

ADDITIONAL SPECIAL TERMS AND CONDITIONS

INTRODUCTION: Central Soya Company, Inc., plans to modify certain operations at the Bellevue facility which will result in increased particulate and OC emissions. The units to be modified through this Permit to Install (PTI) are hull refining (P011), millfeed grinding (P020), specialty soybean extraction (P051), soybean meal cooler (P066) and clean bean conveying (P077).

A. APPLICABLE EMISSION LIMITATIONS AND/OR CONTROL REQUIREMENTS

1. The combined PE from the two baghouses associated with emissions unit P011 shall be limited to 0.80 pound/hour. Total PE from this emissions unit shall not exceed 3.50 tons/year. All PE from the two baghouses are assumed to be PM₁₀.
2. PE from emissions unit P020 shall be limited to 0.214 pound/hour. Total PE from this emissions unit shall not exceed 0.94 ton/year. All PE from the baghouse are assumed to be PM₁₀.
3. The combined PE from the three baghouses associated with emissions unit P051 shall be limited to 2.30 pounds/hour. Total PE from this emissions unit shall not exceed 10.1 tons/year. All PE from the three baghouses are assumed to be PM₁₀.
4. Hexane consumption, i.e., emission rates from the hexane extraction operations in emissions units P043 and P051 combined shall be determined on a "mass balance" basis. Consumption, i.e., emission rates shall not exceed the following levels:
 - a. total stack hexane emissions from emissions units P043 and P051 shall be limited to 20.82 pounds/hour. Total fugitive hexane emissions shall be limited to 52.7 pounds/hour;
 - b. total hexane consumption in emissions units P043 and P051 shall not exceed 285,400 gallons (811.2 tons)/rolling 12-month period;
 - c. total hexane consumption in emissions units P043 and P051 shall not exceed 0.388 gallon/ton crushed soybeans (0.00075 pound of hexane/pound of crushed soybeans from P043 and 0.0035 pound of hexane/pound of crushed soybeans from P051), based on a 6-month rolling, weighted average; and,
 - d. the short-term loss of hexane from emissions units P043 and P051 shall not exceed 67.6 tons/month.
5. Alcohol consumption, i.e., emission rates from the ethanol extraction operations in emissions units P051 and P060 combined shall be determined on a "mass balance" basis. Consumption, i.e., emission rates shall not exceed the following levels:
 - a. total stack ethanol emissions from emissions units P051 and P060 shall be limited to 11.3 pounds/hour;
 - b. total alcohol consumption in emissions units P051 and P060 shall not exceed 152,302 gallons (552.0 tons)/rolling 12-

month period; and,

- c. the short-term loss of alcohol from emissions units P051 and P060 shall not exceed 46.0 tons/month.
6. PE from emissions unit P066 shall be limited to 3.66 pounds/hour. Total PE from this emissions unit shall not exceed 16.0 tons/year. PM₁₀ emissions from this unit shall be limited to 2.93 pounds/hour. Total PM₁₀ emissions from this unit shall not exceed 12.8 tons/year.
7. PE from emissions unit P077 shall be limited to 0.043 pound/hour. Total PE from this emissions unit shall not exceed 0.19 ton/year. All PE from the baghouse are assumed to be PM₁₀.
8. Visible PE from any baghouse or cyclone stack shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule.
9. The permittee shall employ 2 baghouses (CEPREPA and CEPREPB) to control the PE from emissions unit P011.
10. The permittee shall employ a baghouse (CEPREPB) to control the PE from emissions unit P020.
11. The permittee shall employ 3 baghouses (CEPREPA, CEPREPB and CEP051A) to control the PE from emissions unit P051.
12. The permittee shall employ the white flake mineral oil vent system (CEP051B) to control OC emissions from emissions unit P051.
13. The permittee shall employ a cyclone (CEP066A) to control PE from emissions unit P066.
14. The permittee shall employ a baghouse (CEPREPA) to control the PE from emissions unit P077.

B. OPERATIONAL RESTRICTIONS

1. The pressure drop across each baghouse (CEPREPA, CEPREPB and CEP051A) and the cyclone (CEP066A) shall be maintained within the range of 0.5-10 inches of water while the associated emissions units are in operation.

C. MONITORING AND/OR RECORD KEEPING REQUIREMENTS

1. The permittee shall properly install, operate, and maintain equipment to monitor the pressure drop across each baghouse (CEPREPA, CEPREPB and CEP051A) and the cyclone (CEP066A) while the associated emissions units are in operation. The monitoring equipment shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manual(s). The permittee shall record the pressure drop across each baghouse and cyclone on a weekly basis.
2. The permittee shall perform weekly checks, when each emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack(s) serving each emissions unit. The presence or absence of any visible emissions

shall be noted in an operations log for each unit. If visible emissions are observed, the permittee shall also note the following in the operations log:

- a. the color of the emissions;
 - b. whether the emissions are representative of normal operations;
 - c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;
 - d. the total duration of any visible emission incident; and,
 - e. any corrective actions taken to eliminate the visible emissions.
3. The permittee shall collect and record the following information on a monthly basis for emission units P043 and P051 combined:
- a. the total quantity of soybeans weighed in the preparation process before the hexane extraction operation;
 - b. the total amount of hexane inventory lost in gallons/month;
 - c. the 6-month rolling weighted average hexane loss rate (gallons per ton of crushed soybeans, and pounds hexane per pound crushed soybeans);
 - d. the amount of hexane emitted in tons/month;
 - e. the amount of hexane emitted in tons/rolling 12-month;
 - f. all incidents of startup or shutdown of the emission units. (This should include all amounts of hexane that are routinely added to the system or returned to the storage tanks due to startup or shutdown. This amount of hexane is process hexane that is present in the system during times of continuous operation, but will drain out of the system during shutdown and needs to be charged back into the system prior to startup. The amount of hexane used to "recharge" the system should not be interpreted as a "hexane loss" in calculating emission rates);
 - g. dates of scheduled cleaning/maintenance; and,
 - h. dates of any process upsets.
4. The permittee shall collect and record the following information on a monthly basis for emission units P051 and P060 combined:
- a. the total quantity of soybeans weighed in the preparation process before the alcohol extraction operation;
 - b. the total amount of alcohol inventory lost in gallons/month;
 - c. the amount of alcohol emitted in tons/month.
 - d. the amount of alcohol emitted in tons/rolling 12-month period;

- e. all incidents of startup or shutdown of the emission units. (This should include all amounts of alcohol that are routinely added to the system or returned to the storage tanks due to startup or shutdown. This amount of alcohol is process alcohol that is present in the system during times of continuous operation, but will drain out of the system during shutdown and needs to be charged back into the system prior to startup. The amount of alcohol used to "recharge" the system should not be interpreted as an "alcohol loss" in calculating emission rates);
 - f. dates of scheduled cleaning/maintenance; and,
 - g. dates of any process upsets.
5. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings, if a strip-chart recorder is employed, for continuous monitoring instrumentation, and copies of all reports required by the permit. Such records may be maintained in computerized form.

D. REPORTING REQUIREMENTS

1. The permittee shall submit semiannual written reports which (a) identify all days during which any visible particulate emissions were observed from the stack(s) serving any emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Director (the appropriate Ohio EPA district office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.
2. The permittee shall submit reports in the following manner:
 - a. reports of any required information shall be submitted to the appropriate Ohio EPA district office or local air agency; and,
 - b. quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA district office or local air agency. If no deviations occurred during a calendar quarter, a quarterly report shall be submitted which states that no deviations occurred during that quarter. The reports shall be submitted by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.
3. The compliance status of each emissions unit shall be reported pursuant to the annual certification required by OAC rule 3745-77-07(C) (5).

4. The actual annual emissions data for each emissions unit shall be reported pursuant to the fee emissions report required by OAC rule 3745-78-02(A).

E. TESTING REQUIREMENTS/COMPLIANCE METHODS DETERMINATION

1. Compliance Methods Requirements: Compliance with the emission limitation(s) in this permit shall be determined in accordance with the following method(s):

- a. Emission Limitation: hull refining (P011) - 0.80 pound PE/hour, 3.50 tons/year

Applicable Compliance Method: The permittee may demonstrate compliance with the hourly PE limitation of 0.80 pound by multiplying the baghouse manufacturer-guaranteed outlet grain loading (0.005 grain/cubic foot) by the actual volumetric air flow rate (cubic feet/minute). As long as compliance is maintained with the hourly emission limitation, the unit will be in compliance with the annual emission limitation as the annual limitation is based on the hourly emission limitation at 8760 hours/year. If required, the test method to be employed to demonstrate compliance with the PE limitation shall be Method 5, which is located in 40 CFR Part 60, Appendix A.

- b. Emission Limitation: millfeed grinding (P020) - 0.214 pound PE/hour, 0.94 ton/year

Applicable Compliance Method: The permittee may demonstrate compliance with the hourly PE limitation of 0.214 pound by multiplying the baghouse manufacturer-guaranteed outlet grain loading (0.005 grain/cubic foot) by the actual volumetric air flow rate (cubic feet/minute). As long as compliance is maintained with the hourly emission limitation, the unit will be in compliance with the annual emission limitation as the annual limitation is based on the hourly emission limitation at 8760 hours/year. If required, the test method to be employed to demonstrate compliance with the PE limitation shall be Method 5, which is located in 40 CFR Part 60, Appendix A.

- c. Emission Limitation: specialty soybean extraction (P051) - 2.30 pounds PE/hour, 10.1 tons/year

Applicable Compliance Method: The permittee may demonstrate compliance with the hourly PE limitation of 2.30 pounds by multiplying the baghouse manufacturer-guaranteed outlet grain loading (0.005 grain/cubic foot) by the actual volumetric air flow rate (cubic feet/minute). As long as compliance is maintained with the hourly emission limitation, the unit will be in compliance with the annual emission limitation as the annual limitation is based on the hourly emission limitation at 8760 hours/year. If required, the test method to be employed to demonstrate compliance with the PE limitation shall be Method 5, which is located in 40 CFR Part 60, Appendix A.

- d. Emission Limitation: specialty soybean extraction (P051) -

67.6 tons OC/month, 811.2 tons/rolling 12-month period
(combined with P043)

Applicable Compliance Method: The permittee shall demonstrate compliance with the monthly OC emission limitation of 67.6 tons by maintaining monthly records as specified in section C.2 of the terms and conditions of this permit.

- e. Emission Limitation: specialty soybean extraction (P051) - 0.388 gallon hexane/ton crushed soybeans, based on a 6-month rolling, weighted average (combined with P043)

Applicable Compliance Method: The permittee shall demonstrate compliance with the OC emission limitation of 0.388 gallon/ton crushed soybeans by maintaining monthly records as specified in section C.2 of the terms and conditions of this permit.

- f. Emission Limitation: 46.0 tons OC/month, 552.0 tons/year (combined with P060)

Applicable Compliance Method: The permittee shall demonstrate compliance with the monthly OC emission limitation of 46.0 tons by maintaining monthly records as specified in section C.3 of the terms and conditions of this permit.

- g. Emission Limitation: soybean meal cooler (P066) - 3.66 pounds PE/hour, 16.0 tons/year

Applicable Compliance Method: The permittee may demonstrate compliance with the hourly PE limitation of 3.66 pounds by multiplying the emission rate (0.812 pound/hour) from a stack test on a similar, but smaller unit, by the ratio of the capacities (2700 tons/day divided by 1200 tons/day). As long as compliance is maintained with the hourly emission limitation, the unit will be in compliance with the annual emission limitation as the annual limitation is based on the hourly emission limitation at 8760 hours/year. If required, the test method to be employed to demonstrate compliance with the PE limitation shall be Method 5, which is located in 40 CFR Part 60, Appendix A.

- h. Emission Limitation: soybean meal cooler (P066) - 2.93 pounds PM₁₀/hour, 12.8 tons PM₁₀/year

Applicable Compliance Method: The permittee may demonstrate compliance with the hourly and annual PM₁₀ limitations by multiplying the hourly and annual PE rate (refer to E.1.g of the terms and conditions of this permit) by a factor of 80% (the permittee has determined that 80% of the PE are PM₁₀). If required, the test method to be employed to demonstrate compliance with the PM₁₀ limitation shall be Method 5, which is located in 40 CFR Part 60, Appendix A (including the weight of the back half of the filter).

- i. Emission Limitation: clean bean conveying (P077) - 0.043 pound PE/hour, 0.19 ton/year

Applicable Compliance Method: The permittee may demonstrate compliance with the hourly PE limitation of 0.043 pound by multiplying the baghouse manufacturer-guaranteed outlet grain loading (0.005 grain/cubic foot) by the actual volumetric air flow rate (cubic feet/minute). As long as compliance is maintained with the hourly emission limitation, the unit will be in compliance with the annual emission limitation as the annual limitation is based on the hourly emission limitation at 8760 hours/year. If required, the test method to be employed to demonstrate compliance with the PE limitation shall be Method 5, which is located in 40 CFR Part 60, Appendix A.

- j. Emission Limitation: emissions units P011, P020, P051, P066 and P077 - visible PE shall not exceed 20 percent opacity, as a six-minute average, except as otherwise provided by rule

Applicable Compliance Method: Compliance with the visible PE limitation shall be demonstrated through the monitoring/recordkeeping and reporting required in section C.2 and section D.2, respectively. If required, the permittee shall demonstrate compliance with the visible PE limitation by employing the method detailed in OAC rule 3745-17-03(B)(1).

NOTE: No term or condition specifying a method for demonstrating compliance with any emission limitation or other requirement of this permit shall preclude the use by any person of any credible evidence to establish compliance with or a violation of this permit, the Clean Air Act, or any implementing regulations or rules promulgated thereunder.

F. MISCELLANEOUS REQUIREMENTS

- 1. The potential point source VOC emissions from emissions unit P051 are equivalent to the actual VOC emissions and are a function of the mineral oil scrubber vent air flow. The average of the last 2 years actual VOC emissions from the mineral oil scrubber is 91.2 tons/year. The post change potential to emit for point source emissions (scrubber stacks) is 91.2 tons per year. The actual/potential point source VOC emissions are not expected to increase as a result of the modification as the air flow will not increase. Therefore, there is no significant increase in either VOC or PM10 emissions as a result of this modification.