

Lane Regional Air Protection Agency  
Minimal Source Air Contaminant Discharge Permit

**REVIEW REPORT**

**Gheen Irrigation Works, Inc.**

**Permit No. 203109**

**PERMITTING**

**Permitting Action**

1. The permit is a renewal for an existing Air Contaminant Discharge Permit (ACDP) which was issued on January 1, 2003, and scheduled to expire on December 31, 2007. No changes have been made to the permit since the last renewal.

**Other Permits**

2. No other permits have been issued or are required by LRAPA for this facility.

**Attainment Status**

3. The facility is located in an attainment area for all pollutants except PM<sub>10</sub> (particulate matter less than 10 microns in size). The Eugene/ Springfield Air Quality Management Area is a non-attainment area for PM<sub>10</sub>.

**SOURCE DESCRIPTION**

**Overview**

4. The facility is a galvanizing operation located at 1248 Willagillespie in Eugene. The facility was issued its first ACDP on January 1, 1983. In 2002, the facility produced approximately 1.2 million irrigation pieces. Pollutants are emitted from:
  - 2 zinc dip tanks;
  - 1 baghouse which controls emissions from an epoxy process; and
  - 1 gas-fired oven.

Emissions from the facility are estimated to be less than 5 tons per year for particulate matter (PM) and less than 10 tons per year for all gaseous pollutants. The operating schedule for the facility is 2,210 hours per year (8.5 hours per day, 5 days per week and 52 weeks per year).

5. Since the last permit renewal, the Chemlok coating operation has been discontinued and is no longer a permitted source of emissions at the facility. During the February 5, 2008 renewal inspection it was noted that one of the zinc dip tanks was not in operation as the building in which the tank was located was partially destroyed in 2007 fire. The facility also indicates that the diesel-fired boiler was destroyed in the 2007 fire and, therefore, the diesel-fired boiler is no longer a permitted source of emissions at the facility.

**Process and Control Devices**

6. Existing air contaminant sources at the facility consist of the following:
  - a. Natural gas-fired oven without emission controls, installed in 1972;
  - b. 1 baghouse which exhausts directly to the atmosphere, handling epoxy

- powder coating dust emissions; and
- c. 2 zinc hot dip tanks.

## **EMISSIONS**

7. The pollutants of concern associated with this facility type are zinc, epoxy dust, and emissions from natural and diesel gas combustion. Emissions of the above pollutants are expected to be minimal. Thorough research was conducted to estimate the emissions for the facility but no emission factors were available. Other estimation methods, including material balance, were considered but the information necessary to do this type of analysis was unattainable. The Attachment to this Review Report contains emissions estimates for the facility=s natural gas combustion calculations.

### **Baseline Emission Rate**

8. The Baseline Emission Rate (BER) has been set at 0 TPY for PM, PM<sub>10</sub>, VOC, NO<sub>x</sub>, SO<sub>x</sub>, CO, and Pb. The facility did exist in 1978 but no emissions estimates are available from that time. Because the facility was designated as minimal during the baseline year and since it is minimal now, the BER has been set at zero (0) for all criteria pollutants.

## **MINIMAL PERMIT DETERMINATION**

9. The Agency has determined that the facility qualifies as minimal for the following reasons:
- a. Emissions from this facility are estimated to be less than 5 tons per year of particulate matter and less than 10 tons per year for the criteria gaseous pollutants.
  - b. The facility was inspected on February 5, 2008, and found to be in compliance with permit conditions.

## **SPECIAL CONDITIONS**

10. There are no special conditions specified in the permit.

## **NESHAPS/MACT APPLICABILITY**

11. There are no sources at this facility for which NESHAPS/MACT standards have been promulgated.

## **NSPS APPLICABILITY**

12. There are no sources at this facility for which NSPS standards have been promulgated.

## **PUBLIC NOTICE**

**Renewal**

13. The draft permit will be on public notice from August 25, 2008 to September 23, 2008. Written comments may be submitted during the 30-day comment period. If requested by ten (10) or more individuals or an individual representing a group of more than ten (10) individuals, there will be a public hearing following the comment period.

After the comment period and hearing (if requested), LRAPA will respond to comments received and then take final action to issue or deny the permit within 45 days of the close of the public comment or hearing period.

Max  
7/25/08/rcf 10/07/08

**Facility: Gheen Irrigation Works**  
**Type: Irrigation Fittings Manufacturer**  
**Permit # 203109**

<u>Chemical</u>	<u>Pollutant</u>	<u>Factor</u>	<u>Amount Used Gal/year(*)</u>	<u>Amount Present in Compound gallons(*lbs)</u>	<u>units</u>	<u>Emissions Factor</u>	<u>Emissions</u>
1) Xylene Thinner	VOC (xylene)	7.24	1.25	9.05	lbs		
2) Elastomeric Compound *(rubber, lbs)	VOC	1	12560	12560	lbs		
3) Polymeric Compound 1 *(rubber, lbs)	VOC (naphthenic distillate)	0.3238	31394	10165.3772	lbs		
	Zinc Oxide	0.012	31394	376.728	lbs		
4) Polymeric Compound 2 *(rubber, lbs)	VOC	0	39575	0	lbs		
	Zinc Oxide	0.03	39575	1187.25	lbs		
5) Zalcon Galvanizing Fluxes *(solid, lbs)	HAP -ZnCl	0.5	17750	8875	lbs		
	NH4Cl	0.5	17750	8875	lbs		
6) Brightner Alloy (zinc-Aluminum alloy) *(solid, lbs)	Zinc	0.96	2245	2155.2	lbs		
	Aluminum	0.1	2245	224.5	lbs		
7) Zinc *(solid, lbs)	Zinc	0.985	215556	212322.66	lbs		
8) Arc Welding Wire *(solid, lbs)	Iron	0.95	23208	22047.6	lbs		5.2 lbPM10/10^3 lb used
	Manganese	0.5	23208	11604	lbs		0.318 lbManganese/10^3 lb usec
9) Carbon Steel Electrode *(solid, lbs)	Manganese	0.1	480	48	lbs		0.05 lbPM10/10^3 lb used
10) Covered Electrode *(solid, lbs)	Mangasnese	0.1	2000	200	lbs		
11) Electrodes *(solid, lbs)	Carbon	0.8	500	400	lbs		
	Mangasnese	0.005	500	2.5	lbs		
12) Fusion Bonded Epoxy Coating *(solid, lbs)	Epoxy Resin	0.8	26910	21528	lbs		
	Wollastonite	0.2	26910	5382	lbs		
13) Chemlok 250x adhesive	Ethyl Benzene	0.15	5	0.75	gal		
	Xylene	0.65	5	3.25	gal		
14) Sulfuric Acid		1	23250	23250	gal		
TOTAL				341216.8652			

**Facility: Gheen Irrigation Works**  
**Type: Irrigation Fittings Manufacturer**  
**Permit # 203109**  
**Small Boiler (<5 x 10<sup>6</sup> BTU/HR)**  
**Natural Gas**

Natural Gas usage in Therms 32499  
 Natural Gas usage in cubic feet 3.25E+06

Natural Gas DEQ factors Emissions		
	(lbs/10 <sup>6</sup> ft <sup>3</sup> gas)	(lbs/year) (tons/year)
NOx	100	325 0.1625
CO	84	273 0.1365

Natural Gas Factors taken from AP 42 Table 1.4-1