

equipment leaks of HCl and Cl₂ because of their highly corrosive nature. The leaks can be easily identified, as the presence of ambient moisture (humidity) results in rapid corrosion on or around leaking equipment components.

The bottoms from scrubbers used to reduce HCl and Cl₂ emissions from HCl process vents, HCl storage vessels, and HCl transfer operations are typically routed to wastewater treatment systems. In most cases, the HCl or Cl₂ has been chemically converted in the scrubber to sodium hypochlorite (bleach). Any residual Cl₂ or HCl would be quite small. We estimate that wastewater emissions represent less than 1 percent of total emissions from the source category. Therefore, we believe that wastewater streams do not represent a significant potential source of emissions.

2. Estimated Emissions

We have calculated the nationwide baseline emissions for each of the HCl production facility emission sources. Hydrochloric acid process vents emit a total of 2,240 Mg/yr (2,470 tpy) of combined HCl (1,600 Mg/yr; 1,770 tpy) and Cl₂ (640 Mg/yr; 700 tpy) emissions. Hydrochloric acid storage tanks emit 230 Mg/yr (260 tpy) of HCl, HCl transfer operations emit 27 Mg/yr (30 tpy) of HCl, leaking equipment emits 410 Mg/yr (450 tpy) of HCl, and wastewater emits 9 Mg/yr (10 tpy) HCl. Total baseline HAP emissions from the industry are 2,910 Mg/yr (3,220 tpy).

C. What Is the Affected Source?

The final rule defines the affected source as the group of one or more HCl production facilities at a plant site that are subject to the final rule, and all associated wastewater operations. The affected source contains emission streams from the following: HCl process vents, HCl storage tanks, HCl transfer operations, leaks from equipment in HCl/Cl₂ service, and HCl wastewater operations. However, there are no emission limitations or other requirements for HCl wastewater operations in the final rule.

D. What Are the Emission Limitations and Work Practice Standards?

Existing affected sources must reduce HCl and Cl₂ emissions from each HCl process vent by 99 percent or to outlet concentrations of 20 parts per million by volume (ppmv) HCl and 100 ppmv Cl₂, determined using EPA Test Method 26A of 40 CFR part 60, appendix A. New sources must reduce HCl and Cl₂ emissions from each HCl process vent by 99.4 and 99.8 percent, respectively,

or to outlet concentrations of 12 ppmv HCl and 20 ppmv Cl₂. The final rule also requires that owners or operators establish site-specific operating limits for each control device, based on monitored parameters and levels established during the performance test. For example, if you use a caustic scrubber to meet the emission limits, you must maintain the daily average scrubber inlet liquid flow rate above the minimum value established during the performance test. You also must maintain the daily average scrubber effluent pH within the operating range value established during the performance test.

For each storage tank and transfer operation at an existing affected source, HCl emissions must be reduced by 99 percent or to an outlet concentration of 120 ppmv; the operating limits are the same as for process vents. There are no Cl₂ emissions from these sources. For each storage tank at a new affected source, HCl emissions must be reduced by 99.9 percent or to an outlet concentration of 12 ppmv. For each transfer operation at a new affected source, HCl emissions must be reduced by 99 percent or to an outlet concentration of 120 ppmv. Emission streams from the following types of storage tanks and transfer operations are exempt from these emission limitations: (1) Storage tanks that never store liquid HCl product with a concentration of 30 weight percent or greater, and (2) transfer operations that never load liquid HCl product with a concentration of 30 weight percent or greater.

For leaking equipment, the final rule includes a work practice standard. We require you to prepare, and at all times operate according to, an equipment leak detection and repair (LDAR) plan that describes in detail the measures that will be put in place to control leaking equipment emissions at the facility. You are required to submit the LDAR plan to the Administrator. You are also required to certify in your Notification of Compliance Status that you have developed and implemented the LDAR plan and submitted the plan to the Administrator.

There are no emission limitations or work practice standards for HCl wastewater operations.

E. What Are the Performance Testing, Initial Compliance, and Continuous Compliance Requirements?

For HCl process vents at new and existing affected sources, you are required to demonstrate initial compliance by conducting a performance test that demonstrates that the emission limitations are being met.

You are required to conduct subsequent performance tests on the earlier of your title V operating permit renewal or within 5 years of issuance of your title V permit.

You must also establish site-specific operating limits based on control device parameters. These operating limits will be established for each parameter based on monitoring conducted during the performance test. Specifically for water or caustic scrubbers, which we believe will be the most commonly used control device, the final rule requires that you establish operating limits for pH of the scrubber effluent and the scrubber liquid inlet flow rate. For any other type of control device, you are required to establish the operating limits based on a site-specific monitoring plan that identifies appropriate parameters. Continuous compliance will be demonstrated by these monitored parameters staying within the operating limits.

For HCl storage tanks and HCl transfer operations at new and existing affected sources, you are required to demonstrate initial compliance by conducting a performance test that demonstrates that the emission limitations are being met. Alternatively, in lieu of conducting initial or subsequent performance tests for HCl storage tanks and HCl transfer operations that are not routed to a control device that also controls HCl process vent emissions or any other continuous vent stream, you may conduct a design evaluation which demonstrates that the control technology being used achieves the required control efficiency when a liquid HCl product with a concentration of 30 weight percent or greater is being loaded into the storage tank, or a tank truck, rail car, ship, or barge. The schedule for subsequent performance tests and the operating limits for new and existing HCl storage tanks and HCl transfer operations are the same as those for HCl process vents.

F. What Are the Notification, Recordkeeping, and Reporting Requirements?

The final rule requires owners or operators of affected sources to submit the following notifications and reports:

- Initial Notification.
- Notification of Intent to Conduct a Performance Test.
- Notification of Compliance Status (NOCS).
- Compliance Reports.
- Startup, Shutdown, and Malfunction (SSM) Reports.

The final rule requires that each owner or operator maintain records of reported