

**Texas Commission on Environmental Quality  
Air Permits Division**

**New Source Review (NSR) Boiler Plate Special Conditions**

This information is maintained by the Mechanical/Agricultural/Construction NSR Section and is subject to change. Last update was made **October 2006**. These special conditions represent current NSR boiler plate guidelines and are provided for informational purposes only. The special conditions for any permit or amendment are subject to change through TCEQ case by case evaluation procedures [30 TAC 116.111(a)]. Please contact the appropriate Mechanical/Agricultural/Construction NSR Section management if there are questions related to the boiler plate guidelines.

**Galvanizing Facilities**

EMISSION STANDARDS

1. This permit covers only those sources of emissions listed in the attached table entitled "Emission Sources - Maximum Allowable Emission Rates," and those sources are limited to the emission limits and other conditions specified in the attached table.

FUEL SPECIFICATIONS

2. Fuel for the primary gas-fired boiler, the waste heat boiler, and the zinc kettle heaters shall be limited to pipeline-quality, sweet natural gas containing no more than 5 grains total sulfur and 0.25 grains hydrogen sulfide per 100 dry standard cubic feet. The use of any other fuel will require prior approval of the Executive Director of the Texas Commission on Environmental Quality (TCEQ).
3. Upon request by the Executive Director of the TCEQ or the TCEQ Regional Director or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuels used in these facilities or shall allow air pollution control program representatives to obtain a sample for analysis.

OPACITY / VISIBLE EMISSION LIMITATIONS

4. In accordance with the U.S. Environmental Protection Agency (EPA) Test Method (TM) 9 or equivalent, and except for those periods described in Title 30 Texas Administrative Code (30 TAC) §§ 101.201 and 101.211, opacity from any emission point, (*include the following as applicable*: zinc kettle baghouse, zinc kettle furnace, primary boiler, waste heat boiler, or cooling tower) when adjusted for uncombined water vapor, shall not exceed 5 percent averaged over a six-minute period.
5. There shall be no visible emissions from the galvanizing building and no visible emissions shall leave the plant property boundary except for water vapor. Visible emissions shall be determined by a standard of no visible emissions exceeding 30 seconds in duration in any six-minute period as determined using EPA TM 22 or equivalent.

## SPECIAL CONDITIONS

### Galvanizing Facilities

Page 2

#### OPERATIONAL LIMITATIONS, WORK PRACTICES, AND PLANT DESIGN

6. The maximum throughput of galvanized steel shall be limited to ### pounds per day and ### tons per year.
7. Annual zinc usage shall be limited to a maximum of ### tons per year.
8. An acid fume suppressant shall be used in the hydrochloric acid tanks. If the suppressant used depends on foam to control emissions, a foam layer shall be maintained on the surface of the acid bath. The suppressant shall be used in accordance with the manufacturer's instructions.
9. The concentration of the hydrochloric acid in the acid tanks shall not exceed ## percent by weight. A measurement of the acid concentration shall be made and recorded not more than 12 hours preceding acid tank recharge and again not more than 12 hours following tank recharge and at other times as determined by the permit holder.
10. The hydrochloric acid tanks shall not be heated by an external source to temperatures above ##°F. When using an external heat source, a measurement of the acid temperature shall be made and recorded at least once per day.
11. The galvanizing kettle shall be equipped with a hooded enclosure maintained under negative pressure during galvanizing and vented to a fabric filter baghouse. *or* The area containing the galvanizing kettle shall be an enclosed room that exhausts to a fabric filter baghouse with velocities of inlet air through all openings of the room equal to or greater than 100 feet per minute. [*May be revised based on specific equipment representations.*]
12. The fabric filter baghouse shall be designed to meet an outlet grain loading not to exceed 0.01 grain per dry standard cubic foot of exhaust. Filter bags in the baghouses shall be pre-coated with limestone or diatomaceous earth. A minimum and maximum pressure drop shall be maintained at (or above) # and below #. [*Specific values to be determined during permit review based on manufacturer's specifications.*] The baghouse cleaning mechanism shall be activated whenever the pressure exceeds ## inches of water.
13. All hooding, duct, and collection systems shall be effective in capturing emissions from the intended equipment and in preventing fugitive emissions from the building. The hooding and duct system shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the emission capture system.

## SPECIAL CONDITIONS

### Galvanizing Facilities

Page 3

14. *(If the flux tank is upstream of the galvanizing kettle, use the following: )* There shall be no pre-flux materials placed in the galvanizing kettle. All fluxing shall be performed in a separate vessel.
15. Spillage of acid, caustic, flux, or other process materials shall be cleaned up as soon as practical and contained to minimize fugitive emissions.
16. During non-operational periods, either a fume suppressant shall be used in the acid tanks, or the acid tanks shall be covered to reduce evaporative losses. All air pollution abatement equipment shall be properly maintained, and cleaning and maintenance of the equipment shall be performed as recommended by the manufacturer and as necessary so that the equipment efficiency can be adequately maintained.

## MONITORING

17. The holder of this permit shall install, calibrate, and maintain a device to monitor pressure drop in the fabric filter baghouse. The monitoring device shall be calibrated in accordance with the manufacturer's specifications and shall be calibrated at least annually and shall be accurate to within a range of  $\pm 0.5$  inches water gauge pressure ( $\pm 125$  pascals); or a span of  $\pm 0.5\%$ . Pressure drop readings shall be recorded at least once per day during galvanizing operations.
18. The TCEQ Regional Office shall be notified as soon as possible after the discovery of any monitor malfunction, which is expected to result in more than 24 hours of lost data. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Director in case of extended monitor downtime. Necessary corrective action shall be taken if the downtime exceeds 10 percent of the (*emissions source name*) operating hours in the quarter. Failure to complete any corrective action as directed by the TCEQ Regional Office may be deemed a violation of the permit.
19. The holder of this permit shall perform monthly inspections to verify proper operation of all hooding, duct, and collection systems and to verify there are no holes, cracks, and/or other conditions that would reduce the collection efficiency of the emission capture system as represented. If the results of the inspections indicate that the capture system is not operating properly or is not achieving the represented collection efficiency, the permit holder shall promptly take necessary corrective actions.
20. Upon request by the Executive Director of the TCEQ, the holder of this permit shall perform stack sampling, ambient air monitoring, or other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere.

## SPECIAL CONDITIONS

### Galvanizing Facilities

Page 4

#### RECORDKEEPING REQUIREMENTS

21. The following records shall be maintained at this facility and made available upon the request of personnel from the TCEQ or any other air pollution control program having jurisdiction. These records shall be retained for a rolling 5-year period.
  - A. Daily, monthly, and annual galvanized steel throughput (in tons);
  - B. Monthly and annual zinc usage (in tons);
  - C. Acid tank recharge date and acid concentration measurements as prescribed in Special Condition No. 9 (Records must be of sufficient detail to establish the average acid concentration);
  - D. Daily acid temperature (in °F), when using an external heat source to heat the acid tank;
  - E. Fabric filter baghouse pressure drop readings (in inches of water);
  - F. Preventative maintenance, scheduled maintenance, and repairs performed on any abatement device shall be recorded as they occur;
  - G. Malfunctions in the process, and malfunctions of any air pollution abatement device or system; and
  - H. Inspections of capture systems and abatement devices shall be recorded as they occur.