

# **CONSTRUCTION PERMIT OFFICE OF AIR MANAGEMENT**

**Royal Crown Limited  
401 East Syracuse Road  
Milford, Indiana 46547**

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Construction Permit No.: CP-085-9961-00080	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

## SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM). The information describing the source 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 permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information

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The Permittee owns and operates a stationary source that manufactures poly vinyl chloride (PVC) plastic products by extrusion process.

Responsible Official: Mr. Dennis G. Yoder  
Source Address: 401 East Syracuse Road, Milford, Indiana 46547  
Mailing Address: 401 East Syracuse Road, Milford, Indiana 46547  
SIC Code: 3089  
County Location: Kosciusko  
County Status: Attainment for all criteria pollutants  
Source Status: Minor Source, under PSD Rules;

### A.2 Emission Units and Pollution Control Equipment Summary

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This stationary source consists of the following emission units and pollution control devices:

- (a) Six (6) natural gas fired unit heaters identified as UH<sub>1-1</sub> through UH<sub>1-6</sub>, each rated at 0.165 million British thermal units per hour (MMBtu/hr);
- (b) Three (3) natural gas fired unit heaters identified as UH<sub>2-1</sub> through UH<sub>2-3</sub>, each rated at 0.05 million British thermal units per hour (MMBtu/hr);
- (c) Three (3) natural gas fired unit heaters identified as UH<sub>3-1</sub> through UH<sub>3-3</sub>, each rated at 0.025 million British thermal units per hour (MMBtu/hr);
- (d) Four (4) natural gas fired make-up air heating units identified as MUA<sub>1-1</sub> through MUA<sub>1-4</sub>, each rated at 2.60 million British thermal units per hour (MMBtu/hr);
- (e) One (1) Poly Vinyl Chloride (PVC) Compounds loading operation, with a maximum capacity of 6850 pounds per hour to storage silos identified as S<sub>1</sub> to S<sub>6</sub>, particulate matter controlled by their separate bag filters identified as SF<sub>1</sub> through SF<sub>6</sub>;
- (f) One (1) vacuum feed system identified as VFS, receives PVC compound from Re grind storage silos identified as RS<sub>1</sub> through RS<sub>6</sub> and storage silos identified as S<sub>1</sub> to S<sub>6</sub>, with a maximum capacity of 6850 pounds per hour and transfers to the extruder lines identified as A through L;
- (g) Twelve (12) Extruder Lines identified as A through L, each with a maximum capacity of 571 pounds of PVC compounds per hour;
- (h) Twelve (12) PVC pipe cutting saws identified as SAW<sub>1</sub> through SAW<sub>12</sub>;

- (i) Two (2) PVC Grinders identified as # 1 and # 2, with a maximum capacity of 343 pounds scrap plastics per hour, transferring to Re grind silos identified as RS<sub>1</sub> through RS<sub>6</sub>, particulate matter (PM) emissions are controlled by a bag filter identified as RSF<sub>1</sub>.

## **SECTION B GENERAL CONDITIONS**

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

### **Construction Conditions [326 IAC 2-1-3.2]**

#### **B.1 General Construction Conditions**

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- (a) The data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Office of Air Management (OAM).
- (b) This permit 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 Effective Date of the Permit [IC13-15-5-3]**

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

#### **B.3 Revocation of Permits [326 IAC 2-1-9(b)]**

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Pursuant to 326 IAC 2-1-9(b)(Revocation of Permits), the Commissioner may revoke this permit 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.4 Permit Review Rules [326 IAC 2]**

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Notwithstanding Construction Condition (B.5), all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

#### **B.5 First Time Operation Permit [326 IAC 2-1-4]**

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This document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:

- (a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

- (b) 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. Any permit conditions associated with an operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

## **Operation Conditions**

### **B.6 General Operation Conditions**

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- (a) The data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).
- (b) The Permittee shall 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 (IC13-17) and the rules promulgated thereunder.

### **B.7. Preventive Maintenance Plan [326 IAC 1-6-3]**

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

- (a) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices.
- (b) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions.
- (c) Identification of the replacement parts which will be maintained in inventory for quick replacement.

The preventive maintenance plan shall be submitted to IDEM, OAM upon request and shall be subject to review and approval.

### **B.8 Transfer of Permit [326 IAC 2-1-6]**

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Pursuant to 326 IAC 2-1-6 (Transfer of Permits):

- (a) In the event that ownership of a source or facility is changed, the Permittee shall notify OAM, Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.
- (b) The written notification shall be sufficient to transfer the permit from the current owner to the new owner.

- (c) The OAM shall reserve the right to issue a new permit.

**B.9 Permit Revocation [326 IAC 2-1-9]**

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Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of 326 IAC 2-1 (Permit Review Rules).

**B.10 Availability of Permit [326 IAC 2-1-3(l)]**

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Pursuant to 326 IAC 2-1-3(l), the Permittee shall maintain the applicable permit on the premises of the source and shall make this permit available for inspection by the IDEM, or other public official having jurisdiction.

**SECTION C SOURCE OPERATION CONDITIONS**

Entire Source

**Emission Limitations and Standards**

**C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]**

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- (a) The total source potential to emit of particulate matter (PM) are less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.

**C.2 Notice of Malfunction [326 IAC 1-6-2]**

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- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

**C.3 Opacity [326 IAC 5-1]**

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

- (a) Visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings, as determined in 326 IAC 5-1-4.
- (b) Visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) in a six (6) hour period.

**C.4 Fugitive Dust Emissions [326 IAC 6-4]**

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The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

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

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All air pollution control equipment listed in this permit 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.

**Testing Requirements**

**C.6 Performance Testing [326 IAC 3-6]**

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- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing methods approved by IDEM, OAM.

A test protocol, except as provided elsewhere in this permit, 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

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 within forty-five (45) days after the completion of the testing. An extension may be granted by the Commissioner, 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**

### **C.7 Compliance Monitoring [326 IAC 2-1-3]**

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Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment, no more than ninety (90) days after receipt of this permit. If due to circumstances beyond its control, this schedule cannot be met, the Permittee may extend compliance schedule 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

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.8 Monitoring Methods [326 IAC 3]**

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Any monitoring or testing performed to meet the applicable requirements of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

## **Corrective Actions and Response Steps**

### **C.9 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-1-3]**

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- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, 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 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 within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM 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 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 permit conditions may be grounds for immediate revocation of the permit 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**

### **C.10 Monitoring Data Availability [326 IAC 2-1-3]**

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- (a) With the exception of performance tests conducted in accordance with Section C- Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit 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 a subsection (a) above, when the equipment listed in Section D of this permit 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 permit.
- (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 may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time 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.11 General Record Keeping Requirements [326 IAC 2-1-3]**

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- (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, representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner 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 permit;
  - (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 improper maintenance 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. 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 permit issuance.

C.12 General Reporting Requirements [326 IAC 2-1-3]

- (a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Quarterly Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported.
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit 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
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit 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, on or before the date it is due.
- (d) Unless otherwise specified in this permit, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period.

- (e) All instances of deviations must be clearly identified in such reports.
- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

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).

## SECTION D.1 FACILITY OPERATION CONDITIONS

- (a) Six (6) natural gas fired unit heaters identified as UH<sub>1-1</sub> through UH<sub>1-6</sub>, each rated at 0.165 million British thermal units per hour (MMBtu/hr);
- (b) Three (3) natural gas fired unit heaters identified as UH<sub>2-1</sub> through UH<sub>2-3</sub>, each rated at 0.05 million British thermal units per hour (MMBtu/hr);
- (c) Three (3) natural gas fired unit heaters identified as UH<sub>3-1</sub> through UH<sub>3-3</sub>, each rated at 0.025 million British thermal units per hour (MMBtu/hr);
- (d) Four (4) natural gas fired make-up air heating units identified as MUA<sub>1-1</sub> through MUA<sub>1-4</sub>, each rated at 2.60 million British thermal units per hour (MMBtu/hr);
- (e) One (1) Poly Vinyl Chloride (PVC) Compounds loading operation, with a maximum capacity of 6850 pounds per hour to storage silos identified as S<sub>1</sub> to S<sub>6</sub>, particulate matter controlled by their separate bag filters identified as SF<sub>1</sub> through SF<sub>6</sub>;
- (f) One (1) vacuum feed system identified as VFS, receives PVC compound from Regrind storage silos identified as RS<sub>1</sub> through RS<sub>6</sub> and storage silos identified as S<sub>1</sub> to S<sub>6</sub>, with a maximum capacity of 6850 pounds per hour and transfers to the extruder lines identified as A through L;
- (g) Twelve (12) Extruder Lines identified as A through L, each with a maximum capacity of 571 pounds of PVC compounds per hour;
- (h) Twelve (12) PVC pipe cutting saws identified as SAW<sub>1</sub> through SAW<sub>12</sub>;
- (i) Two (2) PVC Grinders identified as # 1 and # 2, with a maximum capacity of 343 pounds scrap plastics per hour, transferring to Regrind silos identified as RS<sub>1</sub> through RS<sub>6</sub>, particulate matter (PM) emissions are controlled by a bag filter identified as RSF<sub>1</sub>.

### Emission Limitations and Standards

#### D.1.1 Particulate Matter (PM) [326 IAC 6-3]

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from:

- (a) One (1) PVC Compound loading operation to storage silos ( $S_1$  through  $S_6$ ) shall not exceed 9.35 pounds per hour when operating at a process weight rate of 6850 pounds per hour.
- (b) One (1) vacuum feed system identified as VFS (receives PVC compound from Re grind storage silos identified as  $RS_1$  through  $RS_6$  and storage silos identified as  $S_1$  to  $S_6$  and transfers to the extruder lines identified as A through L) shall not exceed 9.35 pounds per hour when operating at a process weight rate of 6850 pounds per hour;
- (c) Two (2) grinders identified as # 1 and # 2 shall not exceed 1.25 pounds per hour when operating at a process weight rate of 343 pounds per hour;
- (d) One (1) Re grind handling operation to Re grind storage silos (RS 1 to 6) shall not exceed 1.25 pounds per hour when operating at a process weight rate of 343 pounds of Re grind plastic compounds per hour;
- (e) One (1) Re grind material handling operation transferring PVC compounds from Re grind storage silos (RS 1 to 6) to vacuum feed system (VFS) shall not exceed 1.25 pounds when operating at a process weight rate of 343 pounds per hour.

The pound per hour limitation was calculated with the following equation:

Interpolation and extrapolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

## Compliance Determination Requirements

### D.1.2 Testing Requirements

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The Permittee is not required to test the facility identified as One (1) vacuum feed system (VFS) by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the PM limit specified in Condition D.1.1(b) shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

### D.1.3 Particulate Matter (PM)

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- (a) The bag filters identified as  $SF_1$  through  $SF_6$  for PM control shall be in operation at all times when the PVC compounds loading operation into silos identified as  $S_1$  through  $S_6$  are in operation and exhausting to the outside atmosphere.
- (b) The closed loop vacuum feed system (VFS) for PM control shall be in operation at all time when PVC compounds transferring to extruders identified as A through L is in operation and exhausting to the outside atmosphere.
- (c) The bag filter identified as  $RSF_1$  for PM control shall be in operation at all times when transferring Re grind scrap PVC compounds into Re grind storage silos identified as  $RS_1$  through  $RS_6$  and exhausting to the outside atmosphere.

## Compliance Monitoring Requirements

### D.1.4 Visible Emissions Notations

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- (a) Daily visible emission notations of the bag filters (SF<sub>1</sub> through SF<sub>6</sub>) and bag filter RSF<sub>1</sub> stack exhaust shall be performed 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 a 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.1.5 Baghouse Inspections

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An inspection shall be performed each calendar quarter of all bag filters controlling the PM from the storage silos when venting to the atmosphere. A bag filter inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bag filters shall be replaced.

### D.1.6 Broken Bag or Failure Detection

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

## Record Keeping and Reporting Requirement

### D.1.7 Record Keeping Requirements

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- (a) To document compliance with Condition D.1.4, the Permittee shall maintain records of daily visible emission notations of the stack exhaust.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**MALFUNCTION REPORT**

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
FAX NUMBER - 317 233-5967**

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6  
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE: IT HAS POTENTIAL TO EMIT 25 LBS/HR PARTICULATES ? \_\_\_\_\_, 100 LBS/HR VOC ? \_\_\_\_\_, 100 LBS/HR SULFUR DIOXIDE ? \_\_\_\_\_ OR 2000 LBS/HR OF ANY OTHER POLLUTANT ? \_\_\_\_\_ EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION \_\_\_\_\_.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC \_\_\_\_\_ OR, PERMIT CONDITION # \_\_\_\_\_ AND/OR PERMIT LIMIT OF \_\_\_\_\_

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ?      Y            N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ?      Y            N

COMPANY: **Royal Crown Limited**      PHONE NO. ( 219 ) 658-9442

LOCATION: (CITY AND COUNTY):      Milford, Kosciusko

PERMIT NO. 085-9961    AFS PLANT ID: 085-00080      AFS POINT ID: \_\_\_\_\_    INSP: Doyle Houser  
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: \_\_\_\_\_

DATE/TIME MALFUNCTION STARTED: \_\_\_\_/\_\_\_\_/ 19\_\_\_\_      \_\_\_\_\_ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: \_\_\_\_\_

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE \_\_\_\_/\_\_\_\_/ 19\_\_\_\_      \_\_\_\_\_ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: \_\_\_\_\_

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: \_\_\_\_\_

MEASURES TAKEN TO MINIMIZE EMISSIONS: \_\_\_\_\_

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL\* SERVICES: \_\_\_\_\_

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: \_\_\_\_\_

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: \_\_\_\_\_

INTERIM CONTROL MEASURES: (IF APPLICABLE) \_\_\_\_\_

MALFUNCTION REPORTED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

**Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.**

**326 IAC 1-6-1            Applicability of rule**

Sec. 1. The requirements of this rule (326 IAC 1-6) shall apply to the owner or operator of any facility which has the potential to emit twenty-five (25) pounds per hour of particulates, one hundred (100) pounds per hour of volatile organic compounds or SO<sub>2</sub>, or two thousand (2,000) pounds per hour of any other pollutant; or to the owner or operator of any facility with emission control equipment which suffers a malfunction that causes emissions in excess of the applicable limitation.

**326 IAC 1-2-39            “Malfunction” definition**

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. (Air Pollution Control Board; 326 IAC 1-2-39; filed Mar 10, 1988, 1:20 p.m. : 11 IR 2373)

**\*Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

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## Indiana Department of Environmental Management Office of Air Management

### Technical Support Document (TSD) for New Construction and Operation

#### Source Background and Description

Source Name: Royal Crown Limited  
Source Location: 401 East Syracuse Road, Milford, Indiana 46547  
County: Kosciusko  
Construction Permit No.: CP-085-9961-00080  
SIC Code: 3089  
Permit Reviewer: Manoj P. Patel

The Office of Air Management (OAM) has reviewed an application from Royal Crown Limited relating to the construction and operation of PVC plastic extrusion process, consisting of the following equipment:

- (a) Six (6) natural gas fired unit heaters identified as UH<sub>1-1</sub> through UH<sub>1-6</sub>, each rated at 0.165 million British thermal units per hour (mmBtu/hr);
- (b) Three (3) natural gas fired unit heaters identified as UH<sub>2-1</sub> through UH<sub>2-3</sub>, each rated at 0.05 million British thermal units per hour (mmBtu/hr);
- (c) Three (3) natural gas fired unit heaters identified as UH<sub>3-1</sub> through UH<sub>3-3</sub>, each rated at 0.025 million British thermal units per hour (mmBtu/hr);
- (d) Four (4) natural gas fired make-up air heating units identified as MUA<sub>1-1</sub> through MUA<sub>1-4</sub>, each rated at 2.60 million British thermal units per hour (mmBtu/hr);
- (e) One (1) Poly Vinyl Chloride (PVC) Compounds loading operation, with a maximum capacity of 6850 pounds per hour to storage silos identified as S<sub>1</sub> to S<sub>6</sub>, particulate matter controlled by their separate bag filters identified as SF<sub>1</sub> through SF<sub>6</sub>;
- (f) One (1) vacuum feed system identified as VFS, receives PVC compound from regrind storage silos identified as RS<sub>1</sub> through RS<sub>6</sub> and storage silos identified as S<sub>1</sub> to S<sub>6</sub>, with a maximum capacity of 6850 pounds per hour and transfers to the extruder lines identified as A through L;
- (g) Twelve (12) Extruder Lines identified as A through L, each with a maximum capacity of 571 pounds of PVC compounds per hour;
- (h) Twelve (12) PVC pipe cutting saws identified as SAW<sub>1</sub> through SAW<sub>12</sub>;
- (i) Two (2) PVC Grinders identified as # 1 and # 2, with a maximum capacity of 343 pounds scrap plastics per hour, transferring to regrind silos identified as RS<sub>1</sub> through RS<sub>6</sub>, particulate matter (PM) emissions are controlled by a bag filter identified as RSF<sub>1</sub>.

### Stack Summary

Stack*	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
BF <sub>1</sub> through BF <sub>6</sub>	PVC Storage Silo	--	--	710	ambient
RSF	Regrind Storage Silos (RS <sub>1</sub> through RS <sub>6</sub> )	--	--	710	ambient

\* - Vertical duct originating within the facility.

### Enforcement Issue

IDEM is aware that this source has been constructed and operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

### Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Information, unless otherwise stated, 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 July 16, 1998, with additional information received on August 8, 1998.

### Emissions Calculations

(a) Unit Heaters and Make Up Air Units

See Appendix A (Emissions Calculation Spreadsheets) for detailed calculations.

(b) Loading, PVC Compound Storage Silos, Regrind Silos, VFS:

See Appendix B (Emissions Calculation Spreadsheets) for detailed calculations.

### Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Allowable Emissions (tons/year)	Potential Emissions (tons/year)
Particulate Matter (PM)	98.50	49.85
Particulate Matter (PM10)	49.85	49.85
Sulfur Dioxide (SO <sub>2</sub> )	0.03	0.03
Volatile Organic Compounds (VOC)	14.90	14.90
Carbon Monoxide (CO)	4.30	4.30
Nitrogen Oxides (NO <sub>x</sub> )	5.10	5.10
Single Hazardous Air Pollutant (HAP)	0.09	0.09
Combination of HAPs	0.09	0.09

- (a) Allowable PM emissions are determined from the applicability of rule 326 IAC 6-3. See Appendix B of this TSD for detailed calculations.
- (b) The potential emissions before control are less than the allowable emissions, therefore, the potential emissions before control are used for the permitting determination.
- (c) Allowable emissions (as defined in the Indiana Rule) of VOC and PM are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.

**County Attainment Status**

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Kosciusko County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Kosciusko County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

**Source Status**

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	26.0
PM10	25.65
SO <sub>2</sub>	0.03
VOC	14.90
CO	4.30
NO <sub>x</sub>	5.10
Single HAP	0.09
Combination HAPs	0.09

- (a) This new source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

### **Part 70 Permit Determination**

#### 326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to this source.

### **Federal Rule Applicability**

- (a) There are no New Source Performance Standards (326 IAC 12) and 40 CFR Part 60 applicable to this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (326 IAC 14) and 40 CFR Part 63 applicable to this source.

### **State Rule Applicability**

#### 326 IAC 2-6 (Emission Reporting)

This rule does not apply to the facilities, because the source emits less than 100 tons/yr of VOC or PM<sub>10</sub>.

#### 326 IAC 5-1-2 (Visible Emission Limitations)

Pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:

- (a) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.
- (b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

#### 326 IAC 6-3 (Process Operations)

Pursuant to 326 IAC 6-3 (Process Operations), the allowable PM emission rate from the PVC loading operation, raw material transfer to extruders (A to L) through VFS, Grinders 1 & 2, conveying regrind material to silos 1 through 6, PVC regrind storage to VFS shall not exceed 9.35, 9.35, 1.25, 1.25, and 1.25 pounds per hour when operating at a process weight rate of 3.425, 3.425, 0.17, 0.17, and 0.17 tons per hour, respectively.

(a) Raw Material Loading to Silos (1 through 6) (P = 3.425 ton/hr)

$$\begin{aligned} E &= 4.10 P^{0.67} \\ &= 4.10 (3.425)^{0.67} \\ &= 9.35 \text{ lb./hr} \\ &= 41.0 \text{ tons/year} \end{aligned}$$

Potential PM emissions are less than the allowable emissions. So, Raw Material Loading to Silos (1 through 6) complies with 326 IAC 6-3-2(c).

(b) Raw Material Transfer to Extruders (A -L) through VFS : (P = 3.425 ton/hr)

$$\begin{aligned} E &= 4.10 P^{0.67} \\ &= 4.10 (3.425)^{0.67} \\ &= 9.35 \text{ lb./hr} \\ &= 41.0 \text{ tons/year} \end{aligned}$$

Controlled particulate matter (PM) emissions are less than the allowable emissions. So, Raw Material Transfer to Extruders (A -L) through VFS complies with 326 IAC 6-3-2.

(c) Grinders (1 & 2): (P = 0.17 ton/hr)

$$\begin{aligned} E &= 4.10 P^{0.67} \\ &= 4.10 (0.17)^{0.67} \\ &= 1.25 \text{ lb./hr} \\ &= 5.50 \text{ tons/year} \end{aligned}$$

Potential PM emissions are less than the allowable emissions. So, grinders (1 & 2) comply with 326 IAC 6-3-2.

(d) Material Handling to Regrind Silos (RS<sub>1</sub> through RS<sub>6</sub>): (P = 0.17 ton/hr)

$$\begin{aligned} E &= 4.10 P^{0.67} \\ &= 4.10 (0.17)^{0.67} \\ &= 1.25 \text{ lb/hr} \\ &= 5.50 \text{ tons/year} \end{aligned}$$

Potential PM emissions are less than the allowable emissions. So, Material Handling to Regrind Silos (RS<sub>1</sub> through RS<sub>6</sub>) complies with 326 IAC 6-3-2.

(e) PVC Regrind Compound from Regrind Silos to VFS: (P = 0.17 ton/hr)

$$\begin{aligned} E &= 4.10 P^{0.67} \\ &= 4.10 (0.17)^{0.67} \\ &= 1.25 \text{ lb/hr} \\ &= 5.50 \text{ tons/year} \end{aligned}$$

Potential PM emissions are less than the allowable emissions. So, PVC Regrind Compound from Regrind Silos to VFS complies with 326 IAC 6-3-2.

326 IAC 8-1-6 (General Provisions Relating to VOC Rules: General Reduction Requirements for New Facilities)

The extruder identified as A through L is not subject 326 IAC 8-1-6 (General Provisions Relating to VOC Rules: General Reduction Requirements for New Facilities) because the potential VOC emissions from each facility are less than 25 tons per year.

No other article 8 rules apply to this source.

**Air Toxic Emissions**

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

- (a) This new source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Amendments to Clean Air Act.
- (b) See below table for detailed air toxic calculation.

Pollutant	Emission Rate*	
	lb./hour	ton/year
Vinyl Chloride (CAS- 00075014)	0.02	0.09

\* - Emission Rate provided in Form Y4 of Construction Permit Application by Applicant.

**Conclusion**

The construction of this PVC extrusion process will be subject to the conditions of the attached proposed **Construction Permit No. CP-085-9961-00080**.

Royal Crown Limited  
401 East Syracuse Road  
Milford, Indiana 46547

**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 Royal Crown Limited, 401 East Syracuse Road, Milford, Indiana, 46547, has constructed the following:
  - (a) Six (6) natural gas fired unit heaters identified as UH<sub>1-1</sub> through UH<sub>1-6</sub>, each rated at 0.165 million British thermal units per hour (mmBtu/hr);
  - (b) Three (3) natural gas fired unit heaters identified as UH<sub>2-1</sub> through UH<sub>2-3</sub>, each rated at 0.05 million British thermal units per hour (mmBtu/hr);
  - (c) Three (3) natural gas fired unit heaters identified as UH<sub>3-1</sub> through UH<sub>3-3</sub>, each rated at 0.025 million British thermal units per hour (mmBtu/hr);
  - (d) Four (4) natural gas fired make-up air heating units identified as MUA<sub>1-1</sub> through MUA<sub>1-4</sub>, each rated at 2.60 million British thermal units per hour (mmBtu/hr);
  - (e) One (1) Poly Vinyl Chloride (PVC) Compounds loading operation, with a maximum capacity of 6850 pounds per hour to storage silos identified as S<sub>1</sub> to S<sub>6</sub>, particulate matter controlled by their separate bag filters identified as SF<sub>1</sub> through SF<sub>6</sub>;
  - (f) One (1) vacuum feed system identified as VFS, receives PVC compound from regrind storage silos identified as RS<sub>1</sub> through RS<sub>6</sub> and storage silos identified as S<sub>1</sub> to S<sub>6</sub>, with a maximum capacity of 6850 pounds per hour and transfers to the extruder lines identified as A through L;
  - (g) Twelve (12) Extruder Lines identified as A through L, each with a maximum capacity of 571 pounds of PVC compounds per hour;
  - (h) Twelve (12) PVC pipe cutting saws identified as SAW<sub>1</sub> through SAW<sub>12</sub>;
  - (i) Two (2) PVC Grinders identified as # 1 and # 2, with a maximum capacity of 343 pounds scrap plastics per hour, transferring to regrind silos identified as RS<sub>1</sub> through RS<sub>6</sub>, particulate matter (PM) emissions are controlled by a bag filter identified as RSF<sub>1</sub>.in conformity with the requirements and intent of the construction permit application received by the Office of Air Management on July 16, 1998 and as permitted pursuant to **Construction Permit No. CP-085-9961, Plant ID No. 085-00080** issued on \_\_\_\_\_

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)

**Appendix A: Emission Calculations  
Natural Gas Combustion Only  
MM Btu/hr 0.3 - < 10**

**Company Name:** Royal Crown Limited  
**Address City IN Zip:** 401 East Syracuse Road, Milford, Indiana 46547  
**CP:** 085-9961  
**Plt ID:** 085-000080  
**Reviewer:** Manoj P. Patel  
**Date:** 07/29/98

Heat Input Capacity\*  
MMBtu/hr

Potential Throughput  
MMCF/yr

11.615

101.7

Pollutant

	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0	5.5	84.0
Potential Emission in tons/yr	0.4	0.4	0.03	5.1	0.3	4.3

\* - Unit Heaters (UH-1-1 to 1-6, 2-1 to 2-3, 3-1 to 3-3) and Make Up air MUA 1-1 to 1-4).

**Methodology**

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: uncontrolled = 100, Low Nox Burner = 17, Flue gas recirculation = 36

Emission Factors for CO: uncontrolled = 84, Low NOx Burner = 27, Flue gas recirculation = ND

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-03-006-03

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Appendix B: Emission Calculations**

**Company Name: Royal Crown Limited**  
**Address City IN Zip: 401 East Syracuse Road, Milford, Indiana 46547**  
**CP: 085-9961**  
**Plt ID: 085-00080**  
**Reviewer: Manoj P. Patel**  
**Date: 08/05/1998**

Process	SCC	Throughput in ton/hr	Emissions Factor in lb./ton Product			Potential emissions (tons/year)			C.E. for PM	Controlled Emissions in tons / year		PM Allowable Emissions	
			PM	PM10	VOC*	PM	PM10	VOC		PM	PM10	lbs./hr	tons/year
Raw material Unloading to Silos (1 to 6)	30500707	3.43	0.2	0.2	0	3.00	3.00	0.00	0.00%	3.00	3.00	9.35	40.97
Raw Material Transfer to Extruders (A-L) through VFS	30101810	3.43	3	3	0	45.00	45.00	0.00	50.00%	22.50	22.50	9.35	40.97
Extruder (A through L)	-----	3.40	0	0	1	0.00	0.00	14.89	0.00%	0.00	0.00	-----	-----
Grinding Operation (#1 and #2)	30501222	0.17	0.2	0.2	0	0.15	0.15	0.00	0.00%	0.15	0.15	1.25	5.48
Conveying Material to Re grind Storage (RS 1 to 6)	30101811	0.17	0.8	0.8	0	0.60	0.60	0.00	99.00%	0.01	0.00	1.25	5.48
PVC Re grind Storage to Vacuum Feed System (VFS)	30101811	0.2	0.8	0.8	0	0.60	0.60	0.00	50.00%	0.30	0.00	1.25	5.48
										<b>25.96</b>	<b>25.65</b>		

\* - Based on Cast Film Extruder @ 470F, 40% capture from hood (Worst Case Basis).

**Methodology:**

All Emission Factors are taken from similar processes.

Potential Emissions = (E.F. in lb./ton)\* (throughput in ton/hour) \* 4.38

Controlled Emissions = Potential Emissions \* (1-controlled efficiency)

E.F.. for Raw Material Unloading are based on the SCC: 30500707 & 30501222. MSDS for PVC Manufacturer shows that the material will be either in pellets or powder form.

Extruder VOC average E.F.from State of Wisconsin DNR Stack Test Results Summary sent to SPI. dated 12/5/1997.

Grinding Operation E.F. are taken same as Raw material Unloading.

Plastic Storage to Silo, E.F. are based on SCC: 30101811, Plastic Operation.

PM Allowable emissions (lbs./hour) = 4.10 (P)<sup>0.67</sup>, P = Process weight Rate in tons per hour as 326 IAC 6-3 (Process Operations)

PM Allowable Emissions (tons/year) = PM Allowable Emissions in lbs./hr \* 4.38