soapstock is combined with meal in the DTDC. The oil-miscella passes through a second stage of evaporation to remove all hexane. After evaporation, oil flows to a stripper, which removes the remaining traces of solvent by heating with low pressure steam. The solvent/water vapors from the evaporators are condensed and fed to the solvent/water separator, a continuous decanting system. The vapors from the solvent/water separator are sent to a mineral oil absorption system. The crude oil, or PBSY, is sent then sent to storage.

Soybean Processing

The raw material is soybeans, which are brought in by truck or rail car. The soybeans are dumped into a storage area below ground level, then conveyed into storage bins. Prior to storage, unwanted debris is clean of unwanted debris. Fabric filters control PM emissions from soybean handling operations. The moisture of the raw material is measured and the beans dried in one of two grain dryers, if the moisture content exceeds 13%. The beans are conveyed to a fluidized bed dryer which dries the bean hulls to enable its separation from the bean. The dried beans are sent through cracking mills that separate the hull from the bean meat. Fabric filters and cyclones control PM emissions from these operations. The hulls are ground up and sold as filler for animal feed. The loose hulls are pneumatically conveyed to storage and a baghouse separates the hulls from the air stream.

The dried and dehulled beans are passed through smooth rollers to turn the beans into flakes. The flakes are then passed through a shallow bed, percolation type, continuous, counter-current extractor. The extractor is a closed system of hexane and miscella, a mixture of hexane and vegetable oil. The hexane is used to extract the oil from the bean flakes. After extraction, the material consists of wet flakes and miscella. The miscella drains to the lower compartments and is separated in the distillation system. Once the miscella is completely drained from the flakes, the flakes are transported in a vapor-tight conveyor to the desolventizer-toaster-dryer-cooler (DTDC).

In the DTDC the flakes are introduced to an upper tray which is heated by indirect steam to vaporize any hexane that may remain in the flakes. The flakes are then transferred to the middle tray for toasting, to increase the meal quality. The dryer-cooler section of the DTDC consists of five decks: the top four for drying and the lowest deck for cooling. In the dryer section, hot air is passed through the meal to reduce the moisture content of the meal. In the cooling section, ambient air is passed through the meal to reduce the temperature. The particulate matter from each of the dryer and cooler decks is controlled by a cyclone. After the DTDC, the meal is sent to be sized and ground. The meal is then transferred to storage and loadout areas.

The miscella from the extractor passes through hydroclones to remove suspended solids and is then separated into oil and solvent by two-stage separation. After evaporation, oil flows to a stripper, which removes the remaining traces of solvent by heating with low-pressure steam. The solvent/water vapors from the evaporators are condensed and fed to the solvent/water separator, a continuous decanting system. The vapors from the solvent/water separator are sent to a mineral oil absorption system. Crude soybean oil is then pumped to storage.

Vegetable Oil Refining and Packaging

The refining process consists of refining, bleaching and deodorizing. The refining process removes the undesirable fatty acid, phosphatides and insoluble matter by reacting the oil with a caustic solution and then separating the solution with a self-cleaning centrifuge. The bleaching process removes trace amounts of undesirable compounds which affect the stability of the oil. This is achieved by adsorbing these compounds onto an acid activated clay and then filtering. The deodorizing process improves the taste, odor, color and stability of the oil. This is achieved by steam stripping various flavor and odor compounds and fatty acids.

B. Equipment List for the Process

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
001	Rail Pit No. 1	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.4.1, 3.4.2	001	Baghouse
002	Rail Pit No. 2	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.4.1, 3.4.2	002	Baghouse
003	Truck Dump	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.10, 3.4.1, 3.4.2	044	Baghouse
004	Bean Cleaning and Distribution	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.10, 3.4.1, 3.4.2	044	Baghouse
005	Bean Storage	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.4.1, 3.4.2	None	

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
009	Grain Dryer (Column Dryer) No. 3	40 CFR 60, Subpart A 40 CFR 60, Subpart DD 391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 391-3-1-.02(2)(g)	3.2.1, 3.2.3, 3.2.6, 3.2.7, 3.2.10, 3.3.4,3.3.5, 3.4.1, 3.4.2, 3.4.4	None	
010	Grain Dryer (Column Dryer) No. 2	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 391-3-1-.02(2)(g)	3.2.1, 3.2.3, 3.2.6, 3.2.7, 3.2.10, 3.4.1, 3.4.2, 3.4.4	None	
110	Vertical Seed Conditioner	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.10, 3.4.1, 3.4.2	111	Baghouse
120	Fluid Bed Dryer	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.10, 3.4.1, 3.4.2	121, 122	Cyclone, Baghouse
130	Cracking Rolls	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.10, 3.4.1, 3.4.2	141	Baghouse
140	Fluid Bed Dehulling Dryer/Conditioner	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.10, 3.4.1, 3.4.2	121 (via 120), 122	Cyclone, Baghouse
150	Flaking Rolls	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.10, 3.4.1, 3.4.2	151	Cyclone
170	Secondary Dehulling	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.10, 3.4.1, 3.4.2	141	Baghouse
180	Hull Grinders	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.10, 3.4.1, 3.4.2	182	Baghouse
190	Soybean Hull Pelletizing (Mill, Cooler)	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.5, 3.4.1, 3.4.2	191	Cyclone
210	Cottonseed Oil Extractor	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 63, Subpart A 40 CFR 63, Subpart GGGG PSD	2.2.3, 3.3.1, 3.4.1, 3.4.2	221 (via 220)	Mineral Oil Scrubber and Condenser
220	Cottonseed Solvent Recovery	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 63, Subpart A 40 CFR 63, Subpart GGGG PSD	2.2.3, 3.3.1, 3.4.1, 3.4.2	221	Mineral Oil Scrubber
230	Cottonseed Desolventizer, Toaster, Dryer, Cooler	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 63, Subpart A 40 CFR 63, Subpart GGGG PSD	2.2.3, 3.2.4, 3.3.1, 3.4.1, 3.4.2	C226, C236, 221	2 Cyclones, Mineral Oil Scrubber, and Condenser
330	Meal Grinders	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.10, 3.4.1, 3.4.2	331	Baghouse
340	Clay Storage Bin	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.2, 3.2.10, 3.4.1, 3.4.2	341	Baghouse
410	Product Storage	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.10, 3.4.1, 3.4.2	311	Baghouse
420	Product Blend	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.10, 3.4.1, 3.4.2	311	Baghouse
430	Rail Loadout	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.10, 3.4.1, 3.4.2	311	Baghouse
440	Truck Loadout	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.10, 3.4.1, 3.4.2	311	Baghouse
630	95 mmBtu/hr Biomass Wellons Boiler	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 40 CFR 63, Subpart DDDDD	3.2.3, 3.2.6, 3.2.7, 3.2.8, 3.2.10, 3.3.3, 3.3.12 through 3.3.16, 3.3.19, 3.2.20, 3.4.3, 3.4.4, 5.2.2, 5.2.8, 5.2.10, 6.2.18 through 6.2.23	631, 632, 633	Multiclone, 2 Baghouses

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
640	75 mmBtu/hr Natural gas Cleaver Brooks Boiler	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 40 CFR 63, Subpart DDDDD	3.2.3, 3.2.6, 3.2.7, 3.2.9, 3.2.10, 3.3.2, 3.3.12 through 3.3.16, 3.3.17, 3.3.18, 3.4.3, 3.4.4, 5.2.2, 5.2.8, 5.2.10, 6.2.18 through 6.2.23	None	NA
650	160 mmBtu/hr Natural gas CE Boiler	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 40 CFR 63, Subpart DDDDD	3.2.3, 3.2.6, 3.2.7, 3.2.9, 3.2.10, 3.3.2, 3.3.12 through 3.3.16, 3.3.17, 3.3.18, 3.4.3, 3.4.4, 5.2.2, 5.2.8, 5.2.10, 6.2.18 through 6.2.23	None	NA
701	15 mmBtu/hr Natural gas GTS Boiler No. 1	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 40 CFR 60, Subpart A 40 CFR 60, Subpart Dc 40 CFR 63, Subpart DDDDD	3.2.3, 3.3.2, 3.3.3, 3.3.4, 3.3.12 through 3.3.16, 3.3.17, 3.3.18, 3.4.3, 3.4.4, 5.2.2, 5.2.8, 5.2.10,6.2.18 through 6.2.23	None	NA
705	15 mmBtu/hr Natural gas GTS Boiler No. 2	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 40 CFR 60, Subpart A 40 CFR 60, Subpart Dc 40 CFR 63, Subpart DDDDD	3.2.3, 3.3.2, 3.3.3, 3.3.4, 3.3.12 through 3.3.16, 3.3.17, 3.3.18, 3.4.3, 3.4.4, 5.2.2, 5.2.8, 5.2.10, 6.2.18 through 6.2.23	None	NA
710	Bleaching Clay Receiving	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.2, 3.2.10, 3.4.1, 3.4.2	711	Baghouse
C010	Seed Receiving	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	C011	Rotary Drum Filter
C030	Seedhouse No. 1	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	None	
C040	Seedhouse No. 2	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	None	
C050	Seedhouse No. 3	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	None	
C060	Seedhouse No. 4	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	None	
C070	Seedhouse No. 6	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	None	
C080	Seedhouse No. 7	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	None	
C100	Seed Cleaning	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	C101	Rotary Drum Filter
C110	Seed Delinting	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	C111, C116, C121, C126, C131, C136	Rotary Drum Filters
C140	Seed Hulling	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	C141	Rotary Drum Filter
C150	Lint Press	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	C151	Rotary Drum Filter
C160	Flaking	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	None	N/A
C170	Conditioning	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	None	N/A
C180	Expanding	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	None	None
C190	Collet Cooler	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	C191	Baghouse

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
C400	Bulk Hull Storage	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	C401	Baghouse
C410	Pelleted Hull Storage	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	C411	Baghouse
C420	Pellet Cooling	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.4.1, 3.4.2, 6.1.7	C421	Cyclone
C430	Cottonseed Meal Grinding	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	C431	Baghouse
C435	Clay Tank	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	C431	Baghouse
C440	Meal Storage and Loadout	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	C441	Baghouse
C450	White Seed Truck Loadout	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2	C451	Rotary Drum Filter
C460	White Seed Rail/Hull Rail and Truck Loadout	391-3-1-.02(2)(e) 391-3-1-.02(2)(b)	3.2.4, 3.4.1, 3.4.2, 6.1.7, 6.2.9	C461	Rotary Drum Filter
12	Soy Hexane Process Tank (20,000gallons)	40 CFR 63, Subpart A 40 CFR 63, Subpart GGGG	2.2.3	None	NA
13	Soy Hexane Process Tank (20,000gallons)	40 CFR 63, Subpart A 40 CFR 63, Subpart GGGG	2.2.3	None	NA
14	Cottonseed Hexane Process Tank (30,000 gallons)	40 CFR 63, Subpart A 40 CFR 63, Subpart GGGG	2.2.3	None	NA
720	Hot Well Tank	391-3-1-.02(2)(b) PSD	3.3.1, 3.4.1	None	
S200	Soybean Oil Extractor	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 63, Subpart A 40 CFR 63, Subpart GGGG PSD	2.2.3, 3.3.1, 3.4.1, 3.4.2, 3.5.1	S241 (via 240)	Mineral Oil Scrubber and Condenser
S240	Soybean Solvent Recovery	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 63, Subpart A 40 CFR 63, Subpart GGGG PSD	2.2.3, 3.3.1, 3.4.1, 3.4.2, 3.5.1	S241	Mineral Oil Scrubber
S250	Soybean Desolventizer, Toaster, Dryer, Cooler	391-3-1-.02(2)(e) 391-3-1-.02(2)(b) 40 CFR 63, Subpart A 40 CFR 63, Subpart GGGG PSD	2.2.3, 3.3.1, 3.4.1, 3.4.2, 3.5.1	S251, S256, S261, S266, S271, S241	5 Cyclones, Mineral Oil Scrubber, and Condenser
CT01	Miscella Aboveground Storage Tank	40 CFR 63, Subpart A 40 CFR 63, Subpart GGGG PSD	2.2.3, 3.3.1	221	Scrubber
CT02	Miscella Aboveground Storage Tank	40 CFR 63, Subpart A 40 CFR 63, Subpart GGGG PSD	2.2.3, 3.3.1	221	Scrubber
HP1	Hydrogen Gas Generator	391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 40 CFR 63, Subpart DDDDD	3.2.3, 3.2.6, 3.2.7, 3.4.3, 3.4.4	None	NA

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
B115A	52 MMBTU/ hr Biomass Hurst Boiler	40 CFR 52.21 40 CFR 60, Subpart A 40 CFR 60, Subpart Dc 40 CFR 63, Subpart DDDDD 391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 391-3-1-.03(2)(c)	3.2.11, 3.3.3, 3.3.4, 3.3.5, 3.3.6, 3.3.7, 3.3.8, 3.3.9, 3.3.10, 3.3.11, 3.3.12 through 3.3.16, 3.3.21, 3.3.22, 4.1.3, 4.2.8, 4.2.9, 4.2.10, 5.1.1, 5.2.1, 5.2.2, 5.2.8, 5.2.9, 5.2.10. 5.2.11, 6.1.7, 6.2.18 through 6.2.26	ESP-661	Electrostatic Precipitator
B115B	52 MMBTU/ hr Biomass Hurst Boiler	40 CFR 52.21 40 CFR 60, Subpart A 40 CFR 60, Subpart Dc 40 CFR 63, Subpart DDDDD 391-3-1-.02(2)(d) 391-3-1-.02(2)(g) 391-3-1-.03(2)(c)	3.2.11, 3.3.3, 3.3.4, 3.3.5, 3.3.6, 3.3.7, 3.3.8, 3.3.9, 3.3.10, 3.3.11, 3.3.12 through 3.3.16, 3.3.21, 3.3.22, 4.1.3, 4.2.8, 4.2.9, 4.2.10, 5.1.1, 5.2.1, 5.2.2, 5.2.8, 5.2.9, 5.2.10, 5.2.11, 6.1.7, 6.2.18 through 6.2.26	ESP-661	Electrostatic Precipitator

* Generally applicable requirements contained in this permit may also apply to emission units listed above.

C. Equipment & Rule Applicability

Emission and Operating Caps:

Soybean extraction

The column grain dryers (SC 009 and 010) are subject to a PSD avoidance limit of 549,200 tons of soybeans for any 12 consecutive months. The emission units are permitted to burn only natural gas. The column grain dryers are also subject to PSD avoidance limits for NOx and CO emissions in conjunction with the other combustion units at the facility. These limits are discussed in more detail below under the Combustion Units section.

The clay storage silo (SC 340) and the refinery bleaching clay storage silo (SC 710) (which is part of the edible oil refinery) are subject to a PSD avoidance limit of 10,000 tons for any 12 consecutive months. The soybean hull pelletizer (SC 190) is subject to PSD avoidance limits of 5.5 lb/hr of particulate matter and 3.2 lb/hr of PM_{10}.

Many of the soybean extraction plant emission units are subject to PSD avoidance limits for particulate matter and PM_{10} as listed in the table below:

Source code	Description	Stack Code	PM (lb/hr)	PM_{10} (lb/hr)
044	Bean Receiving Baghouse	S44	5.19	2.04
011	Vertical Seed Conditioner	111	0.2	0.55
122	Escher-Wyss Fluidized-Bed Dryer Baghouse	125	0.25	0.13
141	Secondary Dehulling Baghouse	145	0.83	0.11
151	Flaking Mill (Prep-wet) Cyclone	155	4.1	2.19
182	Hull Grinder Baghouse	185	0.75	0.27
C226, C236	Desolventizer/Toaster/Dryer/Cooler (DTDC) Cyclones	235	2.65	2.04
311	Meal/Hull Loadout Baghouse	315	0.6	0.29
331	Meal Grinder Baghouse	335	0.15	0.09
341	Clay Storage Baghouse	345	0.15	0.10
711	Refinery Bleaching Clay Storage Baghouse	715	0.15	0.10
630	Wellons Wood Waste Fired Boiler	635	1.48	1.03
640	Cleaver-Brooks Boiler	645	1.34	1.0
650	CE Boiler	655	1.17	0.83
009, 010	Column Grain Dryers (including combustion emissions)*	S09, S10	0.222*	0.056*

* The PM and PM_{10} emission limits for the two grain dryers are in lbs/ton of soybeans processed through the dryers and represent the combined emissions from both dryers.

Rules and Regulations Assessment:

The soybean extraction plant emission units are subject to Georgia Rule 391-3-1-.02(2)(e), "Particulate Emission from Manufacturing Processes" and Georgia Rule 391-3-1-.02(2)(b), "Visible Emissions." Georgia Rule (e) applies because the soybean extraction plant is a process and it emits particulate matter. All of the soybean extraction plant is being treated as one process under Georgia Rule (e). Georgia Rule (b) applies because the facility is subject to other emission standards under Georgia Rule 391-3-1-.02(2) and there are no other more specific visible emission standards that apply to this equipment.

The column grain dryers (SC 009, 010) are subject to Georgia Rule 391-3-1-.02(2)(g), "Sulfur Dioxide." Georgia Rule (g) applies since the dryers are a fuel burning source (natural gas).

The soybean and cottonseed extraction plants are subject to a PSD limit for VOC emissions (hexane).

Some of the soybean extraction plant emission units are subject to 40 CFR 63, Subpart GGGG. This was discussed in the facility wide section.

Emission and Operating Standards:

Georgia Rule (e) limits particulate matter emissions based on the following equations:

$E = 4.1 * P^{0.67}$; for process input weight rate up to and including 30 tons per hour.
$E = 55 * P^{0.11} - 40$; for process input weight rate above 30 tons per hour.

Georgia Rule (b) limits visible emissions to 40% opacity.

40 CFR 52.21 – "Prevention of Significant Deterioration"--
The PSD limit for processing the soybeans and cottonseeds is 0.36 gallons of hexane per ton of soybeans and cottonseeds processed and 2.03 pounds of hexane per ton of soybeans and cottonseeds processed. Compliance with this limit is determined on a 12-month rolling average

Cottonseed Processing

Many of the cottonseed extraction plant emission units are subject to PSD avoidance limits for PM_{10} and hours of operation as listed in the table below:

Emission Unit	Allowable Hourly Emission of PM-10 (lb/hr)	Allowable Hours of Operation (hr/12 months)	Allowable Annual Emissions of PM_{10} (tpy)
Seed Receiving (SC C010)	0.16	3500	0.28
Seedhouses (SC C030, C040, C050, C060, C070, C080)	0.07*	16000	0.56
Seed Cleaning (SC C100)	0.24	8760	1.05
Seed Delinting (SC C110)	1.42	8760	6.22
Seed Hulling (SC C140)	0.24	8760	1.05
Lint Press (SC C150)	0.24	8760	1.05
Flaking (SC C160)	0.0015	8760	1.06
Conditioning (SC C170)	0.10	8760	0.44
Expanding (SC C180)	--	8760	0.05
Collet Cooler (SC C190)	0.54	8760	2.35
DTDC (SC 230)	0.17	8760	0.74
Hull Storage and Conveying (SC C400, C410)	--	8760	0.05
Meal Grinding (SC C430)	--	8760	0.05
Clay Tank (SC C435)	0.05	80	~0.00
Meal Loadout (SC C440)	0.05	6000	0.15
White Seed Truck Loadout (SC C450)	0.16	2000	0.16
White Seed/Hull Rail and Truck Loadout (SC C460)	0.55	2600	0.72
TOTAL			14.97

* Each Seedhouse fan is limited to 0.07 lb/hr; the 12 fans may not exceed a total of 16,000 hours of operation during any 12 consecutive month period.

Rules and Regulations Assessment:

The cottonseed extraction plant emission units are subject to Georgia Rule 391-3-1-.02(2)(e), "Particulate Emission from Manufacturing Processes" and Georgia Rule 391-3-1-.02(2)(b),

"Visible Emissions." Georgia Rule (e) applies because the cottonseed extraction plant is a process and it emits particulate matter. All of the cottonseed extraction plant is being treated as one process under Georgia Rule (e). Georgia Rule (b) applies because the facility is subject to other emission standards under Georgia Rule 391-3-1-.02(2) and there are no other more specific visible emission standards that apply to this equipment.

The soybean and cottonseed extraction plants are subject to a PSD limit for VOC emissions (hexane).

Some of the cottonseed extraction plant emission units are subject to 40 CFR 63, Subpart GGGG. This was discussed previously in the facility wide section.

Emission and Operating Standards:

Georgia Rule (e) limits particulate matter emissions based on the following equations:

$E = 4.1 * P^{0.67}$; for process input weight rate up to and including 30 tons per hour.
$E = 55 * P^{0.11} - 40$; for process input weight rate above 30 tons per hour.

Georgia Rule (b) limits visible emissions to 40% opacity.

The PSD limit for processing the soybeans and cottonseeds is 0.36 gallons of hexane per ton of soybeans and cottonseeds processed and 2.03 pounds of hexane per ton of soybeans and cottonseeds processed. Compliance with this limit is determined on a 12-month rolling average.

As mentioned above in the soybean extraction plant section, the clay storage silo (SC 340) (which is part of the soybean extraction plant) and the refinery bleaching clay storage silo (SC 710) (which is part of the edible oil refinery) are subject to a PSD avoidance limit of 10,000 tons for any 12 consecutive months.

The hydrogen reformer (SC HP1) is permitted to burn only natural gas.

Applicable Rules and Regulations–

Rules and Regulations Assessment:

The bleaching clay receiving process (SC 710) is subject to Georgia Rule 391-3-1-.02(2)(e), "Particulate Emission from Manufacturing Processes" and Georgia Rule 391-3-1-.02(2)(b), "Visible Emissions." Georgia Rule (e) applies because the edible oil refinery is a process and it emits particulate matter. Georgia Rule (b) applies because the facility is subject to other emission standards under Georgia Rule391-3-1-.02(2) and there are no other more specific visible emission standards that apply to this equipment.

The hydrogen reformer (SC HP1) is subject to Georgia Rule 391-3-1-.02(2)(d), "Fuel Burning Equipment" and Georgia Rule 391-3-1-.02(2)(g), "Sulfur Dioxide." It is also subject to 40 CFR 63 Subpart Dc, "Standards of Performance for Small Industrial-Commercial-Institutional Steam

Generating Units." All equipment that meets the definition of 'fuel burning equipment' in the Georgia Rules are subject to Rules (d) and (g). HP1 is subject to Subpart Dc because it was constructed after June 1989 and expected to have a heat input capacity of greater than 10 mmBtu/hr and meets the definition of 'steam generating unit' in the regulation.

Some of the edible oil refinery emission units are subject to 40 CFR 63, Subpart GGGG. This was discussed previously in the facility wide section.

Emission and Operating Standards:

For the bleaching clay receiving (SC 710), Georgia Rule (e) limits particulate matter emissions based on the following equations:

$E = 4.1 * P^{0.67}$; for process input weight rate up to and including 30 tons per hour.
$E = 55 * P^{0.11} – 40$; for process input weight rate above 30 tons per hour.

For the bleaching clay receiving (SC 710), Georgia Rule (b) limits visible emissions to 40% opacity.

For the hydrogen reformer (SC HP1), Georgia Rule (d)2.(ii) limits particulate matter emissions base on the following equation:

$P = 0.5 * (10/R)^{0.5}$; where P equals the allowable particulate matter emission rate in lb/mmBtu and R equals the heat input of the fuel burning equipment in mmBtu/hr.

For the hydrogen reformer (SC HP1), Georgia Rule (d)3. limits visible emissions to 20% opacity except for one6-minute per of not more than 27% opacity. For the hydrogen reformer (SC HP1), Georgia Rule (g) limits the sulfur content of the fuel to no more than 2.5%. Because HP1 burns only natural gas, it will have no difficulty complying with Rules (d) and (g).

Combustion Units:

Emission and Operating Caps–

Wellons Boiler (SC 630) was installed in 1972 and has a heat input capacity of 95 mmBtu/hr. It is permitted to burn biomass, oilseed hulls (in loose or palletized form), and railroad crossties. Railroad crossties may only be burned at rates less than or equal to 2.5 tons per hour and only during normal operation. The Wellons boiler is subject to a PSD avoidance limit for NOx emissions of 0.456 pounds of NOx per thousand pounds of steam generated.

Cleaver Brooks boiler (SC 640) was installed in 1981 and has a heat input capacity of 75 mmBtu/hr.

CE boiler (SC 650) was constructed in 1980 and installed in 1996 and has a heat input capacity of 160mmBtu/hr.

GTS boiler (SC 705) was installed in 1999 and has a heat input capacity of 15mmBtu/hr. These boilers are permitted to burn natural gas, distillate fuel oil, and vegetable oil.

The other GTS boiler (SC 701) was installed in 2002 and has a heat input capacity of 15 mmBtu/hr. It is permitted to burn natural gas and distillate fuel oil.

The Cleaver Brooks boiler (SC 640) and the CE boiler (SC 650) are subject to a PSD avoidance limit for sulfur dioxide emissions of 40.62 tons during any 12 consecutive months. This is also translated into a fuel oil and vegetable oil usage limit of 1,120,000 gallons during any 12 consecutive months. They are also subject to a PSD avoidance limit for fuel sulfur content of fuel oil of 0.5%, by weight. This limit has been combined with the fuel sulfur limit for the GTS boilers (701 and 705) since their fuel sulfur limit under NSPS Subpart Dc is the same.

The Wellons boiler (SC 630), Cleaver Brooks boiler (SC 640), the CE boiler (SC 650), the hydrogen reformer (SC HP1), and the column grain dryers (SC 009 and 010) are subject to a PSD avoidance limit for NO_x emissions of 106.80 tons during any 12 consecutive month period.

The Wellons boiler (SC 630), Cleaver Brooks boiler (SC 640), the CE boiler (SC 650), the hydrogen reformer (SC HP1), and the column grain dryers (SC 009 and 010) are subject to a PSD avoidance limit for CO emissions of 343 tons during any 12 consecutive month period.

The Wellons boiler (SC 630), Cleaver Brooks boiler (SC 640), and the CE boiler (SC 650) are each subject to PSD avoidance limits for particulate matter and PM_{-10} as indicated in the table Below:

Source Code	Description	Stack Code	PM lb/hr	PM10 lb/hr
630	Wellons Wood Waste Fired Boiler	635	1.48	1.03
640	Cleaver-Brooks Boiler	645	1.34	1.0
650	CE Boiler	655	1.17	0.83

Applicable Rules and Regulations–

Rules and Regulations Assessment:

All of the boilers (630, 640, 650, 701, 705) are subject to Georgia Rule 391-3-1-.02(2)(d), "Fuel Burning Equipment" and Georgia Rule 391-3-1-.02(2)(g), "Sulfur Dioxide." All equipment that meets the definition of 'fuel burning equipment' in the Georgia Rules are subject to Rules (d) and (g). Because the boilers were all constructed after January 1972 and have a heat input capacity greater than 10 mmBtu/hr and less than 250 mmBtu/hr, they are subject to paragraphs 2.(ii) and 3. of Rule (d) and paragraph 2 of Rule (g).

Boilers 630 and 640 are not subject to NSPS standards (Subpart Dc) because they were constructed before 1989. Boiler 650 is not subject to NSPS standards (Subpart Db) because it was constructed before 1984.

Boilers 701, 705, B115A and B115B are subject to 40 CFR 60 Subpart Dc, "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units," because they were constructed after June 1989 and have a heat input capacity of greater than 10 mmBtu/hr and meet the definition of 'steam generating unit' in the regulation.

All of the boilers (SC-630, 640, 650, 701, 705, B115A and B115B) are subject to 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 GTS Boilers (Source Code 701 and 705), Cleaver Brooks and CE Boiler (Source Code 640 and 650) are designated as an industrial boiler in the "Units Designed to Burn Gas 1" subcategory, with a heat input greater than 10 million Btu/hour

The Wellons Boiler (Source Code 630) is designated as an industrial boiler in the "Fuel cell units designed to burn biomass/bio-based solids" subcategory, with a heat input greater than 10 million Btu/hour.

The Wellons Boiler has the following limits:
a. Filterable Particulate Matter (PM) in excess of 0.02 lb/MMBtu of heat input.
b. CO in excess of 1100 ppm, dry, at 3% oxygen on a 30 day rolling average.
c. Hydrogen Chloride (HCl) emissions in excess 0.022 lb/MMBtu of heat input.
d. Emissions of mercury are limited to 5.7E-06lb/MMBtu of heat input.
e. Opacity of which is equal to or greater than 10% opacity (daily block average).

The Hurst Boilers (Source Code B115A and B115B) are designated as an industrial boiler in the "Stokers/sloped grate/others designed to burn wet biomass fuel" subcategory, with a heat input greater than 10 million Btu/hour.

The Hurst Boilers have the following limits:
a. Opacity of which is equal to or greater than 10% opacity (daily block average).
b. Filterable Particulate Matter (PM) in excess of 0.037 lb/MMBtu of heat input.
c. CO in excess of 720 ppm, dry, at 3% oxygen on a 30 day rolling average.
d. Hydrogen Chloride (HCl) emissions in excess 0.022 lb/MMBtu of heat input.
e. Emissions of mercury are limited to 5.70E-06 lb/MMBtu of heat input.

Boilers B115A and Bll5B have an ESP, an allowed compliance option under the Industrial/Commercial/Industrial Boilers and Process Heaters NESHAP, to control particulate emissions.

The applicable limit in the federal NSPS for boilers found in 40 CFR Part 60, Subpart Dc is 0.03 lb/MMBtu for units that were constructed after February 29, 2005. These boilers were constructed in 2006 and so are subject to the 0.03 limit.

Emission and Operating Standards:

For the boilers (630, 640, 650, 701, and 705), Georgia Rule (d)2.(ii) limits particulate matter emissions based on the following equation:

P = 0.5 * (10/R)0.5 ; where P equals the allowable particulate matter emission rate in lb/mmBtu and R equals the heat input of the fuel burning equipment in mmBtu/hr.

For the boilers (630, 640, 650, 701, 705, B115A and B115B), Georgia Rule (d)3. limits visible emissions to 20% opacity except for one 6-minute per of not more than 27% opacity.

For the boilers (630, 640, 650, 701, and 705), Georgia Rule (g)2. limits the sulfur content of the fuel to no more than 2.5%.
For the GTS boilers (SC 701 and 705), Subpart Dc limits the fuel sulfur content of the fuel oil to 0.5%, by weight. As discussed above, this limit has been combined with the PSD avoidance limit for boilers 640 and 650 since they are also subject to a fuel sulfur limit of 0.5%, by weight.

Boilers 630, 115A and 115B are permitted to use biomass fuel.

Georgia Rule (d)2.(ii) limits particulate matter emissions

Boilers B115A and B115B are subject to PSD avoidance limiting the fuel to be burned, the VOC emissions, the fluoride emissions, the sulfuric acid mist emissions, the sulfur dioxide emissions, and the sulfur content in the fuel to be burned.

D. Compliance Status

The facility is operating in compliance with all applicable air quality rules and regulations.

E. Operational Flexibility

None applicable.

F. Permit Conditions

The Emissions units table and Condition 3.2.4 was modified to address the removal of C161, the baghouse associated with Emissions Unit C160, Cottonseed Flaking.

The Emissions units table and Condition 3.2.10 was modified to include the vertical seed conditioner (SC 110).

Conditions 3.2.3 and 3.2.9 were modified to remove source code 705.

Condition 3.2.20e and 3.3.22a, were modified to match Table 4 language which says 10% or the highest hourly average opacity measured during the most recent PM/TSM performance test

The permit was updated for the addition of permit conditions related to compliance with 40 CFR Subpart DDDDD (Boiler MACT). New Conditions include: 3.3.12 through 3.3.22.

Permit Conditions 3.3.12 and 3.3.13 are general rule applicability requirements for the boilers.

Permit Condition 3.3.14 subjects the facility to work practice standards of Subpart DDDDD.

Permit Condition 3.3.15 requires the facility to comply with the standards of Subpart DDDDD during periods of startup and shutdown.

Permit Condition 3.3.16 requires the facility to comply with the periodic tune-up requirements per 40 CFR 63, Subpart DDDDD for the applicable boiler..

Permit Conditions 3.3.17 and 3.3.18 defines the fuels that may be fired in GTS boilers (Source code 701 and 705) and the tune-up requirements per 40 CFR 63, Subpart DDDDD.

Permit Conditions 3.3.19 and 3.3.20 defines the fuels that may be fired in Wellons Boiler 630 and outlines all applicable emission limitations for the Wellons Boiler per 40 CFR 63, Subpart DDDDD.

Permit Conditions 3.3.21 and 3.3.22 defines the fuels that may be fired in Hurst Boilers B115A and B115B and outlines all applicable emission limitations for the Hursts Boilers per 40 CFR 63, Subpart DDDDD.

Old Permit Condition 3.2.3 was modified to specify the boiler as biomass fuel and to remove railroad ties and ground stumps since the facility does not have capability to grind stumps or railroad ties.

Old Permit Conditions 3.2.12 through 3.2.15, 3.3.11 and 3.3.12 were removed since Boilers 115A and 115B are biomass fired.

Old Permit Condition 3.5.2 was removed from the permit.

All other Part 3.0 Permit Conditions of Permit No. 2075-185-0051-V-02-0 remain unchanged and have been carried over to this permit.

IV. Testing Requirements (with Associated Record Keeping and Reporting)

A. General Testing Requirements

The permit includes a requirement that the Permittee conduct performance testing on any specified emission unit when directed by the Division. Additionally, a written notification of any performance test(s) is required 30 days (or sixty (60) days for tests required by 40 CFR Part 63) prior to the date of the test(s) and a test plan is required to be submitted with the test notification. Test methods and procedures for determining compliance with applicable emission limitations are listed and test results are required to be submitted to the Division within 60 days of completion of the testing.

Condition 4.1.3 was modified for the addition of testing and monitoring procedures related to compliance with 40 CFR Subpart DDDDD (Boiler MACT).

B. Specific Testing Requirements

All Part 4.0 Permit Conditions of Permit No. 2075-185-0051-V-02-0 remain unchanged and have been carried over to this permit.

Condition 4.2.1 requires ADM to test the Wellons boiler (630) for PM-10, CO, and NOx emissions if it is fired with oilseed hulls. This testing is necessary to ensure that the CO and NOx emission rates that are used in the PSD avoidance conditions for the Wellons boiler are also appropriate for the burning of oilseed hulls. The test for PM-10 verifies that the source is in compliance with Rule (d).

Condition 4.2.2 requires ADM to test the Wellons boiler for PM annually.

Condition 4.2.3 requires ADM to test the Wellons boiler for CO and NOx at 3-year intervals.

Condition 4.2.4 requires ADM to test either boiler 640 or 650 for PM_{10}, CO, and NOx for both distillate fuel oil and vegetable oil. This condition is not triggered until one of the boilers actually burns vegetable oil. This testing will verify that the burning of vegetable oil does not result in greater emissions of these pollutants that the burning of distillate fuel oil.

Condition 4.2.5 requires ADM to do an initial performance test on the new Collet Cooler (SC C190) for PM and PM_{10} after it starts up.

Conditions 4.2.6 and 4.2.7 provide justification for reopening the permit if the test results from the tests required by Conditions 4.2.1 and 4.2.4 result in higher emissions than were used to support the combustion of those fuels (oilseed hulls and vegetable oil) in the permit.

Conditions 4.2.8, 4.2.9 and 4.2.10 per PSD and the Boiler MACT, require performance testing for the NOx and CO emissions limits and for COMS for each boiler with Source Codes B115A and B115B.

V. Monitoring Requirements

A. General Monitoring Requirements

Condition 5.1.1 requires that all continuous monitoring systems required by the Division be operated continuously except during monitoring system breakdowns and repairs. Monitoring system response during quality assurance activities is required to be measured and recorded. Maintenance or repair is required to be conducted in an expeditious manner.

B. Specific Monitoring Requirements

1. Individual Equipment:

Combustion Units:

The boilers (630, 640, 650, 701, 705, B115A, B115B and HP1) are all subject to Georgia Rule 391-3-1-.02(2)(d) for particulate matter and opacity, and Georgia Rule 391-3-1-.02(2)(g) for sulfur dioxide emissions. In addition, boilers 630, 640, and 650 are subject to PSD avoidance limits for particulate matter and PM_{10}. The primary fuel for all the boilers, except the Wellons boiler (630) and Boilers B115A and B115B, is natural gas with distillate fuel oil and vegetable oil serving as backup fuels. Since these fuels are very clean burning and boilers firing these fuels require little maintenance to ensure proper operation, the likelihood of the emission limitations for particulate matter, opacity, and sulfur dioxide being exceeded is very low and no monitoring is required.

The Wellons boiler (630) is equipped with a multiclone and 2 baghouses in series. In addition, ADM is required to do a daily VE check on the baghouse exhaust. All of these monitoring requirements serve to assure compliance with the PM and visible emissions limitations. The Wellons boiler burns only biomass type fuels (wood waste, oilseed hulls, railroad ties), which inherently have very low sulfur, so no monitoring is necessary to ensure compliance with Rule (g).

The combustion units (630, 640, 650, HP1, 009, 010) are subject to PSD avoidance limits for CO and NOx emissions. At approximately one-month intervals, ADM is required to measure the CO and NOx emissions in the exhaust of each emission unit to verify that the emission factors used for estimating the CO and NOx emissions are conservative.

Two boilers (640 and 650) are subject to a PSD avoidance limit for SO_2 emissions that limits the amount of fuel oil and vegetable oil that may be burned.

The permit requires monitors to measure and record the amount of fuel burned in each combustion unit (640, 650, 701, 705, 009, 010, and HP1). Since the Wellons boiler (630) burns solid fuels, it is required to monitor steam production in order to track its level of operation. This data is used for assuring compliance with the PSD avoidance limits for CO and NOx (for 630, 640, 650, HP1, 009, 010) and the PSD avoidance limits for SO_2 (for 640 and 650), and the record keeping requirements for NSPS Subpart Dc (701, 705, HP1, B115A and B115B).

Condition 5.2.1 requires ADM to require COMS monitoring system for the boilers SC 630, B115A and B115B.

Condition 5.2.7 was modified to remove the quarterly testing requirement. ADM already has to comply with Boiler MACT tune ups and utilize the NOx and CO info from these tune ups in these calculations.

New Condition 5.2.9 requires the facility to perform a one-time energy assessment per 40 CFR 63, Subpart DDDDD for the applicable boilers.

New Condition 5.2.10 was added to provide tune-up procedures in accordance with 40 CFR 63 Subpart DDDDD.

New Condition 5.2.11 requires the facility to install all continuous monitoring systems according to procedures in 40 CFR 63.7525(c) through (m).

Soybean Extraction Plant and Cottonseed Extraction Plant:

The soybean extraction process and cottonseed extraction process are each subject to Georgia Rule (e) and Georgia Rule (b). Most of the emission units that comprise the soybean extraction and cottonseed extraction processes are also subject to PSD avoidance limits for particulate matter and/or PM-10. Many of the sources are controlled by cyclones and baghouses. Some are equipped with rotary drum filters and a few are uncontrolled. Proper operation and maintenance of the cyclones will assure that emissions are below applicable limitations. Weekly visual inspections of the cyclones are required to ensure proper operation and maintenance. Reportable excursions are specified in Condition 6.1.7c. Proper operation and maintenance of the baghouses will assure compliance with the applicable limitations. Visible emissions from the baghouses are a good indicator of its performance and a daily check of visible emissions is required for each baghouse that vents to the atmosphere. If visible emissions are seen from the baghouse, corrective action is required to be taken. In addition to the daily VE check, a preventative maintenance program for the baghouses is required to be developed consisting of a weekly measurement of pressure drop across each baghouse and certain physical checks. The PMP is required in Condition 5.2.6.

Visible emissions from the rotary drum filters are a good indicator of its performance and a daily check of visible emissions is required for each rotary drum filter that vents to the atmosphere. If visible emissions are seen from the rotary drum filter, corrective action is required to be taken (no PMP is required for rotary drum filters). Visible emission checks will also be used for most of the uncontrolled sources (005, 009, 010, C030-C080, and C180).

Some of the solvent extraction equipment (210, 220, 230, S200, S240, and S250) is equipped with mineral oil scrubbers. These control devices are used to control VOC and hexane emissions. They are not used to control PM emissions. No monitoring is necessary because VOC and hexane emissions are monitored through material usage records. No monitoring for PM and visible emissions is necessary from 210, 220, S200, and S240 as these sources are not expected to have PM emissions and visible emissions. 230 and S250 are also equipped with cyclones. As discussed above for cyclones, they will be required to undergo periodic maintenance inspections to assure compliance with applicable PM and visible emission limits.

The column grain dryers (009 and 010) are subject to Rule (g). Since they burn only natural gas, no monitoring is necessary to ensure compliance with Rule (g).ADM is required to implement and maintain a leak detection and repair program to minimize hexane emissions from the process piping and equipment of the soybean and cottonseed oil solvent extraction units. This requirement is included as Condition 5.2.3 and has been carried over from the existing SIP permit for the facility.

Edible Oil Refinery:

The edible oil refinery has a baghouse on the bleaching clay receiving process. It is subject to Rules (b) and (e). As discussed above for the other baghouses, proper operation and maintenance

of the baghouse will assure compliance with the applicable limitations. Visible emissions from the baghouse are a good indicator of its performance and a daily check of visible emissions is required for each baghouse that vents to the atmosphere. If visible emissions are seen from the baghouse, corrective action is required to be taken. In addition to the daily VE check, a preventative maintenance program for the baghouses is required to be developed consisting of a weekly measurement of pressure drop across each baghouse and certain physical checks. The PMP is required in Condition 5.2.6.

2. Equipment Groups (all subject to the same monitoring requirements):

None applicable.

C. Compliance Assurance Monitoring (CAM)

Not Applicable

VI. Record Keeping and Reporting Requirements

A. General Record Keeping and Reporting Requirements

The Permit contains general requirements for the maintenance of all records for a period of five years following the date of entry and requires the prompt reporting of all information related to deviations from the applicable requirements. Records, including identification of any excess emissions, exceedances, or excursions from the applicable monitoring triggers, the cause of such occurrence, and the corrective action taken, are required to be kept by the Permittee and reporting is required on a semiannual basis.

Template Conditions 6.1.3 and 6.1.4 were updated in September 2011 to allow ~60 days to submit periodic reports. Alternative reporting deadlines are allowed per 40 CFR 70.6, 40 CFR 60.19(f) and 40 CFR 63.10(a).

B. Specific Record Keeping and Reporting Requirements

The facility is subject to a PSD limit on the total amount of vegetable oil that can be processed at the facility. Monthly records of production are required to be kept to assure compliance with this requirement.

All of the combustion units that are permitted to burn fuel oil (640, 650, 701, and 705) have fuel sulfur limits of 0.5%, by weight. The limit for 701 and 705 comes from Subpart Dc. The limit for 640 and 650 is a PSD avoidance limit. Each shipment of fuel oil to the facility must be certified from the supplier as meeting this sulfur limitation. ADM is required to maintain records of these certifications.

The Wellons boiler (630) is allowed to burn some railroad ties, but no more than 2.5 tons per hour. ADM is required to maintain usage records to assure that this limit is not exceeded. ADM is subject to PSD avoidance limits regarding the amount of soybeans that can be processed at the entire facility as well as just those processed in the column grain dryers (009 and 010). ADM is required to maintain production records to assure that these limits are not exceeded.

Some of the cottonseed extraction equipment (Seed Receiving (SC C010), Seedhouses (SC C030, C040, C050, C060, C070, C080), Clay Tank (SC C435), Meal Loadout (SC C440), White Seed Truck Loadout (SC C450), and White Seed/Hull Rail and Truck Loadout (SC C460)) are subject to PSD avoidance limits regarding their hours of operation. Hours of operation records are required to be maintained to assure compliance with these limits.

The clay storage bin (340) and the bleaching clay receiving bin (710) are subject to a PSD avoidance limit on the amount of material that they receive. Records of material received are required to be maintained to assure compliance with this limit.

The clay storage bin (340) and the bleaching clay receiving bin (710) are subject to a PSD avoidance limit on the amount of material that they receive. Records of material received are required to be maintained to assure compliance with this limit.

The facility is subject to a PSD limit on the amount of hexane emitted per ton of cottonseeds and soybeans processed. Records of hexane usage, crude oil received, amount of cottonseeds processed, and amount of soybeans processed are required to assure compliance with this limit.

Previous Permit Condition 6.2.4 was removed from this renewal permit since the facility is no longer capable of burning railroad ties.

Condition 6.2.10 was modified to change quarterly reporting to semi-annual.

NSPS Subpart Dc requires affected sources (701, 705, HP1) to maintain monthly records of each fuel burned. In addition, it requires periodic reports to be submitted to verify compliance with the requirement to obtain certification for each fuel oil shipment. Condition 6.2.11 contains this reporting requirement.

The permit also contains requirements to keep various records and submit various reports under the Vegetable Oil MACT Standard (40 CFR 63 Subpart GGGG). These requirements are included as Conditions 6.2.12 and 6.2.13.

Permit Condition 6.2.14 requires recording and maintaining records of the amounts of each fuel, including fuel type, combusted daily in boilers (Source Codes: B115A and B115B).

New Permit Conditions 6.2.18 through 6.2.26 outline the requirements of 40 CFR 63, Subpart DDDDD for the applicable boilers.

Permit Condition 6.2.18 requires the facility to submit Notification of Compliance Status documents per 40 CFR 63, Subpart DDDDD.

Permit Condition 6.2.19 requires the facility to submit notification of any alternative fuel burned per 40 CFR 63, Subpart DDDDD.

Permit Condition 6.2.20 requires the facility to provide notice of a fuel switch or physical change per 40 CFR 63, Subpart DDDDD.

Permit Condition 6.2.21 specifies the compliance report schedule per 40 CFR 63, Subpart DDDDD. The reports should be included in the Title V semi-annual reports with the same due dates.

Permit Condition 6.2.22 specifies what information should be submitted in the compliance report schedule per 40 CFR 63, Subpart DDDDD.

Permit Condition 6.2.23 requires the facility to submit reports using CEDRI per 40 CFR 63, Subpart DDDDD.

Permit Condition 6.2.24 specifies the type of records to be maintained at the facility per 40 CFR 63, Subpart DDDDD.

Permit Condition 6.2.25 requires the facility to keep records of any alternative fuel burned per 40 CFR 63, Subpart DDDDD.

Permit Condition 6.2.26 specifies the record keeping requirements associated with tune-ups required per 40 CFR 63, Subpart DDDDD.

VII. Specific Requirements

A. Operational Flexibility

Not applicable

B. Alternative Requirements

Not applicable

C. Insignificant Activities

All insignificant activities are listed in Attachment B of the Permit No. 2075-185-0051-V-03-0

D. Temporary Sources

Not applicable

E. Short-Term Activities

Not applicable

F. Compliance Schedule/Progress Reports

Not applicable

G. Emissions Trading

Not applicable

H. Acid Rain Requirements

Not applicable

I. Stratospheric Ozone Protection Requirements

Not applicable

J. Pollution Prevention

Not applicable

K. Specific Conditions

Not applicable

VIII. General Provisions

Generic provisions have been included in this permit to address the requirements in 40 CFR Part 70 that apply to all Title V sources, and the requirements in Chapter 391-3-1 of the Georgia Rules for Air Quality Control that apply to all stationary sources of air pollution.

Template Condition 8.14.1 was updated in September 2011 to change the default submittal deadline for Annual Compliance Certifications to February 28.

Template Condition Section 8.27 was updated in August 2014 to include more detailed, clear requirements for emergency generator engines currently exempt from SIP permitting and considered insignificant sources in the Title V permit.

Template Condition Section 8.28 was updated in August 2014 to more clearly define the applicability of the Boiler MACT or GACT for major or minor sources of HAP.