STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

1410 North Hilton • Boise, Idaho 83706-1255 • (208) 373-0502

Dirk Kempthorne, Governor
C. Stephen Allred, Director

September 23, 2003

CERTIFIED MAIL No. 7000 1670 0013 9129 4855

Mr. Dan Duffin
President
The Sprinkler Shop, Inc.
375 West 110
Paul, ID 83347

RE: AIRS Facility No. 067-00020, The Sprinkler Shop, Inc., Paul
Final Permit Letter

Dear Mr. Duffin:

On April 2, 2003, the Department of Environmental Quality (DEQ) received a permit to construct (PTC) application from The Sprinkler Shop, Inc. to construct a hot-dip galvanizing process. Based on review of the permit application and on state and federal rules and regulations, DEQ finds this project meets the provisions of IDAPA 58.01.01.200 through 228 *Rules for the Control of Air Pollution in Idaho*. Enclosed is PTC No. P-030408 for the hot-dip galvanizing process.

In accordance with IDAPA 58.01.01.224, a PTC application fee of $1,000 is required to be submitted with the original permit application. The Sprinkler Shop, Inc. submitted the required application fee March 31, 2003. Permit to Construct processing fees are required by IDAPA 58.01.01.225. This facility's potential to emit is limited to 1.3 tons per year, which corresponds to a PTC processing fee of $2,500. The Sprinkler Shop, Inc. submitted the required processing fee September 16, 2003.

This permit does not release The Sprinkler Shop, Inc. from compliance with all other applicable federal, state, or local laws, regulations, permits, or ordinances. Please refer to the appropriate permit number when submitting reports required in the Reporting Requirements section of the permit.

Stephen VanZandt of the Twin Falls Regional Office will contact you regarding a meeting with the DEQ to discuss the permit terms and requirements. In addition to your facility's plant manager, the DEQ recommends the following representatives attend the meeting: your responsible official, environmental contact, and any operations staff responsible for day-to-day compliance with the permit conditions.

Pursuant to IDAPA 58.01.23, you, as well as any other entity, may have the right to appeal this final agency action within 35 days of the date of this decision. However, prior to filing a petition for a contested case, I encourage you to call Bill Rogers at (208) 373-0502 to address any questions or concerns you may have with the enclosed permit.

If you have any questions about the enclosed permit or the permitting process, please contact Bill Rogers at (208) 373-0502 or wrogers@deq.state.id.us.

Sincerely,

Martin Bauer

Martin Bauer, Administrator
Air Quality Division

MB/BR/sm
Enclosure

Permit No. P-030408

cc: Steve VanZandt, Twin Falls Regional Office
Bill Rogers, Permit Coordinator
Marilyn Seymore, (PF)
Sherry Davis, AQ Division/SF
Laurie Kral, EPA Region 10
Phyllis Heitman, (Ltr Only)
Reading File (Ltr Only)

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	Air Quality **PERMIT TO CONSTRUCT** **State of Idaho** **Department of Environmental Quality**	**PERMIT NO.:** P-030408 **AIRS FACILITY NO.:** 067-00020 **AQCR:** 63 **CLASS:** B **SIC:** 3523 **ZONE:** 12 **UTM COORDINATE (km):** 275.4 , 4720.3

1. **PERMITTEE** The Sprinkler Shop			
2. **PROJECT** Hot-Dip Zinc Galvanizing Process			
3. **MAILING ADDRESS** P.O. Box 599	**CITY** Rupert	**STATE** ID	**ZIP** 83347
4. **FACILITY CONTACT** Dan Duffin	**TITLE** President	**TELEPHONE** 208-438-5204	
5. **RESPONSIBLE OFFICIAL** Dan Duffin	**TITLE** President	**TELEPHONE** 208-438-5204	
6. **EXACT PLANT LOCATION** 375 West 110, Paul, Idaho		**COUNTY** Minidoka	
7. **GENERAL NATURE OF BUSINESS & KINDS OF PRODUCTS** Manufacture of agricultural product hardware / Agricultural equipment			

8. **GENERAL CONDITIONS**

This permit is issued according to IDAPA 58.01.01.200, *Rules for the Control of Air Pollution in Idaho*, and pertains only to emissions of air contaminants regulated by the state of Idaho and to the sources specifically allowed to be constructed or modified by this permit.

This permit (a) does not affect the title of the premises upon which the equipment is to be located; (b) does not release the permittee from any liability for any loss due to damage to person or property caused by, resulting from, or arising out of the design, installation, maintenance, or operation of the proposed equipment; (c) does not release the permittee from compliance with other applicable federal, state, tribal, or local laws, regulations, or ordinances; (d) in no manner implies or suggests that the Department of Environmental Quality (DEQ)or its officers, agents, or employees, assume any liability, directly or indirectly, for any loss due to damage to person or property caused by, resulting from, or arising out of design, installation, maintenance, or operation of the proposed equipment.

This permit is not transferable to another person, place, or piece or set of equipment. This permit will expire if construction has not begun within two years of its issue date or if construction is suspended for one year.

This permit has been granted on the basis of design information presented with its application. Changes of design or equipment may require DEQ approval pursuant to the *Rules for the Control of Air Pollution in Idaho,* IDAPA 58.01.01.200, et seq.

C. STEPHEN ALLRED, DIRECTOR
DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE ISSUED: September 23, 2003

Acronyms, Units, and Chemical Nomenclature

AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
CO	carbon monoxide
°F	degrees Fahrenheit
DEQ	Department of Environmental Quality
HAPs	hazardous air pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
km	kilometer
lb/day	pounds per day
lb/yr	pounds per year
MMBtu	million British thermal units
MMBtu/hr	million British thermal units per hour
NO_X	nitrogen oxides
PM	particulate matter
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PTC	permit to construct
SIC	Standard Industrial Classification
SO_2	sulfur dioxide
TAPs	toxic air pollutants
T/yr	tons per year
UTM	Universal Transverse Mercator
VOC	volatile organic compound

1. PERMIT TO CONSTRUCT SCOPE

Purpose

- This PTC is the facility's initial air quality permit.

Regulated Sources

- Table 1.1 lists all sources of regulated emissions in this PTC.

Table 1.1 REGULATED EMISSIONS SOURCES

Permit Section	Source Description	Emissions Control(s)
2	Hot-dip zinc galvanizing process	Fumehood over zinc kettle for fugitive emissions control.

2. HOT-DIP ZINC GALVANIZING PLANT

2.1 Process Description

The primary purpose of the zinc galvanizing process is to treat raw steel pieces for corrosion resistance for use in agricultural applications. The raw steel pieces are prepared for treatment by chemical and mechanical washing, soaking in a hot alkali solution, followed by water rinsing. Next, the pieces undergo acid pickling in a 15% solution of hydrochloric acid, and are dipped in a fluxing agent of ammonium chloride solution to wet the pieces for zinc treatment. The steel pieces are then dipped into a molten zinc bath at approximately 840°F. After water quenching, the final product is air-cooled and the material surface is chemically treated to reduce oxidation. The product is either stored or used in the end-use manufacturing process.

2.2 Emissions Control Description

Emissions from the zinc galvanizing process are not controlled by add-on emissions reduction equipment. However, fugitive emissions from the zinc kettle are collected in a fume hood, which almost encloses the entire zinc kettle, and exhausts air pollutant emissions from the process to the atmosphere through a stack that is approximately 35 feet in elevation. The fumehood and stack system control fugitive process emissions by collecting them and emitting them as a point source.

The zinc kettle is heated to a temperature of 840°F by a 1.2 MMBtu/hr natural gas-fired furnace. Pollutants from the furnace are emitted from a dedicated furnace stack and are not controlled by any add-on emission control equipment.

Table 2.1 ZINC KETTLE

Emissions Unit(s) / Process(es)	Emissions Control Device	Emissions Point
Zinc kettle	Fume hood – fugitive process emissions control only	Zinc kettle stack

Emissions Limits

2.3 Emissions Limits

- The PM_{10} emissions from the zinc kettle stack shall not exceed 7.2 lb/day.
- The PM_{10} emissions from the zinc kettle stack shall not exceed 1.3 tons per any consecutive 12-month period (T/yr).

2.4 Opacity Limit

Emissions from the zinc kettle stack, or any other stack, vent, or other functionally equivalent opening associated with the zinc galvanizing process, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

Operating Requirements

2.5 Throughput Limits

- The maximum daily throughput of zinc added to the zinc kettle shall not exceed 1,728 lb/day.
- The maximum annual throughput of zinc added to the zinc kettle shall not exceed 630,720 lb/yr.

2.6 Reasonable Control of Fugitive Emissions

All reasonable precautions shall be taken to prevent PM from becoming airborne as required in IDAPA 58.01.01.651. In determining what is reasonable, considerations will be given to factors such as the proximity of dust-emitting operations to human habitations and/or activities and atmospheric conditions that might affect the movement of PM. Some of the reasonable precautions include, but are not limited to, the following:

- Use, where practical, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of lands.
- Application, where practical, of asphalt, oil, water or suitable chemicals to, or covering of dirt roads, material stockpiles, and other surfaces which can create dust.
- Installation and use, where practical, of hoods, fans and fabric filters or equivalent systems to enclose and vent the handling of dusty materials. Adequate containment methods should be employed during sandblasting or other operations.
- Covering, where practical, of open-bodied trucks transporting materials likely to give rise to airborne dusts.
- Paving of roadways and their maintenance in a clean condition, where practical.
- Prompt removal of earth or other stored material from streets, where practical.

2.7 Air Pollution Emergency Rules

The permittee shall comply with IDAPA 58.01.01.550-562, *Air Pollution Emergency Rule.*

Monitoring and Recordkeeping Requirements

2.8 Monitor Operating Parameters

The permittee shall monitor and record the following information, when operating, to demonstrate compliance with Permit Condition 2.5. These records shall remain onsite for the most recent two-year period and shall be made available to DEQ representatives upon request.

- The amount of zinc added to the zinc kettle once per day, expressed in units of pounds per day (lb/day).
- The amount of zinc added to the zinc kettle annually, expressed in units of pounds per year (lb/yr). The annual amount of zinc added to the zinc kettle shall be determined by summing the daily zinc throughputs monthly, expressed as pounds per month (lb/month), and then summing the monthly zinc throughputs over the previous consecutive 12-month period, converted to, and expressed as, pounds per year (lb/yr).

2.9 Opacity Monitoring

The permittee shall conduct a quarterly facility-wide inspection of potential sources of visible emissions, during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for each potential source. If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in accordance with IDAPA 58.01.01.130-136. The permittee shall maintain records of the results of each quarterly visible emissions inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

2.10 Fugitive Dust Monitoring

The permittee shall conduct a quarterly facility-wide inspection of potential sources of fugitive emissions during daylight hours and under normal operating conditions to ensure that the methods used to reasonably control fugitive emissions are effective. If fugitive emissions are not being reasonably controlled, the permittee shall take corrective action as expeditiously as practicable. The permittee shall maintain records of the results of each quarterly fugitive emission inspection. The records shall include, at a minimum, the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time fugitive emissions were present (if observed), any corrective action taken in response to the fugitive emissions, and the date the corrective action was taken.

3. SUMMARY OF EMISSIONS LIMITS

Table 3.1 provides a summary of all emissions limits required by this permit:

Table 3.1 SUMMARY OF EMISSIONS LIMITS

The Sprinkler Shop, Paul, Idaho Emissions Limits[a] - Daily (lb/day) and Annual[b] (T/yr)		
Source Description	**PM_{10}[c]**	
	lb/day	**T/yr**
Zinc kettle stack	7.2	1.3

[a] As determined by a pollutant-specific EPA reference method, DEQ-approved alternative, or as determined by DEQ's emissions estimation methods used in this permit analysis.

[b] As determined by multiplying the actual or allowable (if actual is not available) pound-per-day emissions rate by the allowable days per year that the process(es) may operate(s), or by actual annual production rates. The permittee shall not exceed the T/yr listed based on any consecutive 12-month period.

[c] Includes condensibles.

4. EMISSIONS INVENTORY

The following table is a summary of the emissions increases and decreases associated with this new permit. The emissions inventory table is provided for informational purposes only.

Table 4.1 EMISSIONS INVENTORY

Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Decrease (T/yr)	Change in Annual Emissions (T/yr)
NO_X	0.50	NA	0.50
SO_2	0.003	NA	0.003
CO	0.42	NA	0.42
PM/PM_{10}	1.34	NA	1.34
VOC	0.028	NA	0.028
TAPS/ HAPS	1.25	NA	1.25
Total:	3.54	NA	3.54

NA = Not applicable

5. PERMIT TO CONSTRUCT GENERAL PROVISIONS

1. The permittee has a continuing duty to comply with all terms and conditions of this permit. All emissions authorized herein shall be consistent with the terms and conditions of this permit and the *Rules for the Control of Air Pollution in Idaho*. The emissions of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit and the *Rules for the Control of Air Pollution in Idaho*, and the Environmental Protection and Health Act, Idaho Code §39-101, et seq., and the permittee is subject to penalties for each day of noncompliance.

2. The permittee shall at all times (except as provided in the *Rules for the Control of Air Pollution in Idaho*) maintain in good working order and operate as efficiently as practicable, all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable Idaho laws for the control of air pollution.

3. The permittee shall allow the Director, and/or the authorized representative(s), upon the presentation of credentials:

   - To enter, at reasonable times, upon the premises where an emissions source is located, or in which any records are required to be kept under the terms and conditions of this permit.
   - At reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit, to inspect any monitoring methods required in this permit, and require stack compliance testing in conformance with IDAPA 58.01.01.157 when deemed appropriate by the Director.

4. Nothing in this permit is intended to relieve or exempt the permittee from compliance with any applicable federal, state, or local law or regulation, except as specifically provided herein.

5. The permittee shall notify DEQ, in writing, of the required information for the following events within five working days after occurrence:

   - Initiation of Construction - Date
   - Completion/Cessation of Construction - Date
   - Actual Production Startup - Date
   - Initial Date of Achieving Maximum Production Rate - Production Rate and Date

6. If compliance testing is specified, the permittee must schedule and perform such testing within 60 days after achieving the maximum production rate, and not later than 180 days after initial startup. This requirement shall be construed as an ongoing requirement. The permittee shall not operate the source without testing within 180 days. If testing is not conducted within 180 days after initial startup, then each day of operation thereafter without the required compliance test constitutes a violation. Such testing must **strictly** adhere to the procedures outlined in IDAPA 58.01.01.157 and shall not be conducted on weekends or state holidays without prior written approval from DEQ. Testing procedures and specific time limitations may be modified by DEQ by prior negotiation if conditions warrant adjustment. DEQ shall be notified at least 15 days prior to the scheduled compliance test. Any records or data generated as a result of such compliance test shall be made available to DEQ upon request.

7. The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

8. In accordance with IDAPA 58.01.01.123, all documents submitted to DEQ, including, but not limited to, records, monitoring data, supporting information, requests for confidential treatment, testing reports, or compliance certification shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete.