Mr. David B. Smith
Director of Regulatory Compliance,
Central Soya Company, Inc.
P. O. Box 1400
Fort Wayne, IN 46801-1400

Re: A 145-9458
Modification to CP145-4300,
Plt ID 145-00035

Dear Mr. Smith:

Central Soya Company, Inc. was issued a permit on July 18,1995 for a soybean oil extraction plant. A letter requesting the changes in the operations conditions was received on February 9, 1998. The permit shall be modified as follows:

Note: The changes are crossed out, and the additions are bolded for emphasis.

Current

Operation Condition No. 21(b)

(b). That pursuant to 326-2-1-3 (Construction and Operating Permit Requirements), Central Soya shall develop a stack testing plan which identifies the method in which emissions from the following sources shall be evaluated to determine initial compliance:

Facilities	Pollutant/Opacity
Absorber	VOC
RF filter	PM
Flakers Aspiration baghouse	PM
DTDC meal dryers cyclone	PM
DTDC meal coolers cyclone	PM
DTDC meal dryers	VOC

DTDC meal cooler	VOC
Meal grinding baghouse	PM
Flow coat baghouse	PM
Truck Meal loadout baghouse	PM
Rail loader baghouse	PM

Central Soya shall submit the stack testing plan to IDEM within 30 days of the date the facility begins operation. This plan shall be reviewed and approved by IDEM. This plan shall outline the measures to be taken to demonstrate compliance with permitted emission rates and shall provide that compliance demonstrations be completed within 18 months of the date of facility start-up according to the following schedule:

(i) Four tests shall be performed within six months of the date of the facility start-up,

(ii) Four tests shall be performed within twelve months of the date of the facility start-up and

(iii) Three tests shall be performed within 18 months of the date of the facility start-up.

These tests shall be performed according to 326 IAC 3-2.1 (Source Sampling Procedures, copy enclosed) using tests approved by the commissioner or spelled out in the New Source Performance Standards. The Office of Air Management (OAM) shall be notified of the actual test date at least two weeks prior to the date, a test protocol shall be submitted to the OAM 35 days in advance of the test, and all test reports must be received by the OAM within 45 days of the completion of the testing, pursuant to that rule.

New

Operation Condition No. 21(b)

(b). That pursuant to 326-2-1-3 (Construction and Operating Permit Requirements), Central Soya shall develop a stack testing plan which identifies the method in which emissions from the following sources shall be evaluated to determine initial compliance:

Facilities	Pollutant/Opacity
Absorber	VOC
RF filter	PM
Flakers Aspiration baghouse	PM

DTDC meal dryers cyclone	PM
DTDC meal coolers cyclone	PM
DTDC meal dryers	VOC
DTDC meal cooler	VOC
Meal grinding baghouse	PM
~~Flow coat baghouse~~	~~PM~~
Truck Meal loadout baghouse	PM
~~Rail loader baghouse~~	~~PM~~

Central Soya shall submit the stack testing plan to IDEM within 30 days of the date the facility begins operation. This plan shall be reviewed and approved by IDEM. This plan shall outline the measures to be taken to demonstrate compliance with permitted emission rates and shall provide that compliance demonstrations be completed within 18 months of the date of facility start-up according to the following schedule:

(i) Four tests shall be performed within six months of the date of the facility start-up,

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These tests shall be performed according to 326 IAC 3-2.1 (Source Sampling Procedures, copy enclosed) using tests approved by the commissioner or spelled out in the New Source Performance Standards. The Office of Air Management (OAM) shall be notified of the actual test date at least two weeks prior to the date, a test protocol shall be submitted to the OAM 35 days in advance of the test, and all test reports must be received by the OAM within 45 days of the completion of the testing, pursuant to that rule.

New Operation Condition

27. That to demonstrate compliance with PM emissions from the Flow coat baghouse, and Rail loader baghouse, the visible emissions from these baghouses shall be limited to 5% opacity. PM emissions testing is not required by this permit, but compliance with this condition shall not refute non compliance determined by a PM emissions test.

Current

Operation Condition Nos. 15(c) and (d)

(c) The hexane emission rate from the DTDC dryer cyclone shall be determined weekly by measuring the hexane concentration in the meal to dryer/cooler tray 1 and from dryer/cooler tray 2. The hexane emission is then the difference between the concentration in and out of the dryer trays, multiplied by the meal-flow through the equipment. The meal hexane concentration shall be measured using gas chromatograph technology and procedures established by the American Oil Chemists Society. The weekly hexane emission rates shall be used with the weekly meal rates to calculate hexane emissions in units of pound per ton.

d) The hexane emission rate from the DTDC cooler cyclone shall be measured similarly to the DTDC dryer cyclone. The hexane emission rate shall be determined by measuring the concentration of hexane in the meal to dryer/cooler tray 3 and dryer cooler tray 4.

New

Operation Condition Nos. 15(c) and (d)

(c) ~~The hexane emission rate from the DTDC dryer cyclone shall be determined weekly by measuring the hexane concentration in the meal to dryer/cooler tray 1 and from dryer/cooler tray 2. The hexane emission is then the difference between the concentration in and out of the dryer trays, multiplied by the meal-flow through the equipment. The meal hexane concentration shall be measured using gas chromatograph technology and procedures established by the American Oil Chemists Society. The weekly hexane emission rates shall be used with the weekly meal rates to calculate hexane emissions in units of pound per ton.~~

The hexane emission rate from the DTDC dryer cyclones, and cooler cyclone shall be determined monthly by laboratory test if the lower meal temperature of the desolventizer is below 215^0F. If the meal temperature of the desolventizer is at or above 215^0F, then the hexane emission rate will be based on the compliance test results.

~~d) The hexane emission rate from the DTDC cooler cyclone shall be measured similarly to the DTDC dryer cyclone. The hexane emission rate shall be determined by measuring the concentration of hexane in the meal to dryer/cooler tray 3 and dryer cooler tray 4.~~

Current

Operation Condition No. 18 and 19

18. That the mineral oil temperature to the absorber shall be kept at 70^0F - 90^0F. A continuous hard copy readout or manual readings every 15 minutes of the temperature shall be recorded when in operation.

19. That the soybean oil to the mineral-oil-stripping column shall be kept at 215^0F - 225^0F for adequate stripping of the absorbed hexane from the oil. A continuous hard copy readout or manual readings every 15 minutes of the temperature shall be recorded when in operation.

New

Operation Condition Nos. 18 and 19

18. That the mineral oil temperature to the absorber shall be kept at 70^0F - 90^0F. ~~A continuous hard copy readout or manual readings every 15 minutes of the temperature shall be recorded when in operation.~~

When the process is in operation, an electronic data management system (EDMS) shall record the instantaneous temperature on a frequency of not less than every 15 minutes. As an alternate to installing an EDMS, manual readings shall be taken every 15 minutes.

19. That the soybean oil to the mineral-oil-stripping column shall be kept at 215^0F - 225^0F for adequate stripping of the absorbed hexane from the oil. ~~A continuous hard copy readout or manual readings every 15 minutes of the temperature shall be recorded when in operation.~~

When the process is in operation, an electronic data management system (EDMS) shall record the instantaneous temperature on a frequency of not less than every 15 minutes. As an alternate to installing an EDMS, manual readings shall be taken every 15 minutes.

This existing source has submitted their Part 70 (T-145-9004-00035) application on September 22, 1997. The changed operations conditions shall be incorporated in the submitted Part 70 application.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this amendment with the original permit.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

TPS

cc: File - Shelby County
Shelby County Health Department
Air Compliance Section Inspector -D. J. Knotts
Compliance Data Section - Jerri Curless
Permit Tracking - Janet Mobley
Air Programs Section - Nancy Landau
Title V Permit No. - 145-9004-00035

Indiana Department of Environmental Management (IDEM)
Office of Air Management

Technical Support Document (TSD) for Modification to Construction Permit

Source Background and Description

Source Name:	Central Soya Company, Inc.
Source Location:	Morristown, Indiana
County:	Shelby
Modification No.	A 145-9458
Modification to	CP 145-4300
SIC Code:	2075
Permit Reviewer:	Dr. T. P. Sinha

The Office of Air Management (OAM) has reviewed a letter from Central Soya Company, Inc., relating to certain conditions and limitations regarding the stack testing of Flow-Coat Baghouse and Rail Loader Baghouse; to replace the testing of DTDC meal for hexane with actual stack-test results; and changes in Operations Condition nos. 1 8 and 19.

The following written explanations for changing the operations conditions were given by Central Soya Company, Inc..

(a) Operations Condition 21 (b)

All of the required stack-testing is complete, and stack-test results have been submitted to the Indiana Department of Environmental Management, with the exception of the Flow-Coat Baghouse and Rail-Loader Baghouse.

The purpose of the flow-coat baghouse is to control particulate emissions from the flow coat bin whenever flow-coat material is pneumatically unloaded from a truck into the storage bin. This baghouse is only utilized when bulk trucks are unloaded. Approximately one truck per week of flow-coat material is received and unloaded into the bin. The unloading time is approximately 40 minutes. The bin does not have sufficient capacity for enough flow-coat material to perform the required three consecutive, one hour stack-test runs. The total potential controlled particulate emissions from this baghouse are 0.003 tons per year.

The Rail-Loader baghouse controls particulate matter emissions from the plant's soybean-meal railcar loading device. This is a small baghouse with 209 ft^2 of cloth surface area. The total potential controlled PM emissions are only 0.355 tons per year. The applications of the railcar meal-loader baghouse and railcar unloading baghouses are very similar. The railcar receiving baghouse also been tested and found to be in compliance. A comparison of the two baghouses is provided as shown below.

	Rail Loadout	Rail Car Receiving
Airflow (acfm)	2,000	4,800
Filter Area (ft^2)	209	485

Potential Controlled Emissions (lb/hr)	0.81	0.38
Actual Controlled Emissions as Stack Tested	—	< 0.069

Therefore, Central Soya Company, Inc. is requesting to remove the stack-testing requirement for the Flow-Coat Baghouse and Rail-Loader Baghouse.

(b) The permit condition requires a weekly determination of hexane emissions from the DTDC dryer and cooler cyclone stack. Central Soya Company, Inc., has taken meal samples and run gas chromatograph analysis in an attempt to show compliance with this Permit Condition. The test results indicate that the hexane content of the meal entering the dryer and cooler sections is lower than the hexane contents of the meal leaving the dryer and cooler sections. Since the design of the process does not allow this to occur, the results are meaningless. Therefore, Central Soya Company, Inc. requests that the testing of DTDC meal for hexane be replaced with actual stack-test results.

(c) Operations Condition Nos. 18 and 19

These conditions provide operating ranges for the mineral-oil absorption system to control hexane emissions from the process. Central Soya Company, Inc. requests that these permit conditions be replaced with one requiring an Operating and Maintenance Plan for the mineral-oil absorption system, similar to the permit condition contained in the Consolidated Grain and Barge, Mt. Vernon, Indiana permit. this change will require Central Soya Company, Inc. to continue to meet compliance requirements for the emission of volatile organic compounds, but provide some relief from the burden of maintaining considerable record-keeping.

In light of the above explanations given by Central Soya Company, Inc., and OAM review of the conditions imposed on other soybean processing plants, the following changes are made to the operation conditions of the permit.

Note: The changes are crossed out, and the additions are bolded for emphasis.

(a) The OAM has determined that these are small facilities, and the testing is not feasible or economical to perform. However, there will be an opacity limit on these two baghouses to comply with the particulate emissions.

Current

Operation Condition No. 21(b)

(b). That pursuant to 326-2-1-3 (Construction and Operating Permit Requirements), Central Soya shall develop a stack testing plan which identifies the method in which emissions from the following sources shall be evaluated to determine initial compliance:

Facilities	Pollutant/Opacity
Absorber	VOC
RF filter	PM
Flakers Aspiration baghouse	PM
DTDC meal dryers cyclone	PM
DTDC meal coolers cyclone	PM
DTDC meal dryers	VOC
DTDC meal cooler	VOC
Meal grinding baghouse	PM
Flow coat baghouse	PM
Truck Meal loadout baghouse	PM
Rail loader baghouse	PM

Central Soya shall submit the stack testing plan to IDEM within 30 days of the date the facility begins operation. This plan shall be reviewed and approved by IDEM. This plan shall outline the measures to be taken to demonstrate compliance with permitted emission rates and shall provide that compliance demonstrations be completed within 18 months of the date of facility start-up according to the following schedule:

(i) Four tests shall be performed within six months of the date of the facility start-up,

(ii) Four tests shall be performed within twelve months of the date of the facility start-up and

(iii) Three tests shall be performed within 18 months of the date of the facility start-up.

These tests shall be performed according to 326 IAC 3-2.1 (Source Sampling Procedures, copy enclosed) using tests approved by the commissioner or spelled out in the New Source Performance Standards. The Office of Air Management (OAM) shall be notified of the actual test date at least two weeks prior to the date, a test protocol shall be submitted to the OAM 35 days in advance of the test, and all test reports must be received by the OAM within 45 days of the completion of the testing, pursuant to that rule.

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~~Rail loader baghouse~~	~~PM~~

Central Soya shall submit the stack testing plan to IDEM within 30 days of the date the facility begins operation. This plan shall be reviewed and approved by IDEM. This plan shall outline the measures to be taken to demonstrate compliance with permitted emission rates and shall provide that compliance demonstrations be completed within 18 months of the date of facility start-up according to the following schedule:

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test, and all test reports must be received by the OAM within 45 days of the completion of the testing, pursuant to that rule.

New Operation Condition

27. That to demonstrate compliance with PM emissions from the Flow coat baghouse, and Rail loader baghouse, the visible emissions from these baghouses shall be limited to 5% opacity. PM emissions testing is not required by this permit, but compliance with this condition shall not refute non compliance determined by a PM emissions test.

(b) The OAM agrees with Central Soya Company, Inc. However, the company will have to perform laboratory test if the lower meal temperature of the desolventizer is below 215^0F, because the emissions will be equal to or lower than the tested results only if the temperature of the desolventizer is above 215^0F.

Current

Operation Condition Nos. 15(c) and (d)

(c) The hexane emission rate from the DTDC dryer cyclone shall be determined weekly by measuring the hexane concentration in the meal to dryer/cooler tray 1 and from dryer/cooler tray 2. The hexane emission is then the difference between the concentration in and out of the dryer trays, multiplied by the meal-flow through the equipment. The meal hexane concentration shall be measured using gas chromatograph technology and procedures established by the American Oil Chemists Society. The weekly hexane emission rates shall be used with the weekly meal rates to calculate hexane emissions in units of pound per ton.

d) The hexane emission rate from the DTDC cooler cyclone shall be measured similarly to the DTDC dryer cyclone. The hexane emission rate shall be determined by measuring the concentration of hexane in the meal to dryer/cooler tray 3 and dryer cooler tray 4.

New

Operation Condition Nos. 15(c) and (d)

(c) ~~The hexane emission rate from the DTDC dryer cyclone shall be determined weekly by measuring the hexane concentration in the meal to dryer/cooler tray 1 and from dryer/cooler tray 2. The hexane emission is then the difference between the concentration in and out of the dryer trays, multiplied by the meal-flow through the equipment. The meal hexane concentration shall be measured using gas chromatograph technology and procedures established by the American Oil Chemists Society. The weekly hexane emission rates shall be used with the weekly meal rates to calculate hexane emissions in units of pound per ton.~~

The hexane emission rate from the DTDC dryer cyclones, and cooler cyclone shall be determined monthly by laboratory test if the lower meal temperature of the desolventizer is below 215^0F. If the meal temperature of the desolventizer is at or above 215^0F, then the hexane emission rate will be based on the compliance test

results.

~~d) The hexane emission rate from the DTDC cooler cyclone shall be measured similarly to the DTDC dryer cyclone. The hexane emission rate shall be determined by measuring the concentration of hexane in the meal to dryer/cooler tray 3 and dryer cooler tray 4.~~

(c) The installation of a continuous hard copy readout from condition nos. 18 and 19 has been deleted. However an electronic data management system (EDMS) to record the instantaneous temperature on a frequency of not less than every 15 minutes, is required.

Current

Operation Condition No. 18 and 19

18. That the mineral oil temperature to the absorber shall be kept at 70^0F - 90^0F. A continuous hard copy readout or manual readings every 15 minutes of the temperature shall be recorded when in operation.

19. That the soybean oil to the mineral-oil-stripping column shall be kept at 215^0F - 225^0F for adequate stripping of the absorbed hexane from the oil. A continuous hard copy readout or manual readings every 15 minutes of the temperature shall be recorded when in operation.

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Operation Condition Nos. 18 and 19

18. That the mineral oil temperature to the absorber shall be kept at 70^0F - 90^0F.~~ A continuous hard copy readout or manual readings every 15 minutes of the temperature shall be recorded when in operation.~~

When the process is in operation, an electronic data management system (EDMS) shall record the instantaneous temperature on a frequency of not less than every 15 minutes. As an alternate to installing an EDMS, manual readings shall be taken every 15 minutes.

19. That the soybean oil to the mineral-oil-stripping column shall be kept at 215^0F - 225^0F for adequate stripping of the absorbed hexane from the oil.~~ A continuous hard copy readout or manual readings every 15 minutes of the temperature shall be recorded when in operation.~~

When the process is in operation, an electronic data management system (EDMS) shall record the instantaneous temperature on a frequency of not less than every 15 minutes. As an alternate to installing an EDMS, manual readings shall be taken every 15 minutes.

This existing source has submitted their Part 70 (T-145-9004-00035) application on September 22, 1997. The changed operations conditions shall be incorporated in the submitted Part 70 application.

Indiana Department of Environmental Management
Office of Air Management

Addendum to the
Technical Support Document for New Construction and Operation

Source Name:	Central Soya Company, Inc.
Source Location:	Morristown, Indiana
County:	Shelby
Modification No.	A 145-9458
Modification to	CP 145-4300
SIC Code:	2075
Permit Reviewer:	Dr. T. P. Sinha

On April 4, 1998, the Office of Air Management (OAM) had a notice published in the Shelbyville News, Shelbyville, Indiana, stating that Central Soya Company, Inc. had applied for a modification to its Construction Permit No. CP 145-4300, issued on July 18, 1995. The notice also stated that OAM proposed to delete the permit conditions requiring the particulate matter (PM) stack tests for the Flow-Coat baghouse and Rail-Loader baghouse, because these baghouses are very small and to add a new Operation Condition No. 27 for the opacity, which will determine the compliance with the PM limits. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit modification should be issued as proposed.

On May 4, 1998, Bernas Downing, J. J. Downing, Norma E. Kraft, Elizabeth Wilcoxon, Maxine Evans, John Saw Evans, Daniel R. Evans, Lee Ann Evans, Josiah Evans, and Robert Evans submitted comments on the proposed construction permit. The summary of the comments and corresponding responses is as follows:

Comment:

Central Soya Company Inc. emits 175 tons of hexane as well as particulate matter in the atmosphere. Due to the enormous amounts of hexane and particulate matter, Central Soya Co., Inc. emits from the plant, it is stressed that the monitoring and reporting requirements should be as stringent as possible in order to avoid excess emissions. Therefore, Central Soya Company Inc.'s request to delete the stack-testing requirements for the flow-coat baghouse and rail-loadout; and the monitoring of the mineral oil temperature to the absorber and soybean oil to the mineral-oil-stripping column at every 15 minutes, should be denied.

Response to Comment:

(a) The purpose of the flow-coat baghouse is to control particulate emissions from the flow coat bin whenever flow-coat material is pneumatically unloaded from a truck into the storage bin. This baghouse is only utilized when bulk trucks are unloaded. Approximately one truck per week of flow-coat material is received and unloaded into the bin. The unloading time is approximately 40 minutes. The bin does not have sufficient capacity for enough flow-coat material to perform the required three consecutive, one hour stack-test runs. The total potential controlled particulate emissions from this baghouse are estimated to be 0.003 tons per year.

The Rail-Loader baghouse controls particulate matter emissions from the plant's soybean-meal railcar loading device. This is a small baghouse with 209 ft^2 of cloth surface area. The total potential controlled PM emissions are only 0.355 tons per year. The railcar meal-loader baghouse and the railcar receiving baghouse are very similar. The railcar receiving baghouse has been tested and found to be in compliance.

The baghouse is supposed to be the best control technology for this type of operation. Based on the test results on the similar baghouse (receiving baghouse), the OAM believes that the Flow -coat baghouse and the Rail-Loader baghouse will comply with the PM limits. In lieu of testing, an additional operation condition limiting the opacity to 5% will further safeguard the emissions limits for these two baghouses.

(b) Operations Condition Nos. 18 and 19 provide operating ranges for the mineral-oil absorption system to control hexane emissions from the process. The present conditions require monitoring a continuous hard copy readout or manual readings of the temperature every 15 minutes.

It takes hours to detect any abnormal operating conditions of the mineral oil absorber or the mineral oil extractor. Central Soya Company, Inc. will be recording the temperatures at 15 minute intervals by the Electronic Data Management System (EDMS) instead of a continuous hard copy readout . This monitoring system will give the same information as a continuous hard copy readout. The OAM is not relaxing the monitoring and record keeping requirements.