

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date:

Region: Fayetteville Regional Office
County: Cumberland
NC Facility ID: 2600016
Inspector's Name: Robert Hayden
Date of Last Inspection: 11/08/2007
Compliance Code: C/In Compliance With
 Procedural Reqr

Facility Data			Permit Applicability (this application only)
Applicant (Facility's Name): Cargill Inc - Fayetteville Facility Address: Cargill Inc - Fayetteville 1754 River Road Fayetteville, NC 28301 SIC: 2075 / Soybean Oil Mills NAICS: 311222 / Soybean Processing Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V			SIP: NSPS: NESHAP: PSD: PSD Avoidance: NC Toxics: 112(r): Other:
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	Application Number: 2600016.07C Date Received: 10/26/2007 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 03903/T31 Existing Permit Issue Date: 03/07/2008 Existing Permit Expiration Date: 02/28/2013
Scott Schuelke EH&S Coordinator (910) 433-4954 1754 River Road Fayetteville NC, 28301	Joshua Small Facility Superintendent (910) 433-4907 1754 River Road Fayetteville NC, 28301	Scott Schuelke EH&S Coordinator (910) 433-4954 1754 River Road Fayetteville NC, 28301	
Review Engineer: Gautam Patnaik Review Engineer's Signature: Date:		Comments / Recommendations: Issue 03903/T32 Permit Issue Date: Permit Expiration Date:	

1. Facility Description.

Soybeans for feed and oil are processed at this facility. This facility is considered both a Soybean Processing and Refining Facility. As per the Regional Office this facility consists of two plants: 1) Crush Plant where soybean meal and crude oil are produced, and 2) Refinery Plant where the crude oil is refined to edible soybean oil. The facility receives soybeans and then dries, dehulls, conditions, flakes, and extracts oil from the bean flakes. The hulls, soybean meal from depleted flakes, and soybean oil are then processed and transferred off-site.

2. Purpose of Application

This application is for the renewal for their Title V permit. The current Air Permit No. 3903T31, was scheduled to expire on July 31, 2008. However, the applicant submitted the required renewal application at least nine months prior to the expiration date and are therefore covered under the

Title V application shield pursuant to 15A NCAC 2Q .0512(b)(1). In accordance with 15A NCAC 2Q .0513(c) Permit No. 3903T31 shall not expire until the renewal permit has been issued or denied.

Also see Section 12 (Applicant’s comments) of this review.

3. Application Chronology

This renewal application was received on October 26, 2007. The table below outlines the modifications to their permit starting from their initial title V permit.

Application #	Changes Made to the Permit	Permit Issued
260016A5.A	Initial title V application	03903T22
2600016.03A	Administrative changes, change reporting frequency for toxics and PSD avoidance, and replace an existing bagfilter	03903T23
2600016.04A	Replacement of the old deodorizer, boiler and added insignificant activities	03903T24
2600016.04B	Replacement of the clay conveying receiver and associated bagfilter with an enclosed auger system.	03903T25
2600016.05A	Installed a landfill gas and natural gas fired boiler.	03903T26
2600016.05B	Replace two cyclones on two flake mills with one collection system and cyclone.	03903T27
2600016.05C	Increase TAP emissions limits, remove Hot dehulling, correct the emission source and device description, and increase the solvent n-hexane content limit.	03903T28
2600016.05D	Administrative changes	03903T29
2600016.07B	Remove boiler MACT	03903T30
2600016.07D	Replace soybean oil/hexane solvent extraction process, enforcement of Consent Decree 05-2037-JMR-FLN	03903T31

4. Regulatory Review

The facility is subject to the following regulations:

- i. 15A NCAC 2D .0503: “Particulates from Fuel Burning Indirect Heat Exchangers”
- ii. 15A NCAC 2D .0515: “Particulates from Miscellaneous Industrial Processes.”
- iii. 15A NCAC 2D .0516: “Sulfur Dioxide Emissions from Combustion Sources.”
- iv. 15A NCAC 2D .0521: “Control of Visible Emissions.”
The facility now has to demonstrate compliance when required using Method 9 for 12 minutes.

- v. 15A NCAC 2D .0524 (40 CFR 60, Subpart Dc): New Source Performance Standards - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
- vi. 15A NCAC 2D .0530: "Prevention of Significant Deterioration" for (PM, NO_x and SO₂)
- vii. 15A NCAC 2D .0958: "Work Practices for Sources of Volatile Organic Compounds"
- viii. 15A NCAC 2D .1100: "Control of Toxic Air Pollutants"
- ix. 15A NCAC 2D .1111 (MACT Subpart GGGG) national emission standards for hazardous air pollutants: solvent extraction for vegetable oil production
- x. 15A NCAC 2D .1806: "Control of Odorous Emissions"
- xi. 15A NCAC 2Q .0317: (2D .0530) "Avoidance Condition for Prevention Of Significant Deterioration" (VOC and SO₂)
- xii. 15A NCAC 2Q .0700: "Toxic Air Pollutant Procedures"
- xiii. 15A NCAC 2Q .0705: "Existing facilities and SIC calls for Toxic Air Pollutant Emissions Limitation Requirement"

Renewal of the permit does not change any stipulations for the above regulations.

5. NSPS, NESHAPS, PSD, Attainment Status, 112(r), CAM, Application Classification:

NSPS

The landfill gas and natural gas-fired boiler (ID No. ES41) is the only source subject to any NSPS regulation pursuant to 15A NCAC 2D .0524, Subpart Dc regulation.

NESHAP/MACT

This facility is a major source of HAPs and subject to the solvent extraction for vegetable oil production MACT regulation, Subpart (GGGG).

PSD

The facility currently has PSD avoidance conditions for VOCs and SO₂.

Attainment Status

This facility is located in Cumberland County, which is currently designated as attainment area for Ozone.

112(r)

This facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the thresholds in the Rule.

CAM

None of the control devices at this facility are currently subject to a Compliance Assurance Monitoring Plan (CAM). However during this renewal various control devices were determined to be subject to CAM since controlled sources were determined to have pre-controlled emissions above the major source threshold, and use a control device to meet an applicable standard.

The applicant verified that the before control emission rate of PM10 from sources mentioned below are above 100 tons per year and these sources and control devices are as described below:

- i) Sources ES-5, ES11, and ES-22 controlled by bagfilters 5C, BF9, and BF1
- ii) Sources ES-4, ES-6, ES12, ES13, ES14 and ES65 controlled by cyclones C106, ES-6C, C12A and C12C, CY13, CY14, C65A, C65B, and C65C

All the sources mentioned above are subject to 2D .0515 except source ES22, which is subject to 2D .0530. Both these regulations provide limits to the emissions of particulate matter from these sources and compliance is achieved by having controls for these sources. The facility will be required to monitor visible emissions from the cyclones and bagfilters exhaust using a Method 22 like procedure instead of the pressure drop across the control devices.

Testing

None.

Monitoring

The key elements of the monitoring approach are presented in the following table for all the control devices.

Indicator [64.6(c)(1)(i)]	Visible emissions from the outlets of the sources mentioned above recorded once per day during operation.
Measurement Approach [64.6(c)(1)(ii)]	Visible emissions from the outlets of the sources mentioned above will be monitored daily using reference method 22-like procedures.
Indicator Range [64.6(c)(2)]	There should be no visible emissions from the sources. An excursion is defined as the presence of visible emissions. Excursions trigger an inspection and corrective action
Quality Improvement Plan (QIP) Threshold (exceedance) [64.8]	Six excursions as defined above, per source, within any 6-month period.
QA/QC Practices and Criteria	The observer will be familiar with Method 22 and

[64.3(b)(3)]	follow Method 22-like procedures
Monitoring Frequency [64.3(b)(4)] & Data Collection Procedure	A six-minute Method 22-like observation is performed daily, during operation. The daily results shall be recorded once per day and kept in a logbook
Averaging Period	NA

Method 22 is for visual determination of fugitive emissions from material sources and smoke emissions from flares and thus the term used above “Method 22-like,” since this is being used as performance indicator of a control device.

Method 22 specifies the time of visible emissions observation period (six-minute). This method does not require that the opacity of emissions be determined. Since this procedure requires only the determination of whether visible emissions occur and does not require the determination of opacity levels, observer certification according to the procedures of Method 9 is not required. However, it is necessary that the observer is knowledgeable with respect to the general procedures for determining the presence of visible emissions, as mentioned in the quality assurance of the CAM plan in the table above.

This method requires not to observe emissions continuously, for a period of more than 15 to 20 minutes, without taking a rest break. Or for sources requiring observation periods of greater than 20 minutes, the facility has to use two observers who can alternate between making observations and taking breaks. Thus, it was decided that visible emissions observation of greater than 30 minutes as used in similar CAM plan (reference LP – Roxboro, Air Quality Permit No. 07760T15), will not be used. Instead six excursions, per source, within any 6-month period would cause an exceedance.

Recordkeeping and Reporting

The applicant must meet monitoring, recordkeeping and reporting requirements as specified in 40 CFR 64.7 through CFR 64.9 including records of excursion reports, corrective actions, and visible emissions logs.

The applicant must maintain the following records on a monthly basis in accordance with the requirements of 40 CFR 63.10(b)(1). A semi annual compliance report must cover the semiannual reporting period from January 1 through June 30 and the semiannual reporting period from July 1 through December 31.

6. Permit Shield from CAM:

An exemption from CAM allowed by the rule 2D .0614(b)(1)(E) states “an emissions cap that is approved under the rules of this Subchapter and Subchapter 15A NCAC 2Q and incorporated in a permit issued under 15A NCAC 2Q .0500.” During the modification of the current permit an exemption from CAM was allowed under this rule for the soybean oil/ hexane solvent extraction process (ID No. ES31) controlled by a packed column mineral oil absorber (ID No. CD29) and incorporated in Section 2.4 of the permit.

7. Consent Decree:

The consent decree (Consent Decree 05-2037-JMR-FLN) was signed on February 27, 2006 by the applicant and EPA and listed this facility as being subject to certain requirements. The compliance requirements and schedule for this facility was described in the review for application # 2600016.07D (Air Permit No. 03903T31) and incorporated in Section 2.3 of that permit.

8. Facility Wide Air Toxics

The renewal of this permit did not require an air toxics analysis.

9. Part II of Current Permit

The current permit does have a Part II, and there are many emission sources modified during the five year permit term that were flagged in the permit as not being shielded in accordance with General Condition R. These references and the Part II were taken out since this permit will provide for a 30-day public comment period and 45-day EPA review period.

10. Statement of Compliance

The DAQ has reviewed the compliance status of this facility. The Regional Office did inform us that as per the latest inspection done on 11/8/2007 the facility was in likely compliance with all applicable requirements. The applicant has certified that the facility will be in compliance with all applicable requirements at the time of permit issuance and will continue to comply with these requirements.

11. Public Notice / EPA and Affected State Review

Pursuant to 2Q. 0521, a notice of the draft Title V Permit was [will be] placed in a newspaper of general circulation in the area where the facility is located. The notice did [will] provide for a 30 day comment period, with an opportunity for a public hearing. Copies of the public notice was [will be] sent to persons on the Title V mailing list and EPA. Pursuant to 2Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant was [will be] provided to EPA. Also pursuant to 2Q .0522, a notice of the draft Title V Permit was [will be] provided to each affected State at or before the time notice provided to the public under 2Q .0521 above.

12. Conclusions, Comments, and Recommendations

A professional engineer's seal was not required for this renewal.

A consistency determination was not required for this renewal.

Regional Office and the applicant were provided a draft of this permit their response were received on 4/21/08 and 4/23/08 respectively. The Regional Office did not have any comments and the applicant requested that the emission source ID Nos. ES6A and ES6B now be listed as once source (This is essentially a single source, ID No. ES-6) and the ID No., change for cyclone (ID No. 6C) to (ID No. ES-6C). This source and control device will now be listed in the permit as described below:

ES-6	Soybean flaker process	ES-6C	cyclone (29 inches in diameter)
------	------------------------	-------	---------------------------------

Regional Office concurs with RCO recommendation to renew air permit.

13. Permit Modification/Changes

The following table describes the modifications to the current permit as part of the modification process.

Page(s)	Section	Description of Change(s)
8	2.1 A.2. c. ii.	Monitoring includes Method 9 for 12 minutes
10	2.1 B.2. c. ii.	Monitoring includes Method 9 for 12 minutes
12	2.1 C.2. c. ii.	Monitoring includes Method 9 for 12 minutes
13	2.1 D. 1. c. ii.	Monitoring includes Method 9 for 12 minutes
16	2.1 E 4. d. ii.	Monitoring includes Method 9 for 12 minutes
20	2.1 G. 2. c. ii.	Monitoring includes Method 9 for 12 minutes
22	2.1 H. 2. c. ii.	Monitoring includes Method 9 for 12 minutes
23	2.1 I. 2. c. ii.	Monitoring includes Method 9 for 12 minutes
41 to 43	2.5 A.	CAM requirements for sources (ID Nos. ES4, ES5, ES6A, ES6B, ES11, ES12, ES13, ES14, ES22, and ES65)
43 to 51	General Conditions	Updated