Mr. Steve McCoy
National Starch and Chemical
1515 South Dover Street
Indianapolis, Indiana, 46221

Re: 097-11362-00042
First Significant Revision to
T097-7714-00042

Dear Mr McCoy:

National Starch and Chemical has a pending Title V permit for the operation of a stationary source which produces feed, gluten meal, germ meal and heavy steepwater from corn. A letter requesting changes to this permit was received on October 12th, 1999. Pursuant to the provisions of 326 IAC 2-8-11.1 a significant permit revision to this permit is hereby approved as described in the attached Technical Support Document.

The modification consists of changes which include the construction of a spray agglometrator, which will increase sourcewide emissions by over 100 tons per year of particulate matter (PM), and increase Nox emissions by over 10 tons per year.

The following construction conditions are applicable to the proposed project:

1. General Construction Conditions
The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Management (OAM).

2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

4. Pursuant to 326 IAC 2-1.1-9 (Revocation), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the significant permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect.

Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Kevin Leone at 2700 South Belmont Avenue, Indianapolis, Indiana, 46221 or call (317) 327-2274.

Sincerely,

Mona A. Salem, Chief Operating Officer
Department of Public Works, City of Indianapolis

Attachments
KL
cc: Mindy Hahn, IDEM OAM

PART 70 SIGNIFICANT SOURCE MODIFICATION
OFFICE OF AIR MANAGEMENT
and
INDIANAPOLIS ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION

National Starch and Chemical Company
1515 South Drover Street
Indianapolis, Indiana 46221

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15, IC 13-17 and the Code of Indianapolis and Marion County, Chapter 511.

Source Modification No.: 097-11362-00042	
Issued by: Mona A. Salem Chief Operating Officer Department of Public Works, City of Indianapolis	Issuance Date:

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SECTION A SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) and Indianapolis Environmental Resources Management Division (ERMD). The information describing the emission units contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this approval pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates stationary source which produces feed, gluten meal, germ meal and heavy steepwater from corn.

Responsible Official:	Mr. Pete Salis
Source Address:	1515 South Drover Street, Indianapolis, Indiana 46221
Mailing Address:	1515 South Drover Street, Indianapolis, Indiana 46221
Phone Number:	(317)-656-2232
SIC Code:	2046
County Location:	Marion County
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD or Emission Offset Rules; Major Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source is approved to construct and operate the following emission units and pollution control devices:

(a) A spray agglometrator process which has a maximum operating capacity of 18,200 pounds per hour of starch and water slurry. The maximum production rate from this process is 6,450 pounds per hour of finished product. This process consists of the following emitting units:

(1) East Box Packer Filter Receiver, identified as emission unit 5549-16. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-16.

(2) West Box Packer Filter Receiver, identified as emission unit 5549-17. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-17.

(3) Line 1 Middle Packer, identified as emission unit 5549-18. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-18.

(4) Line 1 North Packer, identified as emission unit 5549-19. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-19.

(5) Line 1 South Packer, identified as emission unit 5549-20. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-20.

(6) Line 1 Packing ambient D/C, identified as emission unit 5549-21. This emission

unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-21.

(7) Line 2 Packer**,** identified as emission unit 5549-26. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-26.

(8) Spray Agglomerator #3, identified as emission unit 5549-28. This emission unit is controlled by a wet scrubber. This unit is equipped with a 16.5 million Btu per hour natural gas fired burner. The emissions from this unit are exhausted out stack 5549-28.

(b) North Packing Line, identified as emission unit 577-2. The existing baghouse for this emission unit is being replaced by a new baghouse. The flow rate for the new baghouse will be changed form 3,835 to 9,600 standard cubic feet per minute. The emissions from this unit exhaust out stack 577-2. This emission unit was initially installed in 1979 and is proposed to be modified within the contemporaneous period for the spray agglomeration project.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is a major source, as defined in 326 IAC 2-7-1(22);

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Permit No Defense [IC 13]

This approval to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions [326 IAC 2-7-1]

Terms in this approval shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

B.4 Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.5 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) when, prior to start of operation, the following requirements are met:

(a) The attached affidavit of construction shall be submitted to the Indianapolis Environmental Resources Management Division (ERMD),Permits Section verifying that the emission units were constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to ERMD if constructed as proposed.

(b) If actual construction of an individual emission unit differs from the construction proposed in the application, the source may not begin operation of that emission unit until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.

(c) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Phases may be constructed and started up with overlapping timing. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

(d) The Permittee shall receive an Operation Permit Validation Letter from ERMD, Permits Section and attach it to this document. However, in the event that the Title V application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:

(1) If the Title V draft permit has not gone on public notice, then the change/addition covered by the Significant Source Modification will be included in the Title V draft.

(2) If the Title V permit has gone thru final EPA proposal and would be issued ahead of the Significant Source Modification, the Significant Source Modification will go thru a concurrent 45 day EPA review. Then the Significant Source Modification will be incorporated into the final Title V permit at the time of issuance.

(3) If the Title V permit has not gone thru final EPA review and would be issued after the Significant Source Modification is issued, then the Modification would be added to the proposed Title V permit, and the Title V permit will issued after EPA review.

SECTION C GENERAL OPERATION CONDITIONS

C.1 Certification [326 IAC 2-7-4(f)][326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]

(a) Where specifically designated by this approval or required by an applicable requirement, any application form, report, or compliance certification submitted under this approval shall contain certification by a responsible official of truth, accuracy, and completeness. This certification, shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, on the attached Certification Form, with each submittal.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this approval, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this approval, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division
Air Quality Management Section, Data Compliance
2700 South Belmont Avenue
Indianapolis, Indiana 46221

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM, OAM, and ERMD upon request and shall be subject to review and approval by IDEM, OAM, and ERMD. IDEM, OAM, and ERMD may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this approval.

(b) Any application requesting an amendment or modification of this approval shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division
Air Quality Management Section, Permits
2700 South Belmont Avenue
Indianapolis, Indiana 46221

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule

(c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-7-11(c)(3)]

C.4 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), visible emissions shall meet the following, unless otherwise stated in this approval:

(a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor in a six (6) hour period.

C.5 Operation of Equipment [326 IAC 2-7-6(6)]

Except as otherwise provided in this approval, all air pollution control equipment listed in this approval and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.6 Stack Height [326 IAC 1-7]

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using good engineering practices (GEP) pursuant to 326 IAC 1-7-3.

Testing Requirements [326 IAC 2-7-6(1)]

C.7 Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]

(a) Compliance testing on new emission units shall be conducted within 60 days after

achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division
Air Quality Management Section, Data Compliance
2700 South Belmont Avenue
Indianapolis, Indiana 46221

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM, OAM and ERMD within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAM, and ERMD, if the source submits to IDEM, OAM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Compliance Monitoring Requirements [326 IAC 2-7-5(1)] [326 IAC 2-7-6(1)]

C.8 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

Compliance with applicable requirements shall be documented as required by this approval. All monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division
Air Quality Management Section, Data Compliance
2700 South Belmont Avenue

Indianapolis, Indiana 46221

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

The notification which shall be submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

C.9 Pressure Gauge Specifications

Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall be accurate within plus or minus two percent (±2%) of full scale reading.

Corrective Actions and Response Steps [326 IAC 2-7-5] [326 IAC 2-7-6]

C.10 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5][326 IAC 2-7-6] [326 IAC 1-6]

(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:

(1) This condition;

(2) The Compliance Determination Requirements in Section D of this approval;

(3) The Compliance Monitoring Requirements in Section D of this approval;

(4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this approval; and

(5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this approval. CRP's shall be submitted to IDEM, OAM and ERMD upon request and shall be subject to review and approval by IDEM, OAM, and ERMD. The CRP shall be prepared within ninety (90) days after issuance of this approval by the Permittee and maintained on site, and is comprised of :

(A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this approval; and

(B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.

(b) For each compliance monitoring condition of this approval, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the approval unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.

(c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:

(1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the approval conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the approval, and such request has not been denied or;

(3) An automatic measurement was taken when the process was not operating; or

(4) The process has already returned to operating within "normal" parameters and no response steps are required.

(d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.11 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this approval exceed the level specified in any condition of this approval, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, and ERMD within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAM and ERMD shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM and ERMD within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM and ERMD reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM and ERMD that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate approval conditions may be grounds for immediate revocation of the approval to operate the affected facility.

The documents submitted pursuant to this condition do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

C.12 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, and sampling required as a condition of this approval shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this approval is not operating, the Permittee shall either record the fact that the equipment is shut

down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this approval

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM and ERMD may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time covered by the reading in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.13 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, and ERMD representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or ERMD makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or ERMD within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this approval;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be

relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this approval, and whether a deviation from an approval condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented within ninety (90) days of approval issuance.

C.14 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

(a) The reports required by conditions in Section D of this approval shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division
Air Quality Management Section, Data Compliance
2700 South Belmont Avenue
Indianapolis, Indiana 46221

(b) Unless otherwise specified in this approval, any notice, report, or other submission required by this approval shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, and ERMD on or before the date it is due.

(c) Unless otherwise specified in this approval, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) The first report shall cover the period commencing on the date of issuance of this approval and ending on the last day of the reporting period.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

(a) A spray agglometrator process which has a maximum operating capacity of 18,200 pounds per hour of starch and water slurry. The maximum production rate from this process is 6,450 pounds per hour of finished product. This process consists of the following emitting units:

(1) East Box Packer Filter Receiver, identified as emission unit 5549-16. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-16.

(2) West Box Packer Filter Receiver, identified as emission unit 5549-17. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-17.

(3) Line 1 Middle Packer, identified as emission unit 5549-18. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-18.

(4) Line 1 North Packer, identified as emission unit 5549-19. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-19.

(5) Line 1 South Packer, identified as emission unit 5549-20. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-20.

(6) Line 1 Packing ambient D/C, identified as emission unit 5549-21. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-21.

(7) Line 2 Packer, identified as emission unit 5549-26. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-26.

(8) Spray Agglomerator #3, identified as emission unit 5549-28. This emission unit is controlled by a wet scrubber. This unit is equipped with a 16.5 million Btu per hour natural gas fired burner. The emissions from this unit are exhausted out stack 5549-28.

(b) North Packing Line, identified as emission unit 577-2. The existing baghouse for this emission unit is being replaced by a new baghouse. The flow rate for the new baghouse will be changed form 3,835 to 9,600 standard cubic feet per minute. The emissions from this unit exhaust out stack 577-2. This emission unit was initially installed in 1979 and is proposed to be modified within the contemporaneous period for the spray agglomeration project.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.1.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

(a) The filterable and condensible PM-10 and PM emissions shall be limited as follows such that the net increase in PM-10 and PM emissions do not exceed the PSD significance threshold of 15 tons per year of PM-10 and 25 tons per year of PM:

Emissions Unit	Grains per dry standard cubic foot of exhaust gas	Pounds per hour
5549-16	0.01	0.02
5549-17	0.01	0.04
5549-18	0.01	~~0.28~~
5549-19	0.01	0.24
5549-20	0.01	0.24
5549-21	0.01	1.20
5549-26	0.01	0.26
5549-28	0.025	9.64
577-2	0.01	0.82

Compliance with this emissions limitation shall make the PSD regulation 326 IAC 2-2 and 40 CFR Part 52.21 not applicable and satisfies the requirements of 326 IAC 6-1.

(b) National Starch and Chemical Company is requires the use of netting credits to avoid PSD (326 IAC 2-2, 40 CFR 52.21) review for PM-10 and PM. Contemporaneous creditable emission decreases are obtained from shut down of the following emissions units during the contemporaneous time frame. The following units shall be permanently placed out of service upon the effective date of this permit;

62-1A	A P&S Dryer	62-1D	D P&S Dryer
67-7	Gluten Cooling Conveying	62-2	E and F P&S Dryer
67-12	#1 and #2 Germ Dryer	63-3	CWS North Packer Bin
67-13	#3 Germ Dryer	63-10	CWS South Packer Bin
67-14	#4 Feed Dryer	64-1	#3 Pulverizing Conveying
67-17	North Finish Feed Conveying	64-2	#3 Pulverizing Vacuum Cleaning
67-17A	South Finish Feed Conveying	64-3	#2 Pulverizing Airveyor
67-19	Gluten Flash Dryer	64-4	#1 Pulzerizing Conveying
69-3	B, C, and D Germ Dryers	64-5	#1&#2 Pulverizing Vacuum Cleaning
62-1C	C P&S Dryer		

D.1.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for emission units 5549-16, 5549-17, 5549-18, 5549-19, 5549-20, 5549-21, 5549-26, 5549-28, and 577-2 and the associated control devices.

Compliance Determination Requirements

D.1.3 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

(a) The Permittee shall perform PM and PM-10 testing on emissions units 5549-20, and 5549-28 according to the procedures and time frames established in condition C.7 of

this permit. The tests shall be preformed utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other methods as approved by the Commissioner. PM-10 and PM shall includes the filterable and condensible portions. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

(b) The Permittee is not required to test emission units 5549-16, 5549-17, 5549-18, 5549-19, 5549-21, 5549-26 and 577-2 by this permit. However, IDEM or ERMD may require compliance testing when necessary to determine if these emission units are in compliance. If testing is required by IDEM or ERMD, compliance with the PM and PM-10 limits specified in Conditions D.1.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.1.4 Particulate Matter (PM)

The Baghouse or Wet Scrubber for PM control shall be in operation and control emissions from emission units 5549-16, 5549-17, 5549-18, 5549-19, 5549-20, 5549-21, 5549-26, 5549-28 and 577-2 at all times when that emission unit is in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.5 Visible Emissions Notations

(a) Visible emission notations of the stack exhausts for emission units 5549-16, 5549-17, 5549-18, 5549-19, 5549-20, 5549-21, 5549-26, 5549-28 and 577-2 shall be performed daily during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.1.6 Parametric Monitoring For Baghouses

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with emission units 5549-16, 5549-17, 5549-18, 5549-19, 5549-20, 5549-21, 5549-26, and 577-2 at least once daily when the process is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 0 to 6 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be installed, calibrated, maintained and operated according to the manufacturer’s specifications.

D.1.7 Parametric Monitoring For Scrubber

The Permittee shall record the total static pressure drop across the scrubber used in conjunction with emission unit 5549-28, at least once daily when the process is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the scrubber shall be maintained within a range that indicates proper operation of the unit. The range will be determined by National Starch within 90 days of operation of the scrubber. A notification of the established range shall be submitted to ERMD and OAM at the addresses provided in condition C.14. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be installed, calibrated, maintained and operated according to the manufacturer's specifications.

D.1.8 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an malfunction and the Permittee satisfies the requirements of the Malfunction Rule 326 IAC 1-6-2.

(b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an malfunction and the Permittee satisfies the requirements of the Malfunction Rule 326 IAC 1-6-2.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.9 Record Keeping Requirements

(a) To document compliance with Condition D.1.5, the Permittee shall maintain records of daily visible emission notations of the stack exhausts for emission units 5549-16, 5549-17, 5549-18, 5549-19, 5549-20, 5549-21, 5549-26, 5549-28 and 577-2 .

(b) To document compliance with Condition D.1.6, the Permittee shall maintain the following:

(1) Daily records of the Inlet and outlet differential static pressure during normal operation when venting to the atmosphere.

(2) Documentation of all response steps implemented, per event .

(3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.

(4) Quality Assurance/Quality Control (QA/QC) procedures.

(5) Operator standard operating procedures (SOP).

(6) Manufacturer's specifications or its equivalent.

(7) Equipment "troubleshooting" contingency plan.

(8) Documentation of the dates vents are redirected.

(c) To document compliance with Condition D.1.7, the Permittee shall maintain the following:

(1) Daily records of the Inlet and outlet differential static pressure during normal operation when venting to the atmosphere.

(2) Documentation of all response steps implemented, per event .

(3) Operation and preventive maintenance logs, including work orders, shall be maintained.

(4) Quality Assurance/Quality Control (QA/QC) procedures.

(5) Operator standard operating procedures (SOP).

(6) Manufacturer's specifications or its equivalent.

(7) Equipment "troubleshooting" contingency plan.

(8) Documentation of the dates vents are redirected.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR MANAGEMENT
COMPLIANCE DATA SECTION
and
INDIANAPOLIS ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION
AIR QUALITY MANAGEMENT SECTION
DATA COMPLIANCE

PART 70 SOURCE MODIFICATION CERTIFICATION

Source Name: National Starch and Chemical Company
Source Address: 1515 South Drover Street, Indianapolis Indiana 46221
Mailing Address: 1515 South Drover Street, Indianapolis Indiana 46221
Source Modification No.: 097-11362-00042

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this approval.

Please check what document is being certified:

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Other (specify) _____

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

Mail to: Air Quality Management Section
Environmental Resources Management Division
2700 South Belmont Avenue
Indianapolis, Indiana 46221-2097

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.

2. I hold the position of _____ for _____.
(Title) (Company Name)

3. By virtue of my position with _____,I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____ .
(Company Name)

4. I hereby certify that , *National Starch and Chemical Company has constructed the Spray Agglomeration Process and modified the North Packing line* in conformity with the requirements and intent of the construction permit application received by the Environmental Resources Management Division on *September 1, 1999* and as permitted pursuant to Source Modification Permit T097 -11362-00042**,** issued on _____

5. Additional (?operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the permit. (Delete this statement if it does not apply.)

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

_____
Signature

_____
Date

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana on this _____ day of _____, 19 _____ .

My Commission expires: _____

_____
Signature

_____
Name (typed or printed)

Indiana Department of Environmental Management
Office of Air Management
and
Indianapolis Environmental Resources Management Division
Air Quality Management Section

Addendum to the
Technical Support Document for Significant Source Modification to a
Part 70 Operating Source

Source Name:	National Starch and Chemical Company
Source Location:	1515 South Drover Street, Indpls., Indiana 46221
County:	Marion
SIC Code:	2046
Operation Permit No.:	T097-7714-00042
Operation Permit Issuance Date:	Pending
Significant Source Modification No.:	097-11362-00042
Permit Reviewer:	Kevin Leone

On November 16, 1999, the Indianapolis Environmental Resources Management Division (ERMD) and Office of Air Management (OAM) had a notice published in the Indianapolis Star, Indianapolis, Indiana, stating that National Starch and Chemical Company had applied for a Significant Source Modification for the construction and operation of an Agglomerator process and associated equipment. The notice also stated that ERMD and OAM proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On December 15, 1999, National Starch and Chemical Company submitted comments on the proposed Significant Source Modification. The summary of the comments is as follows:

Comment 1 (Condition A.2 and D.1, Emission Units and Pollution Control Equipment Summary):
National Starch has originally provided the description of emission unit 5549-21 as “Bag Packing Line Fugitives.” We now realize that this title is somewhat confusing. By general definition, fugitive emissions are those that can not be or are not captured by a collection system. Since the emissions are now being collected and routed to a control device, the term fugitives is therefore not appropriate. We request that the title be changed to “Bag Packing Line Ambient Dust Collection.”

Response to Comment 1:
ERMD and OAM agree that the description “Bag Packing Line Fugitives” is somewhat confusing and have revised the description in conditions A.2 and D.1 to read as follows:

(6) Bag Packing Line ~~Fugitive~~ **Ambient Dust Collector**, identified as emission unit 5549-21. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-21.

Comment 2 (Condition B.5, Significant Source Modification):
National Starch requests clarification of Section B.5(b) to indicate that individual emission units may be started up and operated if all the planned emission units are not constructed, ie., potential emissions from actual construction are less than permitted. We also request modification to B.5(c) to reflect the phases may be started up with over lapping timing.

Response to Comment 2:
Individual units constructed as proposed in the permit application may be started up and operated even if other unit covered in the permit are not constructed as proposed in the permit application. However all units not being constructed as proposed in the permit application will not be allowed to operate until such time as a source modification has been revised and an Operating Permit Validation Letter is issued. ERMD and OAM have revised condition B.5(b) as follows to clarify this point.

(b) If actual construction of ~~the~~ an individual emission~~s~~ unit~~s~~ differs from the construction proposed in the application, the source may not begin operation of **that emission unit** until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.

Condition B.5(c) does not prohibit sources from phased of construction with overlapping timing. However in order to clarify this point ERMD and OAM have modified condition B.5(c) as follows:

(c) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. **Phases may be constructed and started up with overlapping timing.** Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

Comment 3 (Condition C.9, Pressure Gauge Specification):
National Starch does not believe that this condition is neither workable nor reasonable. The requirements that the "expected normal reading shall be no less than twenty percent (20%) of full scale " is not compatible with condition D.1.6, which establishes the normal operating range of zero to six inches of water column pressure drop across the baghouse. If zero inches differential pressure (dP) is an "expected normal reading ", what is the necessary scale for the pressure gauge to comply with 20% of full scale requirement?

Response to Comment 3:
ERMD and OAM understands National Starch's concern and has revised Condition C.9 to read as follows:

C.9 Pressure Gauge Specifications

Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall ~~have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and~~ be accurate within plus or minus two percent (±2%) of full scale reading.

Comment 4 (Condition C.12, Monitoring Data Availability):
Maintenance activities can not normally be performed on baghouses of wet scrubber while the units are in operation. National Starch therefore requests that condition C.12(a) be modified to read "... all observations and sampling required as a condition of this permit shall be performed when the equipment is operating at normal representative conditions.

We request that Condition C.12(b) be modified to read "... required by this approval according to the normal recordkeeping frequency prescribed by these conditions."

We feel that Condition C.12(c) is somewhat vague and therefore request it be modified to read "If the equipment is operating but abnormal conditions exist, a record of the nature of the abnormality shall be made."

We request that Condition C.12(e) be modified to read "... of the operating time covered by the reading in any quarter."

Response to Comment 4:
ERMD and OAM understand that maintenance activities can not be made when the equipment is in

operation and have revised condition C.12(a)as requested.

Condition C.12(b) is a general provision which includes observations, sampling, maintenance procedures, and record keeping that does not have normal record keeping frequency prescribed in this permit. Therefore condition C.12(b) is not being changed as requested.

ERMD and OAM understands National Starch's request to clarify the requirements of Condition C.12(e), since each reading represents a segment of time (daily, weekly, ect...) the source is ensuring compliance with an applicable requirement. Therefore ERMD and OAM have revised this condition as requested.

Condition C.12 has been revised to read as follow:

C.12 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, **and** sampling, ~~maintenance procedures, and record keeping,~~ required as a condition of this approval shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this approval is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this approval

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM and ERMD may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time **covered by the reading** in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

Comment 5 (Condition C.13, General Recordkeeping):
We request that Requirement C.13(a) be modified to read "... for a minimum of two (2) years and available....."

Sections (c)(1-3) of this requirement are copied straight from IAC 326 regulations, and National Starch has no comment of these requirements. Section (c)(4) of this requirement does have any obvious regulatory basis and is functionally duplicated by requirement C.10(d). years, of all records of " work orders, parts inventories, and operator's standard operating procedures " as a Title V permit condition.

Response to Comment 5:
The requirement to keep records on site for a minimum of three years is required pursuant to 326 IAC 2-7-5(3)(B)(ii)(DD) and can not be changed.

The requirements of condition (c)(4) and C.10(c) do have some overlap but are not identical. Therefore there is no change to this condition.

Comment 6 (Condition A.2 and D.1, Emission Units and Pollution Control Equipment Summary):
The spray agglomerator is identified in Condition D.1(a) as having a capacity of 20,000 pounds per hour of water and starch slurry feed and 20,000 pounds per hour of finished product. The correct figures are 14,500 pounds per hour of water and starch slurry feed and 4,700 pounds per hour of finished product.

Response to Comment 6:
ERMD and OAM have revised the facility description in D.1 and Condition A.2 to read as follows:

(a) A spray agglomerator process which has a maximum operating capacity of ~~20,000~~ **14,500** pounds per hour of **water** ~~starch~~ and **starch** ~~water~~ slurry. The maximum production rate from this process is ~~20,000~~ **4,700** pounds per hour of finished product. This process consists of the following emitting units:

(1) Spray Dryer Storage Bin #5, identified as emission unit 5549-16. The maximum storage capacity of this bin in 50 tons. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-16.

(2) Spray Dryer Storage Bin #6, identified as emission unit 5549-17. The maximum storage capacity of this bin in 50 tons. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-17.

(3) Purity Gum Packing, identified as emission unit 5549-18. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-18.

(4) Ultra Tex Packing, identified as emission unit 5549-19. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-19.

(5) Drum Dryer Packing, identified as emission unit 5549-20. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-20.

(6) Bag Packing Line Fugitive, identified as emission unit 5549-21. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-21.

(7) Spray Agglomerator #3 Packing, identified as emission unit 5549-26. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-26.

(8) Spray Agglomerator #3, identified as emission unit 5549-28. This emission unit is controlled by a wet scrubber. This unit is equipped with a 25 million Btu per hour natural gas fired burner. The emissions from this unit are exhausted out stack 5549-28.

Comment 7 (Condition D.1.3, Source Testing):
This condition requires source testing (at the request of IDEM or ERMD) of several emission units whose controlled emissions are less than two tons per year (tpy), yet exempts from source testing two sources which emit over five tpy. National Starch believes that this is both inconsistent and unreasonable.

National Starch therefore proposes that the source tests not be required on units 5549-16, 5549-17, 5549-18, 5549-20, 5549-21, 5549-26 and 557-2, and that source tests be performed on units 5549-28 according to the time frames established in condition C.7 of the draft permit.

Response to Comment 7:
Due to the stringent allowable emission limits taken to avoid PSD applicability and National Starch's compliance history, ERMD and OAM have proposed testing on several smaller units to ensure overall compliance with the PSD synthetic minor source modification limit. However due to the process similarities between emission units 5549-19 (Ultra Tex Packing) and 5549-20 (Drum Dryer Packing) ERMD and OAM agree to limit the testing of these smaller units to emission unit 5549-20 (Drum Dryer Packing). Condition D.1.3 has been revised as follows:

D.1.3 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]

(a) The Permittee shall perform PM and PM-10 testing on emissions units ~~5549-19,~~ 5549-20, and 5549-28 according to the procedures and time frames established in condition C.7 of this permit. The tests shall be preformed utilizing Methods 5 or 17 (40 CFR 60, Appendix A) for PM and Methods 201 or 201A and 202 (40 CFR 51, Appendix M) for PM-10, or other methods as approved by the Commissioner. PM-10 and PM shall includes the filterable and condensible portions. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the facility is in compliance.

(b) The Permittee is not required to test emission units 5549-16, 5549-17, 5549-18, **5549-19**, 5549-21, 5549-26 and 577-2 by this permit. However, IDEM or ERMD may require compliance testing when necessary to determine if these emission units are in compliance. If testing is required by IDEM or ERMD, compliance with the PM and PM-10 limits specified in Conditions D.1.1 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

Comment 8 (Condition D.1.5, Visible Emissions Observation):
National Starch objects to the inclusion of unit 5549-28 in this requirement. Visible emissions from wet scrubbers are often hard to evaluate, due to the presences of an attached water plume in high ambient dewpoint conditions. National Starch believes that the requirements of this condition D.1.7 are sufficient to monitor and assure compliance with applicable permit conditions.

Response to Comment 8:
The visible emission notations are used to indicate compliance with 326 IAC 5-1 and applicable PM/PM-10 limits, without the requirement to have a person on site trained in opacity measurement. This requirement is designed as a trigger that the source perform some corrective action on the facility if visible emissions are abnormal, to ensure continuous compliance with emission limitations. On days when the attached water plume is present it is still possible to detect potential problems. ERMD and OAM believe that daily visible emission observation are necessary to ensure compliance with the applicable Opacity and PM/PM-10 limits for this unit and are therefore not changing this condition.

Comment 10 (Condition D.1.6, Parametric Monitoring for Baghouses):
National Starch objects to the inclusion of this condition for three reasons. First, baghouse differential pressure is not, by itself, a reliable indicator of proper baghouse performance. Baghouse in applications with low dust loading may be sized with a larger air to filter area ratio than baghouses in higher dust loading applications: although both baghouses may achieve identical performance, the differential pressure drop for each unit will be different.

Second, National Starch believes that the requirement for daily visual inspection, D.1.5, is sufficient to identify malfunctions of the baghouses; the differential pressure monitoring is therefore a duplicative requirement.

Final, National Starch does not believe that the requirement to calibrate the pressure gauge every six months is neither necessary nor valuable. Instead, we suggest that ERMD use language found in numerous EPA New Source Performance (NSPS) and Maximum Achievable Control Technology (MACT) regulations, which requires facilities to " install calibrate, maintain and operate [the monitoring device] according to the manufactures specifications." This is consistent with other EPA's Compliance Assurance Monitoring rule September 11, 1996 guidance, section 3.2.2.4.

Response to Comment 10:
ERMD and OAM believe that daily monitoring of pressure drop is necessary to ensure continuous compliance with the applicable opacity and PM/PM-10 limits in this permit, therefore the requirement to conduct daily pressure drop readings for all baghouses is not being changed.

ERMD and OAM agree to National Starch's request to revise the requirement to calibrate the pressure monitoring device every six months. ERMD and OAM have revised condition D.1.6 to read as follows:

D.1.6 Parametric Monitoring For Baghouses

The Permittee shall record the total static pressure drop across the baghouse used in conjunction with emission units 5549-16, 5549-17, 5549-18, 5549-19, 5549-20, 5549-21, 5549-26, and 577-2 at least once daily when the process is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 0 to 6 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and ERMD and shall be **installed, calibrated, maintained and operated according to the manufacturer's specifications** ~~calibrated at least once every six (6) months~~.

Comment 11 (Condition D.1.7, Parametric Monitoring for Scrubber):
This section requires that " the pressure drop across the scrubber baghouse [shall] be maintained within a range established during the latest stack test." National Starch believes that this requirement is overly restrictive.

The scrubber is designed to operate over a wide range of pressure drops. The requirements, as written, would allow National Starch to operate the scrubber only in the range of pressure drops measured during the stack test. Since the source test should not be conducted at close to maximum throughput, only a narrow range of pressure drops will be observed. However, there will be other operating conditions where the scrubber system meets the emissions limitations of 8.04 lb PM and PM10 per hour and 0.25 gr/dscf, yet operates at a pressure drop not within the range established during the stack test.

National Starch proposes that this requirement be modified to read "... the pressure drop across the scrubber shall be maintained within a range that indicates proper operation of the unit. The range will be determined by National Starch within 90 days of operation of the scrubber. A notification of the established range shall be submitted to ERMS.

As discussed in previous sections, National Starch objects to the requirement that the scrubber pressure gage be calibrated every six months.

Response to Comment 11:
ERMD and OAM agree that the requirement to maintain the pressure drop within the range established during the latest stack test may not represent pressure drop ranges experienced during normal operating conditions when the unit is operating in compliance with applicable requirements. Therefore ERMD and OAM agree to modify condition D.1.7 as requested. Condition D.1.7 was revised to read as follows:

D.1.7 Parametric Monitoring For Scrubber

The Permittee shall record the total static pressure drop across the scrubber used in conjunction with emission unit 5549-28, at least once daily when the process is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the scrubber shall be maintained within a range ~~established during the latest stack test~~ **that indicates proper operation of the unit. The range will be determined by National Starch within 90 days of operation of the scrubber. A notification of the established range shall be submitted to ERMD and OAM at the addresses provided in condition C.14.** The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and ERMD and shall be **installed, calibrated, maintained and operated according to the manufacturer's specifications** ~~calibrated at least once every six (6) months~~.

Comment 12 (Condition D.1.8, Broken Bag Detection):
Requirement D.1.8 requires National Starch to take corrective action " in the event that bag failure has been observed." The requirement does not specify how failed or broken bags are to be detected; the only real method of discovering a broken bag is by visual observation of bahouse emissions. Since this is required in Condition D.1.5 and since National Starch must also take appropriate corrective action, we believe that this requirement is redundant.

The requirement also states that "failed units and associated process will be shut down immediately. " This is somewhat vague, i.e., does immediately mean within one minute? thirty minutes? one hour? Several of National Starches processes can not be instantly (i.e. 60 seconds) shutdown due to safety reasons. A slower, controlled shutdown is therefore preferred to a more rapid shutdown. All processes covered in this permit action should be shutdown within one hour of initiation.

We therefore request that requirement D.1.8 be deleted, and the following language be added as Requirement D.1.5(f) to read "In the event that abnormal emissions have been observed, the affected units and their associated process will initiate shut down promptly and complete the shut down within one hour, or report the bag failure as a malfunction in accordance with 326 IAC 1-6-2" We also note that this requirement make reference to section B - Emergency Provisions"; however, we can find no Section B - Emergency Provisions" in the draft permit and have therefore not included this language to be added as D.1.5(f).

Response to Comment 12:
Pursuant to 326 IAC 2-7-5(1)(F), each Part 70 permit is required to contain conditions which minimize excess emissions to the extent feasible, caused by events such as a bag failure. The requirements shall take into consideration available technologies, safety cost, and other relevant factors. The OAM does not consider shutting down the baghouse and associated production equipment to be infeasible in most case.

A bag failure could be construed as a "malfunction" as defined in 326 IAC 1-6-2 for purposes of an affirmative defense against a violation of the specific permit condition. However, once the bag failure is observed, continuing to operate the equipment will vent uncontrolled particulate matter to the atmosphere. IDEM and ERMD will likely not consider this an attempt by the permittee to take all reasonable steps to minimize levels of emissions that exceed an emission standard or other requirement in the permit.

This condition incorrectly references Section B - Emergency Provisions, therefore this condition is being corrected to reference the Malfunction Rule 326 IAC 1-6-2. Until a Part 70 permit is issued National Starch is to comply with the Malfunction Rule. Once the Part 70 Permit is issued National Starch will be required to comply with the Emergency Provisions in the Part 70 Rule. Condition D.1.8 has been revised to read as follows:

D.1.8 Broken or Failed Bag Detection

In the event that bag failure has been observed:

(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an **malfunction** ~~emergency~~ and the Permittee satisfies the requirements of the **Malfunction Rule 326 IAC 1-6-2** ~~emergency provisions of this permit (Section B - Emergency Provisions)~~.

(b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations

may continue only if the event qualifies as an **malfunction** ~~emergency~~ and the Permittee satisfies the requirements of the **Malfunction Rule 326 IAC 1-6-2** ~~emergency provisions of this permit (Section B - Emergency Provisions).~~

Comment 13 (Condition D.1.9, Recordkeeping Requirment):
In conjunction with our comments on Requirement D.1.5, National Starch requests that emission unit 5549-28 be removed from Condition D.1.9(a)

We request that Condition D.1.9(b) be removed, as it is to document compliance with Condition D.1.6, which we have requested be removed.

The wording of Condition D.1.9(c)(3) is somewhat confusing. We believe that the intent was for this section to read "... including work orders, shall be maintained."

We believe that Condition D.1.9(c)(4) is redundant and request that it be removed. Preventative maintenance plans are required per requirement C.2 and must be maintained on site and submitted to ERMD and IDEM upon request.

Since there are and will be no bypasses for the baghouses in the emission units covered by this permit action, we believe that condition D.1.9(b)(8) is not necessary and request that it be removed.

Response to Comment 13:
Condition D.1.5 is not being removed therefore the recordkeeping requirements in condition D.1.9(a) shall not be changed.

Condition D.1.6 is not being removed therefore the recordkeeping requirements in condition D.1.9(b) shall not be changed.

Condition D.1.9(c)(3) has been revised to provide some clarity as to what records are being required by this condition.

Condition D.1.9(c)(4) requires the source to keep records of Quality Assurance/Quality Control (QA/QC) procedures as a general permit requirement. Quality Assurance/Quality Control (QA/QC) procedures are not necessary encompassed in the sources Preventative Maintenance Plan and should include, but is not limited to, such items as quality assurance procedures for any monitoring devices required by this permit. Therefore this condition was not changed.

Condition D.1.9(b)(8) requires the source to keep records of date vents are redirected as a general requirement. This condition is not limited to bypasses for baghouses but includes any time emissions are rerouted. Therefore this condition was not changed.

D.1.9 Record Keeping Requirements

(a) To document compliance with Condition D.1.5, the Permittee shall maintain records of daily visible emission notations of the stack exhausts for emission units 5549-16, 5549-17, 5549-18, 5549-19, 5549-20, 5549-21, 5549-26, 5549-28 and 577-2 .

(b) To document compliance with Condition D.1.6, the Permittee shall maintain the following:

(1) Daily records of the Inlet and outlet differential static pressure during normal operation when venting to the atmosphere.

(2) Documentation of all response steps implemented, per event .

(3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.

(4) Quality Assurance/Quality Control (QA/QC) procedures.

(5) Operator standard operating procedures (SOP).

(6) Manufacturer's specifications or its equivalent.

(7) Equipment "troubleshooting" contingency plan.

(8) Documentation of the dates vents are redirected.

(c) To document compliance with Condition D.1.7, the Permittee shall maintain the following:

(1) Daily records of the Inlet and outlet differential static pressure during normal operation when venting to the atmosphere.

(2) Documentation of all response steps implemented, per event .

(3) Operation and preventive maintenance logs, including work ~~purchases~~ orders, shall be maintained.

(4) Quality Assurance/Quality Control (QA/QC) procedures.

(5) Operator standard operating procedures (SOP).

(6) Manufacturer's specifications or its equivalent.

(7) Equipment "troubleshooting" contingency plan.

(8) Documentation of the dates vents are redirected.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Indiana Department of Environmental Management
Office of Air Management
and
Indianapolis Environmental Resources Management Division
Air Quality Management Section

Technical Support Document (TSD) for a Part 70 Significant Source Modification.

Source Background and Description

Source Name:	National Starch and Chemical Company
Source Location:	1515 South Drover Street, Indianapolis Indiana 46221
County:	Marion
SIC Code:	2046
Operation Permit No.:	T097-7714-00042
Operation Permit Issuance Date:	Pending
***Significant* Source Modification No.:**	097-11362-00042
Permit Reviewer:	Kevin Leone

The Office of Air Management (OAM) and Indianapolis Environmental Resources Management Division (ERMD) has reviewed a modification application from National Starch and Chemical relating to the construction of the following emission units and pollution control devices:

(a) A spray agglometrator process which has a maximum operating capacity of 20,000 pounds per hour of starch and water slurry. The maximum production rate from this process is 20,000 pounds per hour of finished product. This process consists of the following emitting units:

(1) Spray Dryer Storage Bin #5, identified as emission unit 5549-16. The maximum storage capacity of this bin in 50 tons. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-16.

(2) Spray Dryer Storage Bin #6, identified as emission unit 5549-17. The maximum storage capacity of this bin in 50 tons. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-17.

(3) Purity Gum Packing, identified as emission unit 5549-18. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-18.

(4) Ultra Tex Packing, identified as emission unit 5549-19. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack

5549-19.

(5) Drum Dryer Packing, identified as emission unit 5549-20. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-20.

(6) Bag Packing Line Fugitive, identified as emission unit 5549-21. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-21.

(7) Spray Agglomerator #3 Packing, identified as emission unit 5549-26. This emission unit is controlled by a baghouse. The emissions from this unit are exhausted out stack 5549-26.

(8) Spray Agglomerator #3, identified as emission unit 5549-28. This emission unit is controlled by a wet scrubber. This unit is equipped with a 25 million Btu per hour natural gas fired burner. The emissions from this unit are exhausted out stack 5549-28.

(b) North Packing Line, identified as emission unit 577-2. The existing baghouse for this emission unit is being replaced by a new baghouse. The flow rate for the new baghouse will be changed form 3,835 to 15,060 standard cubic feet per minute. The emissions from this unit exhaust out stack 577-2. This emission unit was initially installed in 1979 and is proposed to be modified within the contemporaneous period for the spray agglomeration project.

History

On September 1, 1999, National Starch and Chemical Company submitted an application to ERMD and OAM requesting to add a new Spray Agglomerator Dryer and associated equipment to their existing plant. National Starch and Chemical Company submitted a complete Part 70 permit application on December 13, 1996.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temp. (^{0}F)
5549-16	Spray Dryer Storage Bin #5	84	0.5	450	70
5549-17	Spray Dryer Storage Bin #6	84	0.5	450	70
5549-18	Purity Gum Packing	127	0.83	4,600	70
5549-19	Ultra Tex Packing	127	0.83	5,400	70
5549-20	Drum Dryer Packing	127	0.83	6,000	70
5549-21	Bag Packing Line Fugitive	47	1.0	14,000	70
5549-26	Spray Agglomerator #3 Packing	47	0.83	2,800	70
5549-28	Spray Agglomerator #3	112	5	33,100	125
577-2	North Packing Line	52	2.16	15,060	75

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on September 1, 1999. Additional information was received on September 21, 1999.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, pages 1 through 3.)

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	greater than 100
PM-10	greater than 100
SO_2	0.07
VOC	0.60
CO	9.20
NO_x	10.95

HAP's	Potential To Emit (tons/year)
SIngle HAP	less than 10
Combination of HAPs	less than 25

Justification for Modification

The Part 70 Operating permit is being modified through a Part 70 Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(4), since the potential to emit for the aggolmerator project exceeds 25 tons per year of PM and PM-10 emissions. This permit is being issued for combined construction and operating approval. This source may begin construction once this permit is approved, but may not begin operation until a validation letter is issued pursuant to 326 IAC 2-7-10.5(h)(2).

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM-10	Attainment
SO_2	Attainment
NO_2	Attainment
Ozone	Attainment
CO	Attainment

Lead	Attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Marion County has been classified as attainment or unclassifiable for PM, PM-10, SO_2, NO_2, CO, Pb. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	**>250**
PM10	**>250**
SO_2	<100
VOC	<100
CO	<100
NO_x	>100 and <250

(a) This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.

(b) The existing source emissions have been estimated based on allowable emissions in the existing permits issued to National Starch and Chemical Company.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

Table 1 Summary of PM10 and PM Emissions from the Proposed Spray Agglomerator Project

Unit ID	Description	Control Device	PM		PM-10	
			gr/dscf	tons/yr	gr/dscf	tons/yr
5549-28	Spray Agglomerator #3	Baghouse	0.025	31.90	0.025	31.90
5549-16	Spray Agg. #3, Storage Bin #5	Baghouse	0.01	0.17	0.01	0.17
5549-17	Spray Agg. #3, Storage Bin #6	Baghouse	0.01	0.17	0.01	0.17
5549-18	Purity Gum Packing	Baghouse	0.01	1.73	0.01	1.73
5549-19	Utra Tex Packing	Baghouse	0.01	2.03	0.01	2.03
5549-20	Drum Dryer Packing	Baghouse	0.01	2.25	0.01	2.25
5549-21	Bag Packing Line Fugitives	Baghouse	0.01	5.26	0.01	5.26
5549-26	#3 Spray Agglomerator Packing	Wet Scrubber	0.01	1.05	0.01	1.05
Total emissions increase associated with the project:			**44.55**		**44.55**	
PSD Pollutant? Significant Emission Rate: Project Subject to Netting Analysis:			Yes 25 Yes		Yes 15 Yes	

Since the potential to emit of PM-10 and PM exceed the PSD significance thresholds of 15 ton per year of PM-10 and 25 tons per year of PM a netting analysis was preformed.

Table 2 Summary of Netting Analysis

Pollutant	PM (tons/yr)	PM10 (ton/yr)	Lead (ton/yr)	CO (ton/yr)	SO_2 (ton/yr)	NO_x (ton/yr)	VOC (ton/yr)
Proposed Modification (Table 3)	**44.55**	**44.55**	Neg.	9.2	0.07	10.95	0.60
Total Contemporaneous Increases(Table 4)	**59.66**	**57.71**	NA	NA	NA	NA	NA
Total Contemporaneous Decreases (Table 5)	**134.90**	**116.35**	NA	NA	NA	NA	NA
Net PSD Emission Increase (Decrease)	**-30.69**	**-14.08**	NA	NA	NA	NA	NA
PSD and Emission Offset Rules Significant Levels	25	15	0.6	100	40	40	40

This modification to an existing major source is not major because the emissions increase after netting are less than PSD significant levels. Therefore, the PSD Regulation 326 IAC 2-2 and 40 CFR 52.21 does not apply.

No associated or de-bottlenecked emissions will occur as a result of the spray agglomerator project, since the amount of corn processed at this source can not and will not change as a result of the proposed modification**.**

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.

Pursuant to 40 CFR 60.40c, NSPS Subpart Dc is applicable to:

> *"each steam generating unit for which construction, modification or reconstruction is commenced after June 9, 1989 and which has a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr."*

Pursuant to 40 CFR 60.41c, a steam generating unit is defined as:

> *"a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burners that combust fuels and is part of a combined cycle system. This term does not include process heaters as defined in this subpart"*

Combustion gases from the proposed spray agglomerator will heat the starch slurry directly. Based on the above definitions, the spray agglomerator is not considered a steam generating unit and therefore is not subject to NSPS Subpart Dc.

(b) The agglomerator dryer and associated equipment are not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs).

State Rule Applicability - Individual Facilities

326 IAC 2-2 PSD for PM-10

The emissions increases of PM and PM10 exceeded the PSD significant emission levels, therefore it is necessary to perform a netting analysis for these pollutants to determine applicability to the PSD Regulation. This netting analysis shall account for all creditable emissions increases and decreases over the contemporaneous period. As long as the net change in emissions over the contemporaneous period does not exceed the PSD significance thresholds of 25 tons per year of PM and 15 tons per year of PM-10 the PSD regulation shall not apply.

Contemporaneous Time Period

National Starch is proposing to begin construction of the spray agglomerator project in March 2000, and is expecting to commence startup of the entire operation by March 2001. By definition, the contemporaneous period covers the period of time beginning five years prior to the estimated start of construction and ending on the date the source starts up operation of the entire project. Therefore, the contemporaneous period for this project will include all creditable increases and decreases which occurred or will occur at the plant between March 1995 and March 2001.

Creditable Increases within the Contemporaneous Time Period

The creditable emissions increases include emissions from the proposed project as well as the emissions increases from other projects which have or will occur during the contemporaneous time frame.

Table 3 list the emissions increases associated with the proposed project and are based on the proposed limited potential to emit for these units.

Table 3 Proposed Spray Agglomeration Project

Unit ID / Description	Startup Commenced	Hours of Operation (hr/yr)	Air Flowrate (acfm)	Grain Loading (gr/dscf)	PM10 of PM (%)	Allowable PM (TPY) @ hr/yr	Allowable PM10 (TPY) @ hr/yr
5549-16, Spray Agglomerator #3	2000	8760	450	0.01	100	0.17	0.17
5549-17, Spray Agg. #3, Storage Bin #5	2000	8760	450	0.01	100	0.17	0.17
5549-18, Spray Agg. #3, Storage Bin #6	2000	8760	4,600	0.01	100	1.73	1.73
5549-19, Purity Gum Packing	2000	8760	5,400	0.01	100	2.03	2.03
5549-20, Utra Tex Packing	2000	8760	6,000	0.01	100	2.25	2.25
5549-21, Drum Dryer Packing	2000	8760	14,000	0.01	100	5.26	5.26
5549-26, Bag Packing Line Fugitives	2000	8760	2,800	0.01	100	1.05	1.05
5549-28, #3 Spray Agglomerator Packing	2000	8760	33,100	0.025	100	31.90 (1)	31.90 (1)
Total PM10 Emission Increase Associated with proposed Spray Agglomerator Project						**44.55**	**44.55**

(1) include 0.83 tons of PM-10 and PM emissions from the 25 MMBtu per hour Natural Gas fired Burner.

Table 4 lists other emissions increases not associated with this project which have occurred during the contemporaneous time period. Emissions increase associated with the **By Products Rebuild Project** are based on emissions limitations established in construction permit CP-097-00042-01 issued on March 24, 1997 and modifications to construction permit CP-097-0042-01 issued on April 15, 1998, and February 25, 1999. Emissions increases associate with the **Pre By-Product Rebuild Project** are based on revised emissions limitation established in condition 14 of construction permit CP-097-0042-01, issued on March 24, 1997. Emissions increases associated with the **Proposed Modification to Emissions Unit 577-2** are based on an increase in the flow rate from 3,835 scfm to 15,060 scfm and revision to the emission limitation from 0.03 gr/dscf to 0.01 gr/dscf.

Table 4 Contemporaneous Emissions Increases

Unit ID / Description	Startup Commenced	Hours of Operation (hr/yr)	Air Flowrate (scfm)	Grain Loading (gr/dscf)	PM10 of PM (%)	Allowable PM (TPY) @ hr/yr	Allowable PM10 (TPY) @ hr/yr
Byproducts Construction Project							
5502-1, Gluten Dryer Scrubber (front half)	1998	8,400	27,000	0.01	80	7.78	7.78
5502-1,Gluten Dryer Scrubber (back half)	1998	8,400	27,000	0.01	100	9.72	9.72
5502-2, Gluten SO2 Exhaust Fan	1998	8,400	930	NA	NA	0.0	0.0
5502-3, Hammer Mill Baghouse Vent Fan	1998	8,400	11,700	0.01	100	4.21	4.21
5502-4, Loose Feed Bins Vent Fan	1998	8,400	190	0.01	100	0.07	0.07

Unit ID / Description	Startup Commenced	Hours of Operation (hr/yr)	Air Flowrate (scfm)	Grain Loading (gr/dscf)	PM10 of PM (%)	Allowable PM (TPY) @ hr/yr	Allowable PM10 (TPY) @ hr/yr
5502-5, Pellet Cooler Cyclone Exhaust	1998	8,400	13,790	0.01	100	4.96	4.96
5503-1, Gluten Reciever Baghouse Fan	1998	8,400	18,580	0.01	100	6.69	6.69
5503-2, Germ Bin Vent Fan (4)	1998	8,400	8,640	0.01	100	3.11	3.11
5503-3, Pellet Bin #1 Vent Fan	1998						
5503-4, Pellet Bin #2 Vent Fan	1998						
5503-5, Loadout Dust Collector	1998						
5503-6, Truck Loadout Baghouse	1998	1,160	16,720	0.01	100	1.15	1.15
5502-7, RTO Dump Stack	1998	450	21,588	0.01	100	0.42	0.42
5502-6, Germ Fluid Bed Cyclone	1998	8,400	12,080	0.01	100	4.35	4.35
Pre-Byproducts Construction							
5549-4, #2 Spray Dryer Take Away	1996	8,760	1,700	0.01	100	0.64	0.64
5549-12, Agglomerator Feed Storage Bin	1996	8,760	1,530	0.01	100	0.57	0.57
5549-13, Agglomerator	1996	8,008	12,500	0.01	100	4.29	4.29
5549-14, Agglomerator Equipment Aspiration	1996	8,760	2,840	0.01	100	1.07	1.07
71-9, DSW Bulk Bag Filter	1996	7,884	1,700	0.01	100	0.57	0.57
5552-1, Chilsonator	1996	8,760	350	0.01	100	0.13	0.13
5552-2, Chilsonator Product Transfer Hopper	1996	8,760	2,410	0.01	100	0.90	0.90
40-3, #2 Starch Flash Dryer (burner only)	1995	7,884	NA	14 lb/MMcf	100	1.99	1.99
40-4, #1 Starch Flash Dryer (burner only)	1995	7,884	NA	14 lb/MMcf	100	1.66	1.66
575-2 ,#5 Starch Flash Dryer (burner only)	1995	7,884	NA	14 lb/MMcf	100	2.10	2.10
Modification to Emission Unit 577-2 (1)							

Emission Unit	Existing PM and PM10 Allowable (gr/dscf)	Existing PM and PM10 Allowable (ton/yr)	New PM-10 and PM Allowable (gr/dscf)	New PM-10 and PM Allowable (tons/yr)	Net Increase in PM emissions (tons/yr	Net Increase in PM-10 emissions (tons/yr
577-2, North Packing Line	0.03	4.32	0.01	5.65	1.33	1.33
Emissions Increase withing the Contemporaneous Period					**59.66**	**57.71**

Creditable Emissions Decreases within the Contemporaneous Time Period

Creditable emissions decreases are those enforceable decreases which occurred during the contemporaneous time period. These decreases are based on the average annual emissions from previous two years prior to shutdown. All emissions decreases are the same as those used in netting analysis for the By-Products Rebuild Project with the exception of the PM-10 and PM emissions decreases associated with emission units 67-1A and 67-19. National Starch has recalculated the emissions decreases associated with these units based on previously measured front half emissions and a conservative estimate of 0.005 grains per dry standard cubic foot for the back half emissions.

Table 5 Creditable Emissions Decreases with the Contemporaneous Period

Past Byproducts Offsets						
Unit ID	Shutdown Date	PM (2) year average actual emissions	PM10 (2) year average actual emissions	Lowest Allowable Emissions	Creditable PM emission deceases	Creditable PM10 emission deceases
67-1A, Feed Flash Dryer	1998	47.34	40.51	51.6	47.34	40.51
67-7, Gluten Cooling Conveyor	1998	10.52	10.52	13.8	10.52	10.52
67-12, #1 and #2 Germ Dryers	1998	3.70	2.96	4.4	3.70	2.96
67-13, #3 Germ Dryer	1998	4.30	3.44	5.2	4.30	3.44
67-14, #4 Feed Dryer	1998	1.29	1.03	1.98	1.29	1.03
67-17, North Finished Feed Conveyor	1998	2.12	2.12	12.6	2.12	2.12
67-17A, South Finished Feed Conveyor	1998	0.58	0.58	12.6	0.58	0.58
67-19, Gluten Flash Dryer	1998	23.31	26.13	33.1	23.31	26.13
69-3, B, C and D Germ Dryers	1998	1.55	1.24	3.7	1.55	1.24
Other Past Shutdowns						
62-1C, C P&S Dryer	1995	5.20	4.16	8.6	5.20	4.16
62-1D, D P&S Dryer	1995	5.28	4.23	8.6	5.28	4.23
62-2, E and F P&S Dryer	1995	13.98	11.14	15.8	13.98	11.14
63-3, CWS North Packer Bin	1994	0.38	0.38	0.18	0.18	0.18

63-10, CWS South Packer Bin	1994	0.38	0.38	0.18	0.18	0.18
64-1, #3 Pulverizing Conveyor	1995	6.93	6.93	6.93	6.93	6.93
64-2, #3 Pulverizing Vaccum Cleaning	1995	0.001	0.001	0.01	0.001	0.001
64-3, #2 Pulverizing Airveyor	1995	0.64	0.64	0.64	0.64	0.64
64-4, #1 Pulverizing Conveyor	1995	0.37	0.37	0.42	0.37	0.37
64-5, #1,2 Pulzerizing Vacuum Cleaning	1995	0.001	0.001	0.01	0.001	0.001
Total Emissions Decrease					**134.90**	**116.35**

A summary of the netting analysis is provided in table 2. Since the net increase in emissions is less than the significance level of 15 tons per year for PM10 and 25 tons for PM the PSD regulation 326 IAC 2-2 and 40 CFR Part 51.21 does not apply.

Net change in PM emissions:

44.55 ton/yr + 59.66 tons/yr -134.90 tons/yr = -30.69 tons/yr

Net change in PM-10 emissions:

44.55 ton/yr + 57.71 tons/yr - 116.35 tons/yr = -14.08 tons/yr

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it emits more than 10 tons/yr of a criteria air pollutant. Pursuant to this rule, the owner/operator of this source must submit an emission statement annually. The annual statement must be received by April 15 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 5-1 (Opacity)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of thirty percent (30%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-1-2 (Particulate Emissions)

The particulate emitting facilities identified in this construction permit application are subject to 326 IAC 6-1.1-2(a) (Nonattainment Particulate Matter Limitations) since the source-wide potential to emit PM exceeds 100 tons per year and the source is located in Marion County. Pursuant to 326 IAC 6-1-2(a) the filterable PM emissions are limited to 0.03 grains per dry standard cubic for the following units 577-2, 5549-16, 5549-17, 5549-18, 5549-19, 5549-20, 5549,21, 5549-26 and 5559-28. The minor source limit for PM satisfy the requirements of 326 IAC 6-1-2(a).

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAM, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are as follows:

1. Emission units 5549-16, 17, 18, 19, 20, 21, 26, 28 and 577-2 has applicable compliance monitoring conditions as specified below:

(a) Visible emission notations of the stack exhaust for emissions units 5549-16, 17, 18, 19, 20, 21, 26, 28 and 577-2 shall be performed daily during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

(b) The Permittee shall record the total static pressure drop across the baghouse used in conjunction with the emission units 5549-16, 17, 18, 19, 20, 21, 26 and 577-1 , at least once daily when the process is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 0 to 6 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and ERMD and shall be calibrated at least once every six (6) months.

(c) The Permittee shall record the total static pressure drop across the scrubber used in conjunction with the emission units 5549-28 , at least once daily when the process is in operation when venting to the atmosphere. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the scrubber shall be maintained within the range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned

range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAM, and ERMD and shall be calibrated at least once every six (6) months.

(d) In the event that bag failure has been observed:

(1) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(2) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions are necessary to ensure the baghouses and scrubber are operating properly to meet the PM-10 and PM emissions limits taken to avoid PSD applicability.

Conclusion

The construction of this proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 097-11362-00042.

Appendix A: Emissions Calculations
PM-10 Emissions Calculation

Project Emissions Increase

Spray Agglomerator Project	Emission Unit	PM and PM-10 emission rate (gr/dscf)	flow rate (acfm)	Hours of operation (hr/yr)	PM10 and PM emission rate (lbs/hr)	PM10 and PM emission rate (tons/yr)
Spray Dryer Storage Bin #5	5549-16	0.01	450	8760	0.04	0.17
Spray Dryer Storage Bin #6	5549-17	0.01	450	8760	0.04	0.17
Purity Gum Packing	5549-18	0.01	4600	8760	0.39	1.73
Ultra Tex Packing	5549-19	0.01	5400	8760	0.46	2.03
Drum Dryer Packing	5549-20	0.01	6000	8760	0.51	2.25
Bag Packing Line Fugitives	5549-21	0.01	14000	8760	1.20	5.26
Spray Agglomerator #3 Packing	5549-26	0.01	2800	8760	0.24	1.05
Spray Agglomerator #3	5549-28	0.025	33100	8760	7.09	31.07
Spray Agglomerator NG Burner (25 MMBtu/hr)	5549-28	7.6 Lbs/MMcf	NA	8760	0.19	0.83
					Total:	44.55

Contemporaneous Emissions Increases

By Products Construction	Emission Unit ID	Date Startup Commenced	Hours of Operation (hr/yr)	Flow rate (acfm)*	PM emission rate gr/dscf*	PM-10 or PM (%)	PM10 emission rate (lbs/hr)	PM10 emission rate (tons/yr)	PM emission rate (lbs/hr)	PM emission rate (tons/yr)
Gluten Dryer Scrubber (front half)	5502-1	1998	8400	27000	0.01	80	1.85	7.78	2.31	9.72
Gluten Dryer Scrubber (back half) (1)	5502-1	1998	8400	27000	0.01	100	2.31	9.72	2.31	9.72
Gluten SC2 Exhaust Fan	5502-2	1998	8400	930	NA	NA	0.00	0.00	0.00	0.00
Hammer Mill Baghouse Vent Fan	5502-3	1998	8400	11700	0.01	100	1.00	4.21	1.00	4.21
Loose Feed Bins Vent Fan	5502-4	1998	8400	190	0.01	100	0.02	0.07	0.02	0.07
Pellet Cooler Cyclone Exhaust	5502-5	1998	8400	13790	0.01	100	1.18	4.96	1.18	4.96
Gluten Reclaner Baghouse Fan	5503-1	1998	8400	16580	0.01	100	1.59	6.69	1.59	6.69
Germ Bin Vent Fan (2)	5503-2,3,4,5	1998	8400	8640	0.01	100	0.74	3.11	0.74	3.11
Truck Loadout Baghouse	5503-6	1998	1610	16720	0.01	100	1.43	1.15	1.43	1.15
RTO Dump Stack	5502-7	1998	450	21588	0.01	100	1.85	0.42	1.85	0.42
Germ Fluid Bed Cyclone	5502-6	1998	8400	12080	0.01	100	1.04	4.35	1.04	4.35
						Total:	42.45			44.40

* All grain loading values, flowrates and hours of operation were taken from 03/24/97 construction permit (CP-097-00042)

(1) Per 2/5/99 Letter from National Starch to ERMD National Starch has recalculated the allowable emissions from the Gluten dryer based on 0.008 gr/dscf front half emissions and a total of 0.01 gr/dscf back half PM10 emissions.

(2) Units 5503-2,3,4,5 all discharge through a common stack (ID 5503-2)

Pre-Byproducts Construction	Emission Unit ID	Date Startup Commenced	Hours of Operation (hr/yr)	Flow rate (acfm)	PM emission rate (gr/dscf)	PM-10 or PM (%)	PM10 emission rate (lbs/hr)	PM10 emission rate (tons/yr)	PM emission rate (lbs/hr)	PM emission rate (tons/yr)
#2 Spray Dryer Take Away	5549-4	1996	8760	1700	0.01	100	0.15	0.64	0.15	0.64
Agglomerator Feed Storage Bin	5549-12	1996	8760	1530	0.01	100	0.13	0.57	0.13	0.57
Agglomerator	5549-13	1996	8008	12500	0.01	100	1.07	4.29	1.07	4.29
Agglomerator Equipment Aspiration	5549-14	1996	8760	2640	0.01	100	0.24	1.07	0.24	1.07
DSW Bulk Bag Filter	71-9	1996	7884	1700	0.01	100	0.15	0.57	0.15	0.57
Chilsonator	5552-1	1996	8760	350	0.01	100	0.03	0.13	0.03	0.13
Chilsonator Product Transfer Hopper	5552-2	1996	8760	2410	0.01	100	0.21	0.90	0.21	0.90
#2 Starch Flash Dryer (36 MMBtu/hr burner)	40-3	1995	7884	NA	14 lbs/MMcf	100	0.50	1.99	0.50	1.99
#1 Starch Flash Dryer (30 MMBtu/hr burner)	40-4	1995	7884	NA	14 lbs/MMcf	100	0.42	1.66	0.42	1.66
#5 Starch Flash Dryer (36 MMBtu/hr burner)	575-2	1995	7884	NA	14 lbs/MMcf	100	0.53	2.10	0.53	2.10
							Total:	13.92		13.92

* All grain loading values, flowrates and hours of operation were taken from 03/24/97 construction permit (CP-097-00042)

Modification to Emissions Unit 577-2	existing PM and PM10 limit (gr/dscf)	existing flow rate (acfm)	hours of operation (hr/yr)	existing PM and PM10 limit (tons/yr)	revised PM and PM10 limit (gr/dscf)	revised flow rate (acfm)	hour of operation (hr/yr)	revised PM PM10 emission rate (tons/yr)	net increase in PM/PM10 emissions (tons/yr)
The installation of the new baghouse will result in an increase in the stack flow rate and the corresponding PM/PM-10 emissions.	0.03	3,835	8760	4.32	0.01	15,060	8760	5.65	1.33
								Total:	1.33

Contemporaneous Emissions Decreases

Past Byproducts Offsets	Unit ID	Control Device	Date Tested	PM gr/dscf*	Flow rate dscfm*	PM lbs/hr	1994 Operating hrs/yr*	1994 Actual Emissions (tons/yr)	1995 Operating hrs/yr*	1995 Actual Emissions (tons/yr)	2 Year Avg. PM Actual Emissions (tons/yr)	PM10 of PM Front Half (%)	2 Years Avg. PM10 Actual Emissions Front Half (tons/yr)	2 Years Avg. PM10 Actual Emissions Back Half (tons/yr)	SIP Limits (tons/yr)	Creditable PM-10 Calculated tons/yr	Creditable PM Calculated tons/yr
Feed Flash Dryer	67-1A	Scrubber	08/25/95	0.0130	75,000	8.36	8,208	34.30	8,160	34.10	34.20	80.00%	27.36	13.18	51.6	40.51	47.36
Gluten Cooling Conveying	67-2	Baghouse	Assumed 0.01	0.0100	30,000	2.57	8,208	10.55	8,160	10.49	10.52	100.00%	10.52	NA	13.8	10.52	10.52
#1 and #2 Germ Dryers	67-12	Scrubber	Used 67-13	0.0264	4,000	0.90	8,208	3.71	8,160	3.68	3.70	80.00%	2.96	NA	4.4	2.96	3.70
#3 Germ Dryer	67-13	Scrubber	09/02/81	0.0264	4,650	1.05	8,208	4.31	8,160	4.28	4.30	80.00%	3.44	NA	5.2	3.44	4.30
#4 Germ Dryer	67-14	Scrubber	04/14/82	0.0159	2,300	0.31	8,208	1.29	8,160	1.28	1.29	80.00%	1.03	NA	1.98	1.03	1.29
North Finished Feed Conveying	67-17	Baghouse	01/28/86	0.0034	18,000	0.52	8,208	2.13	8,160	2.12	2.12	100.00%	2.12	NA	12.6	2.12	2.12
South Finished Feed Conveying	67-17A	Baghouse	01/28/86	0.0009	18,000	0.14	8,208	0.58	8,160	0.58	0.58	100.00%	0.58	NA	12.6	0.58	0.58
Gluten Flash Dryer	67-19	Scrubber	10/09/96	0.0156	42,600	5.70	8,208	23.37	8,160	23.24	23.30	80.00%	18.64	7.47	33.1	26.11	30.77
B, C, and D Germ Dryers	69-3	Scrubber	05/16/90	0.0072	6,150	0.38	8,208	1.56	8,160	1.55	1.55	80.00%	1.24	NA	3.7	1.24	1.55
																Total: 88.52	102.19
							8184.00	3.68									

* All grain loading values, flowrates and hours of operation were taken from 03/24/97 construction permit (CP-097-00042)
PM and PM10 emissions match with values in the construction permit

(1) Per 2/5/99 Letter from National Starch to ERMD National Starch has recalculated the actual emissions from the Feed Flash dryer and Gluten Feed dryer based on previous measured from half emissions and a conservative assumption of 0.005 gr/dscf back half PM.

Past Shut Downs	Unit ID	Control Device	Date Tested	PM gr/dscf	Flow rate dscfm	Calculated PM lbs/hr	1994 Operating hr/yr	1994 Actual Emissions (tons/yr)	1995 Operating hr/yr	1995 Actual Emissions (tons/yr)	2 Years Avg. PM10 Actual Emissions (tons/yr)	2 Year Avg. PM Actual Emissions (tons/yr)	SIP Limits (tons/yr)	Creditable PM Emissions (tons/yr)	PM10 of PM (%)	Creditable PM10 Emissions (tons/yr)
C P&S Dryer (4 units)	62-1C	Scrubber	04/13/82	0.0061	NA	2.02	5946	6.01	4357	4.40	4.16	5.20	8.6	5.20	80%	4.16
D P&S Dryer (3 units)	62-1D	Scrubber	08/21/86	0.0087	9168.33	2.05	5946	6.10	4357	4.47	4.23	5.28	8.6	5.28	80%	4.23
E and F P&S Dryer (6 units)	62-2	Scrubber	Used 62-1D	0.0087	9168.33	4.10	5946	12.20	7624	15.64	11.14	13.92	15.8	13.92	80%	11.14
CWS North Packer	63-8	Baghouse	Assumed 0.03	0.0300	1000.00	0.26	4420	0.57	1565	0.20	0.38	0.38	0.18	0.18	100%	0.18
CWS South Packer	63-10	Baghouse	Assumed 0.03	0.0300	1000.00	0.26	4420	0.57	1565	0.20	0.38	0.38	0.18	0.18	100%	0.18
#3 Pulverizing Conveying	64-1	Baghouse	Assumed 0.03	0.0300	11000.00	2.83	4900	6.93	4900	6.93	6.93	6.93	6.93	6.93	100%	6.93
#3 Pulverizing Vacuum Cleaning	64-2	Baghouse	Assumed 0.03	0.0300	150.00	0.04	52	0.00	52	0.00	0.001	0.00	0.01	0.001	100%	0.001
#2 Pulverizing Airveyor	64-3	Baghouse	Assumed 0.03	0.0300	2000.00	0.51	2496	0.64	2496	0.64	0.64	0.64	0.64	0.64	100%	0.64
#1 Pulverizing Conveying	64-4	Baghouse	Estimated	N/A	N/A	0.50	1296	0.32	1664	0.42	0.37	0.37	0.42	0.37	100%	0.37
#1 and #2 Pulverizing Vacuum Cleaning	64-5	Baghouse	Assumed 0.03	0.0300	150.00	0.04	52	0.00	52	0.00	0.001	0.00	0.01	0.001	100%	0.001
													Total:	32.71	Total:	27.83

* All grain loading values, flowrates and hours of operation were taken from 03/24/97 construction permit (CP-097-00042)

	PM10 (TPY)	PM (TPY)
Project Emissions Increases		
Spray Agglomerator Project	44.55	44.55
Contemporaneous Increases		
By Products Construction	42.46	44.40
Pre-Byproducts Construction	13.92	13.92
Modifcation to Emission Unit 577-2	1.33	1.33
	57.71	59.66
Contemporaneous Decreases		
Past Byproducts Offsets	88.52	102.19
Past Shut Downs	27.83	32.71
	116.35	134.90
Net Emissions Change	-14.08	-30.69
PSD/NA Major Modification Threshold	15	25

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
Company Name: National Starch and Chemical Company
Plt ID: 00042

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
25.0	219.0

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.2	0.8	0.1	11.0	0.6	9.2

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-0(
(SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).
See page 2 for HAPs emissions calculations.

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	6.300E-03	3.600E-03	2.250E-01	5.400E+00	1.020E-02

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.500E-03	3.300E-03	4.200E-03	1.140E-03	6.300E-03

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.