

**CONSTRUCTION PERMIT
OFFICE OF AIR MANAGEMENT**

**Contech Division, SPX Corporation
5 Arnolt Drive,
Pierceton, IN 46562**

is hereby authorized to construct

two (2) shot blasting systems, consisting of the following equipment:

328 pound/minute shot blasting system with dust collector, and
924 pound/minute shot blasting system with dust collector

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-085-9333-00079	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

Construction Conditions

General Construction Conditions

1. That 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).
2. That 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.

Effective Date of the Permit

3. That pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.
4. That 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.
5. That notwithstanding Construction Condition No. 6, 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).

First Time Operation Permit

6. That 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 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.
 - (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-1-7.1(Fees).
 - (e) Pursuant to 326 IAC 2-1-4, the Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date established in the validation letter. The operation permit issued shall contain as a minimum the conditions in the Operation

Conditions section of this permit.

7. That when the facility is constructed and placed into operation the following operation conditions shall be met:

Operation Conditions

General Operation Conditions

1. That 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).
2. That 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 (IC 13-17) and the rules promulgated thereunder.

Preventive Maintenance Plan

3. That pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), the Permittee shall prepare and maintain a preventive maintenance plan, including the following information:
 - (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.

Transfer of Permit

4. That pursuant to 326 IAC 2-1-6 (Transfer of Permits):
 - (a) In the event that ownership of this aluminum die casting plant 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.

Permit Revocation

5. That 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).

Availability of Permit

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

Malfunction Condition

7. That pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):
- (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]

Annual Emission Reporting

8. That pursuant to 326 IAC 2-6 (Emission Reporting), the Permittee must annually submit an emission statement for the source. This statement must be received by July 1 of each year and

must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Support Section, Office of Air Management
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31.

Opacity Limitations

9. That 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.
10. That pursuant to 326 IAC 2-2 for the 328 pound/minute shot blasting system, the dust collector shall be in operation at all times when the shot blast system is in operation, and shall not exceed the allowable particulate matter (PM) emission rate of 20.5 pounds per hour.
11. That pursuant to 326 IAC 2-2 for the 924 pound/minute shot blasting system, the dust collector shall be in operation at all times when the shot blast system is in operation, and shall not exceed the allowable particulate matter (PM) emission rate of 36.3 pounds per hour.

Dust Collector Operating Condition

12. That the dust collector shall be operated at all times when the shot blast systems are in operation.
 - (a) The Permittee shall take readings of the total static pressure drop across the dust collector, at least once per week. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the dust collector shall be maintained within the range of 0.4 and 6.0 inches of water. The Preventive Maintenance Plan for the dust collector shall contain troubleshooting contingency and corrective actions for the dust collector when the pressure reading is outside of this range for any one reading.
 - (b) The instrument used for determining the pressure shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.
 - (c) The gauge employed to take the pressure drop across the dust collector or any part of the facility shall have a scale such that the expected normal reading shall be no less than 20 percent of full scale and be accurate within $\pm 2\%$ of full scale reading. The instrument shall be quality assured and maintained as specified by the vendor.

- (d) An inspection shall be performed each calendar quarter of the all the dust collector(s). Defective dust collector(s) shall be replaced. A record shall be kept of the results of the inspection and the number of dust collectors replaced.
- (e) In the event that a dust collector's failure has been observed:
 - (i) The affected compartments will be shut down immediately until the failed units have been replaced.
 - (ii) Based upon the findings of the inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

**Indiana Department of Environmental Management
Office of Air Management**

Technical Support Document (TSD) for New Construction and Operation

Source Background and Description

Source Name: Contech Division, SPX Corporation
Source Location: 5 Arnolt Drive, Pierceton, IN 46562
County: Kosciusko
Construction Permit No.: CP-085-9333-00079
SIC Code: 3363
Permit Reviewer: George Kunstek

The Office of Air Management (OAM) has reviewed an application from Contech Division, SPX Corporation relating to the construction and operation of two (2) shot blasting systems, consisting of the following equipment:

- (a) 328 pound/minute shot blasting system with dust collector, and
- (b) 924 pound/minute shot blasting system with dust collector.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
DC-1	Goff Shot Blast	10.17	1.0 x 0.83	2,200	100
DC-2	Hunziker Shot Blast	2.42	0.83	3,200	100

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.

A complete application for the purposes of this review was received on November 7, 1997.

Emissions Calculations

See Appendix A (Emissions Calculation Spreadsheets) for two (2) pages of 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)	249	1320
Particulate Matter (PM10)	249	1320
Sulfur Dioxide (SO ₂)	0.0	0.0
Volatile Organic Compounds (VOC)	0.0	0.0
Carbon Monoxide (CO)	0.0	0.0
Nitrogen Oxides (NO _x)	0.0	0.0
Single Hazardous Air Pollutant (HAP)	0.0	0.0
Combination of HAPs	0.0	0.0

- (a) Allowable emissions are determined from the applicability of rule 326 IAC 6-3. See Appendix A for two (2) pages of detailed calculations.
- (b) The allowable emissions based on the rules cited are less than the potential emissions, therefore, the allowable emissions are used for the permitting determination.
- (c) Allowable emissions (as defined in the Indiana Rule) of particulate matter 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

Kosciusko County has been classified as attainment or unclassifiable for particulate matter (PM). 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

Existing Source PSD, Part 70 or FESOP Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	2.35
PM10	2.35
SO ₂	0.108
VOC	1.02
CO	5.23
NO _x	21.9

This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

Proposed Modification

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO ₂ (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO _x (ton/yr)
Proposed Modification	9.72	9.72	0.00	0.00	0.00	0.00
PSD Threshold Level	250	250	250	250	250	250

This modification to an existing minor stationary source is not major because the emission increase is less than the PSD significant levels. 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 existing source, including the emissions from this permit **CP-085-9333-00079**, is still 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) each 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 status is based on all the air approvals issued to the source. This status has been verified by the OAM inspector assigned to the source.

Federal Rule Applicability

There are no New Source Performance Standards (326 IAC 12) and 40 CFR Part 63 applicable to this facility.

State Rule Applicability

326 IAC 1-6 (Malfunction)

This facility is subject to 326 IAC 1-6 (Malfunction), because this is required for all facilities obtaining a permit under 326 IAC 2-1-2 and 326 IAC 2-1-4.

326 IAC 2-6 (Emission Reporting)

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source has the potential to emit more than 100 tons/yr of PM. Pursuant to this rule, the owner/operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 5-1-2 (Opacity Limitations)

This facility is subject to 326 IAC 5-1-2, because Kosciusko County is classified as attainment for Total Suspended Particulates (TSP).

326 IAC 2-2 {Prevention of Significant Deterioration (PSD)}

That pursuant to 326 IAC 2-2 (PSD), the dust collectors shall be in operation at all times when the shot blasting systems are in operation, and shall not exceed the adjusted allowable particulate matter (PM) emission rates of 20.5 pounds per hour for the Goff unit and 36.3 pounds per hour for the Hunziker unit. The adjustment was performed to reduce the limits below PSD levels of 250 ton PM per year. These emission rates will also meet 326 IAC 6-3.

The processes used are in compliance with this requirement. See Appendix A for two (2) pages of calculations.

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.

There are no air toxic emissions from this facility.

Conclusion

The construction of these two (2) shot blasting systems will be subject to the conditions of the attached proposed **Construction Permit No. CP-085-9333-00079**.

APPENDIX A

**Indiana Department of Environmental Management
Office of Air Management**

CALCULATIONS

Source Information

Source Name: Contech Division, SPX Corporation
 Source Location: 5 Arnolt Drive, Pierceton, IN 46562
 County: Kosciusko
 Operation Permit No.: CP-085-9333-00079
 SIC Code: 3363

Two (2) Shot Blasting Systems**Actual Emission Particulate Matter (PM)**

Goff unit

$$\frac{(78.72 \text{ lb PM})}{(\text{ hr })} (0.00001) = \frac{0.000787 \text{ lb PM}}{\text{ hr}} - \frac{(0.000787 \text{ lb PM})(8760 \text{ hr})(\text{ ton })}{(\text{ hr })(\text{ yr })(2000 \text{ lb})} = \frac{(0.00345 \text{ ton PM})}{\text{ yr}}$$

Hunzinger unit

$$\frac{(221.76 \text{ lb PM})}{(\text{ hr })} (0.00001) = \frac{2.22 \text{ lb PM}}{\text{ hr}} - \frac{(2.22 \text{ lb PM})(8760 \text{ hr})(\text{ ton })}{(\text{ hr })(\text{ yr })(2000 \text{ lb})} = \frac{(9.72 \text{ ton PM})}{\text{ yr}}$$

Potential to Emit (PTE) Particulate Matter (PM)

Goff unit

$$X(0.00001) = \frac{0.000787 \text{ lb PM}}{\text{ hr}} - X = \frac{(0.000787 \text{ lb PM})(\text{ 1 })}{(\text{ hr })(0.00001)} = \frac{78.7 \text{ lb PM}}{\text{ hr}}$$

$$- \frac{(78.7 \text{ lb PM})(8760 \text{ hr})(\text{ ton })}{(\text{ hr })(\text{ yr })(2000 \text{ lb})} = \frac{(345 \text{ ton PM})}{\text{ yr}}$$

Hunzinger unit

$$X(0.01) = \frac{2.22 \text{ lb PM}}{\text{ hr}} - X = \frac{(2.22 \text{ lb PM})(\text{ 1 })}{(\text{ hr })(0.01)} = \frac{222 \text{ lb PM}}{\text{ hr}}$$

$$- \frac{(222 \text{ lb PM})(8760 \text{ hr})(\text{ ton })}{(\text{ hr })(\text{ yr })(2000 \text{ lb})} = \frac{(972 \text{ ton PM})}{\text{ yr}}$$

Allowable Particulate Matter (PM)

Calculations (continued)

326 IAC 6-3 (Process Operations: Particulate Emissions Limitations)

Through put = P = Process Weight Rate (PWR) - E = Allowable Particulate Matter (PM) Emissions

$$\frac{(328 \text{ lb})(60 \text{ min})}{(\text{min})(\text{hr})} = \frac{(19,680 \text{ lb})(\text{ton})}{(\text{hr})(2000 \text{ lb})} = \frac{9.84 \text{ ton shot}}{\text{hr}}$$

$$\frac{(55,440 \text{ lb})(\text{hr})}{(\text{hr})(60 \text{ min})} = \frac{924 \text{ lb}}{\text{min}} - \frac{(55,440 \text{ lb})(\text{ton})}{(\text{hr})(2000 \text{ lb})} = \frac{27.7 \text{ ton shot}}{\text{hr}}$$

Aluminum other

$$\frac{[(3000 + 4500 + 6.25 + 42.19 + 131.4) \text{ lb}](\text{ton})}{(\text{hr})(2000 \text{ lb})} = \frac{3.8 \text{ ton}}{\text{hr}}$$

$$P_1 = (9.84 + 3.8) \text{ ton/hr} = 13.6 \text{ ton/hr}$$

$$P_2 = (27.7 + 3.8) \text{ ton/hr} = 31.5 \text{ ton/hr}$$

$$E_1 = 4.10(P)^{0.67} = 4.10 (13.6)^{0.67} = \frac{23.6 \text{ lb PM}}{\text{hr}} - \frac{(23.6 \text{ lb PM})(8760 \text{ hr})(\text{ton})}{(\text{hr})(\text{yr})(2000 \text{ lb})} = \frac{103 \text{ ton PM}}{\text{yr}}$$

$$E_2 = 4.10(P)^{0.67} = 4.10 (31.5)^{0.67} = \frac{41.4 \text{ lb PM}}{\text{hr}} - \frac{(41.4 \text{ lb PM})(8760 \text{ hr})(\text{ton})}{(\text{hr})(\text{yr})(2000 \text{ lb})} = \frac{181 \text{ ton PM}}{\text{yr}}$$

$$(103 + 181) \text{ ton PM/yr} = 283 \text{ ton PM/yr}$$

326 IAC 2-2 (Prevention of Significant Deterioration)

$$283 \text{ ton PM/yr} > 250 \text{ ton PM/yr} \quad \text{C} \quad (103)(250/283) \text{ ton PM/yr} = 91.0 \text{ ton PM/yr}$$

$$91.0 \text{ ton PM/yr} \quad \text{U} \quad 90.0 \text{ ton PM/yr}$$

$$(181)(250/283) \text{ ton PM/yr} = 160 \text{ ton PM/yr} \quad \text{U} \quad 159.0 \text{ ton PM/yr} - (90.0 + 159.0) \text{ ton PM/yr} = 249 \text{ ton PM/yr}$$

$$\frac{(90.0 \text{ ton PM})(\text{yr})(2000 \text{ lb})}{(\text{yr})(8760 \text{ hr})(\text{ton})} = \frac{20.5 \text{ lb PM}}{\text{hr}}$$

$$\frac{(159.0 \text{ ton PM})(\text{yr})(2000 \text{ lb})}{(\text{yr})(8760 \text{ hr})(\text{ton})} = \frac{36.3 \text{ lb PM}}{\text{hr}}$$

Since PSD < PWR emissions, therefore PSD are chosen as allowable emission limits.

Emission Summary

(lb/hr)

Calculations (continued)

Total	SO ₂	NOx	CO	PM	VOC
Actual	0.00	0.00	0.00	2.22	0.00
PTE	0.00	0.00	0.00	301	0.00
Allowable	0.00	0.00	0.00	56.8	0.00

(ton/yr)

Total	SO ₂	NOx	CO	PM	VOC
Actual	0.00	0.00	0.00	9.72	0.00
PTE	0.00	0.00	0.00	1320	0.00
Allowable	0.00	0.00	0.00	249	0.00