

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT - RENEWAL

PERMITTEE

Alco Spring Industries, Inc.
Attn: Mr. Gordon Sharkey, Production Manager
2300 Euclid Avenue
Post Office Box 188
Chicago Heights, Illinois 60411

Application No.: 74080185 I.D. No.: 031045ABP
Applicant's Designation: Date Received: October 17, 2005
Subject: Hot Wound Steel Spring Manufacturing
Date Issued: Expiration Date:
Location: 2300 Euclid Avenue, Chicago Heights

This permit is hereby granted to the above-designated Permittee to OPERATE emission source(s) and/or air pollution control equipment consisting of two Unit Quenches controlled by Smog Hog ESP's, one Atlas Quench controlled by a Smog Hog ESP, a Spring Dip Painting Operation, 14 natural gas-fired furnaces, one natural gas-fired boiler, and an extension arm for the East smog-hog on the unit quench pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued:
 - i. To limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for VOM). As a result, the source is excluded from the requirements to obtain a Clean Air Act Permit Program permit. The maximum emissions of this source, as limited by the conditions of this permit are described in Attachment A.
 - ii. To limit VOM to less than 25 tons/year, therefore the source is not subject to 35 Ill. Adm. Code Part 205 Emission Reduction Market System (ERMS).
 - b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
 - c. This permit supersedes all operating permit(s) for this location.
2. Emissions and operation of the quenches shall not exceed the following limits:

<u>Item of Equipment</u>	<u>Quench Oil Usage</u>		<u>PM Emissions</u>		<u>VOM Emissions</u>	
	<u>(Qts/Hr)</u>	<u>(Gal/Yr)</u>	<u>(Lbs/Hr)</u>	<u>(Tons/Yr)</u>	<u>(Lbs/Hr)</u>	<u>(Tons/Yr)</u>
Unit Quench #1	2.0	1,500	4.6	6.9	2.1	3.1
Unit Quench #2	2.0	1,500	4.6	6.9	2.0	3.0
Atlas Quench	2.0	<u>1,500</u>	4.6	<u>6.9</u>	2.1	<u>3.1</u>
Totals		<u>4,500</u>		<u>20.7</u>		<u>9.2</u>

These limits are based on the maximum quench oil usage, a maximum of 50% by weight of VOM in the quench oil, a density of 8.2 lbs/gallon for the quench oil, and 3,000 hours per year of operation. The particulate matter emission limits are based on the maximum allowable from 35 Ill. Adm. Code 212.321 determined from the maximum amount of steel springs quenched per hour (6,000 lbs/hr) and 3,000 hours per year of operation. Compliance with annual limits shall be determined on a running total of 12 months of data.

3. Emissions and operation of the Spring Dip Painting Operation shall not exceed the following limits:

Coating Usage		VOM Content	VOM Emissions	
(Gals/Mo)	(Gals/Yr)	(Lbs VOM/Gal)	(Tons/Mo)	(Tons/Yr)
834	5,000	3.5	1.5	8.8

These limits are based on compliance with 35 Ill. Adm. Code 218.204(j), the maximum coating usage, the maximum VOM content of the coatings, and the VOM content of all thinners and clean-up solvents. Compliance with annual limits shall be determined on a running total of 12 months of data.

4. Operation and emissions of the 14 natural gas furnaces and the natural gas-fired boiler shall not exceed the following limits:

Natural Gas Usage		Pollutant	Emission Factor	Emissions	
(mmscf/Mo)	(mmscf/Yr)		(Lbs/mmft ³)	(Tons/Mo)	(Tons/Yr)
106	632	NO _x	100	5.3	31.6
		CO	84	4.5	26.8
		VOM	5.5	0.3	1.8
		SO ₂	0.6	0.1	0.2
		PM	7.6	0.4	2.4
			Total	10.6	62.8

These limits are based on the maximum combined firing rate of all natural gas-fired emission units (72,085,000 Btu/hour), a heat content of 1,000 Btu/scf for natural gas, 8,760 hours per year of operation, and standard emission factors. Compliance with annual limits shall be determined on a running total of 12 months of data.

5. The Smog Hog ESP's shall be equipped with a continuous temperature indicator and strip chart recorder or disk storage to record the inlet gas temperature. The Permittee shall retain all records of equipment operation and strip charts or disk storage for at least one year from the date of occurrence. These records shall be available for inspection by the Illinois EPA and the USEPA.
- 6a. Within 90 days of a written request from the Illinois EPA, pursuant to 35 Ill. Adm. Code 201.282, the emissions of the quench tanks with Smog Hog ESP's shall be measured by an approved testing service, during conditions which are representative of the maximum performance. The

Illinois EPA may provide additional time for the performance of this testing upon request from the Permittee which shows that it is not feasible to perform representative testing within 90 days.

- b. i. The following methods and procedures shall be used for testing of emissions. Refer to 40 CFR 60, Appendix A for USEPA test methods.

Location of Sample Points	USEPA Method 1
Gas Flow and Velocity	USEPA Method 2
Flue Gas Weight	USEPA Method 3
Moisture	USEPA Method 4
Volatile Organic Material	USEPA Method 25

- ii. A test shall consist of three separate runs each at least 60 minutes in duration. Compliance shall be determined from the average of the runs provided that the Illinois EPA may accept the arithmetic mean of the two runs in circumstances described in 40 CFR 60.8(f).
- c. Testing shall be performed by a qualified independent testing service.
- d. At least 30 days prior to the actual date of testing a written test plan shall be submitted to the Illinois EPA for review and approval. A copy shall also be submitted to the USEPA. The plan shall describe the specific procedures for testing, including:
 - i. The person(s) who will be performing sampling and analysis and their experience with similar tests.
 - ii. The conditions under which testing will be performed, including a discussion of why these conditions will be representative of the maximum operating rate, the levels of operating parameters at or within which compliance is intended to be shown, if applicable, and the means by which the operating parameters for the processes and any control equipment will be determined.
- e. The Illinois EPA shall be notified prior to these tests to enable the Illinois EPA to observe these tests. Notification for the expected date of testing shall be submitted a minimum of thirty (30) days prior to the expected date. Notification of the actual date and expected time of testing shall be submitted a minimum of five (5) working days prior to the actual date of the tests. The Illinois EPA may, at its discretion, accept notification with shorter advance notice provided that the Illinois EPA will not accept such notifications if it interferes with the Illinois EPA's ability to observe testing.
- 7a. Within 90 days of a written request from the Illinois EPA, tests shall be performed which will allow evaluation of the representative coatings "as applied" in order to determine compliance with 35 Ill. Adm. Code 218.105(a) and the requirements of Condition 2(b).

- b. These tests shall be performed by an approved independent laboratory by the applicable coating analysis test methods and procedures specified in 35 Ill. Adm. Code 218.105.
- c. The submitted data shall include the following:
 - i. The VOM content of the representative coatings (minus water and exempt compounds) "as applied" (pounds per gallon);
 - ii. A justification why the coatings are representative;
 - iii. A description of the sampling procedures; and
 - iv. Documentation for the analysis.
- 8. The Permittee shall maintain monthly records of the following items:
 - a. The usage, VOM content, and HAPs content of quench oil (gallons/month) (gallons/year) (lbs/gallon) (lbs/gallon);
 - b. The usage, VOM content, and HAPs content of all coatings, thinners, and clean-up solvents (gallons/month) (gallons/year) (lbs/gallon) (lbs/gallon); and
 - c. Natural gas usage (mmscf/month) (mmscf/year).
- 9. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least three years from the date of entry and shall be made available for inspection and copying by the Illinois EPA and USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to an Illinois EPA request for records during the course of a source inspection.
- 10. If there is an exceedance of the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedances or violation and efforts to reduce emissions and future occurrences.
- 11. All required reports shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and

Illinois Environmental Protection Agency
Division of Air Pollution Control - Regional Office
9511 West Harrison
Des Plaines, Illinois 60016

- 12a. The Final Report(s) for all tests shall be submitted within 180 days after the date of the test. The Final Report shall include as a minimum:
- i. General information describing the test, including the name and identification of the emission source which was tested, date of test, name of personnel performing the tests, and Illinois EPA observers, if any;
 - ii. A summary of results;
 - iii. Description of test procedures, including description of sampling points, test equipment, and test schedule;
 - iv. Detailed description of test conditions, including:
 - A. Process information, i.e., process rate, aggregate type, fuel type, and firing rate.
 - B. Control equipment information, i.e., equipment condition and operating parameters during testing.
 - v. Data and calculations, including copies of all raw data sheets and records of laboratory analyses, sample calculations, and data on equipment calibration.
- b. Submittals of information shall be made as follows:
- i. Notices of Test - one copy to the Compliance Unit and one copy to the Regional Office.
 - ii. Final Report - one copy to the Compliance Unit, one copy to the Regional Office, and one copy to the Permit Section.

Illinois Environmental Protection Agency
Division of Air Pollution Control - Regional Office
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13. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act shall be less than 10 tons/year of any single HAP and 25 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of all HAPs from this source not triggering the requirements to obtain a Clean Air Act Permit Program Permit (CAAPP), and Section 112(G) of the Clean Air Act.

It should be noted that the grinders, saws, lathes, and other machining equipment are exempt from state permit requirements, pursuant to 35 Ill. Adm. Code 201.146(aa).

If you have any questions on this permit, please call Dwayne Booker at 217/782-2113.

Sincerely,

Donald E. Sutton, P. E.
Manager, Permit Section
Division of Air Pollution Control

DES:DLB:psj

cc: Illinois EPA, FOS Region 1
Lotus Notes

Attachment A

This attachment provides a summary of the maximum emission from hot wound steel spring manufacturing plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from the plant. The resulting maximum emissions are below the levels, e.g., 100 tons per year of VOM at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that material is handled, will be less than the permitted levels and control measures are more effective than required in this permit.

<u>Emissions Units</u>	<u>Emissions (Tons/Yr)</u>				
	<u>NO_x</u>	<u>CO</u>	<u>SO₂</u>	<u>VOM</u>	<u>PM</u>
Units Quench #1	---	---	---	3.1	6.9
Units Quench #2	---	---	---	3.0	6.9
Atlas Quench	---	---	---	3.1	6.9
Spring Dip Painting Operation	---	---	---	8.8	---
14 Natural Gas Furnaces/Boiler	<u>31.6</u>	<u>26.8</u>	<u>0.2</u>	<u>1.8</u>	<u>2.4</u>
Total:	<u>31.6</u>	<u>26.8</u>	<u>0.2</u>	<u>19.8</u>	<u>23.1</u>

DES:DLB:psj