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EPA United States Environmental Protection Agency

# NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) FOR THE HYDROCHLORIC ACID PRODUCTION INDUSTRY:

## Summary of Public Comments and Responses

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# National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Hydrochloric Acid Production Industry: Summary of Public Comments and Responses

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ENVIRONMENTAL PROTECTION AGENCY

National Emission Standards for Hazardous Air Pollutants for the Hydrochloric Acid Production Industry - Background Information for Promulgated Standards

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1. The final National Emission Standards for Hazardous Air Pollutants (NESHAP) will regulate emissions of hazardous air pollutants from hydrochloric acid production operations. Only those operations that are part of major sources under section 112(d) of the Clean Air Act as amended in 1990 will be regulated.

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## 1.0 SUMMARY

The United States Environmental Protection Agency (EPA) proposed national emission standards for hazardous air pollutants (NESHAP) for hydrochloric acid (HCl) production on September 18, 2001 (66 FR 48174) under Section 112(d) of the Clean Air Act (CAA).

Public comments were requested on the proposed standards and a total of 19 comment letters were received. In response to written requests by commenters (IV-D-02, IV-D-03), the comment period for the proposed rule was extended to December 19, 2001 (66 FR 57917). The commenters represent hydrochloric acid producers, industrial trade organizations, public, and other related organizations. Table 1-1 presents a list of all persons that submitted written comments, their affiliation, and their docket item number. A public hearing was not requested.

This document presents a summary of the public comments received along with responses developed by EPA. This summary of comments and responses serves as the basis for revisions made to the standards between proposal and promulgation.

**Table 1-1. List of Commenters on the Proposed NESHAP for Hydrochloric Acid (HCl) Production, 40 CFR 63, Subpart NNNNN.**

| Docket A-99-41 Item Number | Commenter and Affiliation | Date of Document |
|---|---|---|
| IV-D-01 | J. Bardi, Administrative Assistant, American Society for Testing and Materials (ASTM) | 09-18-01 |
| IV-D-02 | A. Dungan, Vice President, Safety, Health, and Environment, The Chlorine Institute | 10-16-01 |
| IV-D-03 | K. Batt, Dow Chemical Company | 10-25-01 |
| IV-D-04 | L. Tanner, Environmental Engineering Specialist, 3M Environmental Technology | 11-13-01 |
| IV-D-05 | M. Lopez, *et al.*, Undergraduate Students, Florida International University | 11-14-01 |
| IV-D-06 | P. Jann, Senior Regulatory Consultant, Environmental Section, DuPont Engineering | 11-16-01 |
| IV-D-07 | R. Kelley, Vice President, Environment, Health, Safety, and Communications, Formosa Plastics Corporation | 11-16-01 |
| IV-D-08 | D. Foerter, Deputy Director, Institute of Clean Air Companies (ICAC) | 11-16-01 |
| IV-D-09 | J. Evans, Manager, Environmental Affairs, Lyondell Chemical Company | 11-16-01 |
| IV-D-10 | A. Till, Ph.D., Pharmaceutical Research and Manufacturers of America (PhRMA) | 11-16-01 |
| IV-D-11 | M. Collins, Environmental Manager, Cabot Corporation | 11-19-01 |
| IV-D-12 | N. Morrow, ExxonMobil Chemical Company | 12-17-01 |
| IV-D-13 | J. Mayhew, Vice President, Regulatory and Technical Affairs, American Chemistry Council | 12-19-01 |
| IV-D-14 | R. Raiders, Lead Environmental Manager, Atofina Chemicals | 12-19-01 |
| IV-D-15 | R. Smerko, President, The Chlorine Institute | 12-19-01 |
| IV-D-16 | S. Capone, Manager, Air Programs, GE Plastics | 12-19-01 |
| IV-D-17 | C. Schlitter, Environmental Projects Manager, Kerr-McGee Chemical, LLC | 12-19-01 |

**Table 1-1. List of Commenters on the Proposed NESHAP for Hydrochloric Acid (HCl) Production, 40 CFR 63, Subpart NNNNN.**

| Docket A-99-41 Item Number | Commenter and Affiliation | Date of Document |
|---|---|---|
| IV-D-18 | K. Fay, Global Director, Environment, PPG Industries, Incorporated | 12-19-01 |
| IV-D-19 | K. Batt, P.E., Regulatory Management Expertise Center, Dow Chemical Company (Union Carbide Corporation) | 12-19-01 |
| IV-D-20 | E. Linak, Director Chemical Economics Handbook, SRI Consulting | 01-02-02 |
| IV-D-21 | G. Brouillette, Environmental Health and Safety Manager, Borden Chemicals and Plastics | 11-12-01 |
| IV-D-22 | R. Huffman, Environmental Specialist, Bayer Corporation | 12-19-01 |

## 2.0 SUMMARY OF PUBLIC COMMENTS AND RESPONSES

## 2.1 APPLICABILITY

### 2.1.1 HCl Production Facility

Comment: Several commenters (IV-D-07, IV-D-12, IV-D-13, IV-D-16, IV-D-17, IV-D-22) requested that the EPA clarify the definition of an HCl production facility to confirm their interpretation that a facility must produce, store, AND transfer HCl in order to be considered an HCl production facility. The commenters described many specific configurations of equipment at their facilities and requested confirmation of their assumptions regarding whether the collections of equipment would be subject to the proposed rule. Several commenters noted that section II.A. of the proposal preamble seems to contradict the definition of HCl production facility in proposed §63.8985(a)(1) because it seems to indicate that production of HCl is the only required element for a collection of equipment to be considered an HCl production facility. One commenter (IV-D-16) suggested that the definition of an HCl production facility be clarified to state that it includes an HCl absorber and associated apparatus used to produce and handle liquid HCl product.

Response: As noted by several commenters, the language in the proposed rule and the description in the preamble were not entirely consistent. This led to the common misinterpretation that to be subject to the rule, an HCl production facility had to produce, store, AND transfer liquid HCl product. In fact, the revised language by commenter IV-D-16 conveys our intent, which was clearly stated in the preamble. That is, an HCl production facility is one that PRODUCES liquid HCl product, and, if present, equipment used to store and transfer liquid HCl product is included in the facility. Therefore, the final rule contains language similar to that suggested by the commenter to clarify our intent.

Comment: Many commenters (IV-D-06, IV-D-13, IV-D-14, IV-D-15, IV-D-16, IV-D-17, IV-D-18, IV-D-19, IV-D-20, IV-D-22) requested that the EPA raise the minimum HCl concentration for an HCl production facility from 10 weight percent to a more appropriate level that accurately represents commercial production of HCl. The commenters stated that liquid HCl is commonly produced for commerce at 20° to 22° Baume (Bé) acid strength (31.45 to 35.2 weight percent). One commenter (IV-D-13) corrected mis-information that the EPA cited in the proposal preamble (66 FR 48178) indicating that the Hargreaves process produces HCl at a concentration of 10 weight percent. The commenter clarified that this process produces a byproduct of hydrogen chloride gas that is 5 to 12 percent by volume, not

weight; the liquid HCl produced by the process is 22° Bé. One commenter (IV-D-19) stated that his company, which is the largest manufacturer of HCl in the United States, predominantly produces 30 to 36 weight percent HCl, although approximately 3 percent of the liquid HCl they produce per year is at a concentration of less than 20 weight percent. One commenter (IV-D-13) added that companies do not dilute HCl before shipping it, nor do they produce weak HCl and then concentrate it before shipping it.

Several commenters suggested that the EPA use 30 or 31.45 weight percent as the minimum HCl concentration, which would still cover producers of commercial grade HCl but would exclude incidental production of HCl, while one commenter (IV-D-06) recommended a minimum of 20 to 25 weight percent. According to the commenters, the cost of shipping 10 weight percent acid is higher than the price of the product, so distributors of weak HCl solutions (e.g., 10 weight percent) typically buy concentrated acid in bulk and then dilute it to meet their customer's needs. Additionally, the commenters noted that HCl emissions are a function of vapor pressure which is a function of HCl concentration and that, for a 10 weight percent HCl solution, the vapor concentration of HCl gas in equilibrium with the HCl is lower than the proposed emission standard (10.7 parts per million by volume [ppmv] at 25°C). One commenter (IV-D-18) additionally noted that the Hazardous Organic NESHAP (HON) (§63.119) does not require emission controls on storage tanks with HAP vapor pressures less than 5.2 kPa, whereas the vapor pressure of HCl at 20° Bé is 2.41 kPa. The commenters concluded that the burden associated with installing control equipment and conducting monitoring, reporting, and recordkeeping activities is too high given that storage tanks containing 10 weight percent HCl would already meet the emission limit in the proposed rule. One commenter (IV-D-16) calculated the annualized control cost for a storage tank containing 30 weight percent HCl to be in excess of $100,000 per ton of HAP reduced, and the cost for a tank containing 10 weight percent HCl to be in excess of $200 million per ton of HAP reduced.

Response: As discussed in the proposal preamble, our intent in establishing a minimum grade/HCl concentration was to separate commercial HCl production (which we want the rule to cover) and incidental HCl production (which we do not want the rule to cover). At proposal, we selected a 10 percent by weight cutoff, and specifically requested comments and additional information regarding this issue. We carefully considered all the information provided by the commenters, and agree that the proposed 10 percent is not an appropriate level to define a "commercial" HCl production facility. Based on the information provided in these public comments, we concluded that 30 percent by weight is the optimum choice. We believe that this will

include the most commonly produced commercial grades (20° to 22° Bé), while excluding incidental production. The final rule states that an HCl production facility that produces liquid HCl product at a concentration of 30 weight percent of greater is subject to the rule. This means that this unit is subject at all times, even those times when a liquid HCl product of a lower concentration is being produced. Therefore, the final rule will cover facilities like the one pointed out by the commenter that occasionally produce liquid HCl product at concentrations less than 30 percent, even when those lower concentration products are being produced.

However, we wanted to ensure that facilities that primarily produce lower-concentration liquid HCL product not be subject to the final rule. Therefore, we added a statement in §63.8985(a) that the rule does not cover HCL production facilities that only occasionally produce liquid HCL product at a concentration of 30 percent by weight or greater. We did not, however, include a specific definition of what constitutes "occasional production." If a facility produces liquid HCL with a concentration of 30 percent or greater during its normal operations, this would not be considered occasional production.

Comment: One commenter (IV-D-18) suggested that facilities be required to calculate the concentration of HCl they produce as an "average concentration," defined as in the HON (§63.111) to be a flow-weighted annual average concentration, because customer requirements cause variations in the concentration of HCl produced by a facility.

Response: We recognize that customer requirements can change, resulting in varying concentrations in HCl products. In general, we believe that a plant that produces 30 weight percent HCl is not likely to be an "incidental" producer of HCl. We do not wish to impose the burden of tracking the concentration of every bit of product produced and then calculating an annual average concentration to determine compliance. Therefore, we did not base the applicability on an annual average HCl concentration in the final rule.

Comment: One commenter (IV-D-19) affirmed the EPA's use of HCl concentration by weight percent to define an HCl production facility. The commenter stated that this measure is easy to determine and document and is widely used in the industry. The commenter further informed the EPA that liquid HCl concentration is determined after the acid solution cools to near ambient temperature through either mass balance (using a flow meter) or as the ratio of amount of water to anhydrous HCl feed, and can be measured manually using ASTM method E224, or some other method, or continuously using a nuclear densitometer.

Response: First, we believe that an owner or operator who acknowledges that their process is subject to the rule should not be required to measure the HCl concentration. The only situation where measurement of the HCl concentration would be necessary is demonstrating that a facility is not subject to the rule. We do believe it would be beneficial to specify methods to use for determining the HCl concentration in liquid products, to avoid confusion regarding applicability determinations. Therefore, we have added provisions to the rule specifying that ASTM Method E224 be used to determine the HCl concentration in liquid products, in instances where that is necessary.

Comment: Many commenters (IV-D-06, IV-D-09, IV-D-11, IV-D-13, IV-D-15, IV-D-16, IV-D-17, IV-D-19, IV-D-22) requested that the EPA clearly delineate where the HCl production facility ends and HCl consumption begins so as not to include equipment unrelated to the production of HCl. Commenter IV-D-11 pointed out that the preamble stated that the HCl production facility begins at the point where the HCl-containing stream enters the absorber, but that the rule itself makes no such statement. This commenter suggested that the rule language be made consistent with preamble language. Another commenter (IV-D-19) noted his agreement with the definition of the beginning of the HCl production facility as the absorber that receives an anhydrous HCl stream.

These commenters stated that many plants store and transfer HCl that was purchased rather than produced on-site, or store HCl produced on-site for use in wastewater treatment, and that such activities should not be covered by the proposed rule just because they are on the same plant site as an HCl production facility. One commenter (IV-D-06) suggested that the HCl production facility should end with the first HCl storage tank, and the first transfer rack, if applicable, after the HCl production unit (i.e., absorber). The commenter noted that this definition would be consistent with the HON's definition of a chemical processing unit (CPU). Another commenter (IV-D-16) described the equipment configurations at three of the company's facilities and suggested that the HCl production facility should end at the HCl storage tanks directly connected to the HCl absorber (production unit) and at transfer racks downstream of the storage tanks or absorber.

One commenter (IV-D-09) noted that the control cost per ton of HAP removed for storage tanks that are not located near the HCl production process is very high because they must have dedicated control devices and suggested that the HCl production facility include only the absorber, primary HCl storage tanks, and loading areas associated with the HCl production unit, so as to align the rule applicability with the assumption used in the

cost impacts analysis that facilities could control all emission points with one control device.

Response: We agree with the commenters that the proposed rule could be improved by clarifying where an HCl production facility begins and ends. As mentioned by the commenters, the preamble was clear regarding our intent of where the facility begins. On page 48178 of the proposed preamble, we indicated that the starting point for an HCl production facility is where an HCl-containing gaseous stream enters the absorber in which the liquid HCl is produced. The final rule is clear in this regard. In the final rule, the definition of an HCl production facility in §63.8985(a)(1) states that the "HCl production facility begins at the point when a gaseous stream containing HCl enters the HCl production unit, . . ." In addition, the following definition of HCl production unit is included in §63.9075:

> HCl production unit means an absorber or other vessel in which a liquid HCl product is manufactured by absorbing gaseous HCl into either water or an aqueous HCl solution.

Defining the "end" of an HCl production facility is not quite so straightforward. Our intent was certainly that only storage tanks and transfer operations that are storing and transferring HCl produced at the site be included in the facility. We do recognize, however, that the proposed rule could have been interpreted to be applicable to transfer racks and storage tanks that unload and store purchased HCl, along with any other HCl-containing storage tanks co-located at a site with an HCl production facility that is subject to this rule. Therefore, we have made rule changes to clarify our intent.

In addition to clarifying where the HCl production facility begins, paragraph §63.8985(a)(1) of the final rule also specifies what is included in the HCl production facility and where it ends. Specifically, it states that the HCl production facility includes all storage tanks that contain liquid HCl product that is produced in the HCl production unit, along with all transfer operations that load HCl product produced in the HCl production unit into a tank truck, rail car, ship, or barge. It also includes the piping and other equipment used to transfer liquid HCl product from the HCl production unit to the storage tanks and/or transfer operations. The rule clarifies that the HCl production facility ends at the point that the liquid HCl product produced in the HCl production unit either leaves the plant site via a tank truck, rail car, ship, barge, or pipeline, or enters another process on the plant site. We have added a definition of "plant site" to the final rule.

Comment: Two commenters (IV-D-15, IV-D-18) supported the EPA's decision to limit the source category to sources that produce liquid HCl, as opposed to gaseous HCl. Several commenters (IV-D-12, IV-D-13, IV-D-14) requested clarification of the terms "produce" and "HCl production" to ensure that certain activities are excluded. The commenters requested that the HCl production facility definition include the following language: "produced by the scrubbing of a gaseous stream containing HCl" so as to exclude operations that produce HCl by other means. The commenters requested further clarification that liquid streams produced by the caustic scrubbing of a stream containing HCl are not "liquid HCl product" because they contain sodium chloride not hydrogen chloride.

Response: We have clarified this point in accordance with the commenters' suggestion. We believe that it is appropriate to clarify this point because the information available to us indicates that all processes that produce liquid HCl product do so through the scrubbing of gaseous streams containing HCl. Specifically, we have added a definition of HCl production unit (provided above) and we have stated that an HCl production facility begins at the point where a gaseous stream containing HCl enters the HCl production unit. We agree that the caustic scrubbing of streams containing HCl should not be covered by the rule, but do not believe that it is necessary to specifically exempt such processes because, as pointed out by the commenter, they produce sodium chloride, not hydrogen chloride.

### 2.1.2 Affected Sources

Comment: Several commenters (IV-D-12, IV-D-13, IV-D-16) requested that the EPA re-define the "affected source" to include all of the individual "HCl production facilities" located at one plant site. The commenters noted that this change would be consistent with the proposed revisions to §63.2 of the General Provisions. One commenter (IV-D-12) pointed out that defining each HCl production facility at a plant site as its own affected source could create problems with compliance schedules and result in duplicate testing, reporting, and recordkeeping if, for example, a storage tank is shared by a new affected source and an existing affected source. One commenter (IV-D-16) recommended resolving such a problem by assigning shared equipment to the affected source with the highest annual production of liquid HCl product. Two of the commenters (IV-D-12, IV-D-13) suggested the following language for including all HCl production facilities in one affected source: "The affected source is one or more HCl production facilities at a plant site, which contain the collection of emissions streams listed..." Another commenter (IV-D-16) also suggested that the following statement be added to the definition of HCl production facility in §63.8985(a)(1):

"Each HCl absorber used to produce liquid HCl product, along with its associated equipment, constitutes a separate HCl production facility."

Response: At a single plant site, there can be multiple HCl production facilities that are independent and originate from totally different types of processes. At proposal, we assumed that it would be simpler and "cleaner" for owners and operators to treat each independent HCl production facility as a separate affected source. However, these comments raised concerns with this approach. We prefer the approach of combining all HCl production facilities in one affected source to that of creating complicated provisions to assign shared HCl storage tanks to a specific HCl production unit. Therefore, we have incorporated the language suggested by Commenters IV-D-12 and IV-D-13 in the definition of the affected source in the final rule. We do not feel that it is necessary, in the definition of HCl production facility, to specify that each absorber and associated equipment is a separate production facility, especially in light of the change to the scope of the affected source.

Comment: One commenter (IV-D-19) requested that the EPA provide a method for facilities to determine whether multiple-service storage tanks are part of the HCl production affected source. The commenter suggested that the EPA use language similar to that used in the HON (§63.100(g)) for determining whether a storage tank is part of the source to which the rule applies.

Response: We believe that the changes made to the HCl production facility definition in §63.8985(a) largely eliminate the need for provisions to assign storage tanks to specific process units. In addition, we have specifically stated in §63.8985(a)(2) of the final rule that storage tanks that are dedicated feedstock tanks for another process are not part of the HCl production facility. Therefore, we did not add HON-like language in the final rule.

Comment: One commenter (IV-D-14) requested that the rule include specific provisions for emission points that vent combined emission streams from a process subject to the proposed rule and one or more other processes subject to other NESHAP. The commenter requested that the EPA promulgate a procedure for distinguishing between the individual emission streams in a combined emission stream in order to ensure that a facility is in compliance with all applicable standards. If the EPA decides that such a procedure would not be feasible, the commenter suggested that the proposed rule be revised to allow facilities to meet a performance based standard (e.g., control efficiency) and that the EPA allow the combined emission streams to comply

with any applicable MACT that is promulgated before the compliance date of the proposed rule instead of complying with the proposed rule.

Response: As discussed in section 2.4.4, the final rule contains an alternative emission limitation in the form of a control efficiency. This should provide a mechanism for compliance for combined emission streams. Owners or operators of HCl production affected sources will be required to demonstrate compliance with this rule, although we have also added provisions to the final rule to allow results of previous tests to be used to demonstrate compliance with this rule (see section 2.5.1).

Comment: Two commenters (IV-D-12, IV-D-13) requested that the EPA clarify that the emission limitations and work practice standards apply only to affected sources. The commenters stated that, as written, §63.9000 and Table 1 could be interpreted to mean that the requirements apply to emission streams that are not part of an affected source. The commenters suggested the following language to add to §63.9000(a) and (b) and Table 1: "for each emission stream or leak listed in §63.8990(b) that is part of an affected source..."

Response: We agree that changes in this section of the rule could improve the clarity. However, we have revised it in a different manner than suggested by the commenters. The language used in the final rule is as follows: "you must meet the applicable emission limit and work practice standard in Table 1 to this subpart for each emission stream listed under §63.8990(b)(1) - (4) that is part of your affected source."

Comment: Two commenters (IV-D-09, IV-D-12) supported the EPA's decision to include wastewater treatment operations in the affected source, even though no emission limitations apply to them. One commenter (IV-D-12) stated that including wastewater treatment operations in the affected source was appropriate because it would alleviate the burden associated with dealing with such sources on a case-by-case basis in the future.

Response: This provision has been retained in the final rule.

### 2.1.3 Facility-Wide Exemptions

Comment: Several commenters (IV-D-04, IV-D-06, IV-D-07, IV-D-13, IV-D-14, IV-D-16, IV-D-17, IV-D-18, IV-D-22) requested that the EPA exempt from the proposed rule HCl production facilities that produce less than a certain amount of liquid HCl per year ("small quantity generators"). The commenters stated that this would eliminate burdensome compliance requirements for a facility

that emits very little HCl. Several commenters (IV-D-13, IV-D-14, IV-D-17) stated that some facilities produce less than 0.4 gigagrams of liquid HCl per year, often incidentally, and suggested that the EPA exempt facilities that produce less than 1 gigagram (1,000 Mg) of 100 percent liquid HCl per year, as consistent with the SOCMI NSPS (§60.660(c)(5), §60.700(c)(3)). Another commenter (IV-D-16) suggested that the EPA use 1 Mg/yr of liquid HCl as the minimum production level. Another commenter (IV-D-18) cited the Benzene Waste Operations NESHAP (40 CFR Part 61 Subpart FF) as an example of a rule that used 10 Mg/yr as the minimum production level.

Response: As stated above, our intent is that this rule not cover incidental production of HCl. We believe that the 30 weight percent cutoff in the final rule will help to ensure that such incidental producers are not made subject, so we have not included a production-based exemption in the final rule.

Comment: Several commenters (IV-D-06, IV-D-13, IV-D-14, IV-D-17, IV-D-18, IV-D-22) requested that the EPA exempt from the proposed rule HCl production facilities that emit less than a certain *de minimis* level of HAP per year. The commenters stated that such an exemption would eliminate burdensome compliance costs while insignificantly reducing the environmental benefit. Two commenters (IV-D-15, IV-D-18) reinforced this statement by affirming the EPA's exclusion of HCl production facilities that are not part of major sources. One commenter (IV-D-13) stated that it was unlawful for the EPA to subject to the proposed rule HCl production facilities that emit small amounts of HCl and are not by themselves major sources (e.g., don't emit more than 10 tons per year of any one HAP or more than 25 tons per year of total HAP) but are co-located with major sources. Another commenter cited the Marine Tank Vessel Loading Operations NESHAP as an example of a rule that exempted operations that emit less than major source thresholds even if the operations are co-located at a major source.

Several commenters provided suggestions for a *de minimis* cutoff level. One commenter (IV-D-06) noted that other rules (e.g., Benzene Waste Operations NESHAP, Pharmaceutical NESHAP) have used 10,000 pounds (5 tons) of HAP emissions per year as the *de minimis* threshold value. One commenter (IV-D-17) suggested that the EPA use 10 Mg (11.0 tons) of 100 percent HCl emissions per year as the *de minimis* threshold. Another commenter (IV-D-18) suggested that the EPA exclude HCl production facilities that have a potential to emit less than or equal to 1 Mg (1.1 tons) of HAP per year. Another commenter (IV-D-14) cited the Pesticide Active Ingredient NESHAP (§63.1362(b)(3)(i)) which has a *de minimis* threshold of 6.8 Mg (7.5 tons) per year of combined HCl and $Cl_2$ emissions from all process vents. One commenter (IV-D-

22) suggested that the proposed rule follow the example set forth in RCRA standards (40 CFR 264.343) and require no further controls for facilities that emit less than 1.8 kilograms of HCl per hour.

Response: For this rule, we do not believe that an exemption based on emissions is practical. If such an exemption were established, we believe that a standardized method for measuring these emissions would need to be included in the rule, and sources producing HCl would need to monitor and keep records to demonstrate that their emissions were below the cutoff. As noted above, we have incorporated a cutoff based on HCl concentration (30 weight percent) into the final applicability requirements. We believe that such a cutoff is much more practical and less burdensome for HCl producers that are not subject to the rule.

Comment: Several commenters (IV-D-07, IV-D-12, IV-D-13, IV-D-14, IV-D-16, IV-D-19) requested that the EPA explicitly state that certain types of HCl production are exempt from the proposed rule. Following are the specific exemptions requested, along with our response to each.

Comment: One commenter (IV-D-07) requested that the EPA revise the definition of HCl production facilities to exempt facilities for which HCl is not the primary product. The commenter referred the HON (§63.101) for definitions of "product," "by-product," and "chemical manufacturing processing unit" that limit the applicability to facilities that produce a specific listed chemical as their primary product.

Response: The primary product concept is not relevant to this rule, as the only processes that are subject to the final rule are those that intentionally manufacture liquid HCl product. There are a variety of types of processes that generate HCl-containing gas streams that provide the feed to the HCl production unit. The rule is "blind" to the type of process generating this HCl-containing stream, and the HCl production process starts when this gaseous stream enters the absorber where the liquid product is made. We were very clear on this point in the proposed preamble (66FR 48178). We continue to believe that if a commercial-level liquid HCl product (see comments and responses above related to 30 weight percent as the defining characteristic of a "commercial-level" HCl product) is produced from any HCl-containing gaseous stream, whether this stream is a by-product, co-product, waste stream, etc., the unit producing the liquid HCl product should be in the source category.

Comment: Two commenters (IV-D-12, IV-D-13) listed the following specific liquid streams that should be exempted from the definition of HCl production: process byproduct streams

containing metal chlorides, process byproduct streams containing HCl not produced through water scrubbing, boiler feed water bed regeneration wash water, and catalyst bed wash water.

Response: We believe that other changes made to the final rule make specific exemptions for these processes unnecessary. For example, §63.8985(a)(1) and the definition of HCl production unit clarify that processes that absorb gaseous HCl into water or an aqueous HCl solution are the only HCl production processes covered. Also, the 30 weight percent cutoff should ensure that wash water processes are not subject. Therefore, specific exemptions for these processes are not included in the final rule.

Comment: Several commenters (IV-D-06, IV-D-14, IV-D-16, IV-D-17) requested that the EPA explicitly exempt HCl production that results from the proper operation of air pollution control devices (APCD) that are required to be installed in order to meet applicable requirements, such as water scrubbers that have HCl as either an input or an unwanted output. The commenters asserted that HCl produced in this way should not be considered "HCl production" because the scrubber liquid, which contains HCl, is considered a waste stream and is neutralized by the addition of caustic to the scrubber or at the point of disposal of the liquid. The commenters noted that such APCDs are already permitted and subject to emission standards and monitoring, reporting, and recordkeeping requirements.

Response: We agree with the commenters that HCl produced from the proper operation of air pollution control devices should not be subject to the rule. However, we did not add such an exemption in the final rule because we believe that the 30 weight percent cutoff will effectively eliminate such processes from applicability to this rule. In turn, if 30 weight percent HCl is produced from the proper operation of a control device or any other source, we do not believe it is unreasonable for the process to be subject to this rule.

Comment: Two commenters (IV-D-14) requested confirmation and clarification that facilities that make HCl incidentally and dispose of it because it is not intended for sale should be exempted from the proposed rule. One commenter (IV-D-16) requested that the EPA clarify that consumption of HCl, whether it was purchased or produced on-site, is not covered by the proposed rule. One commenter (IV-D-19) requested that the EPA clarify that dilution of a concentrated HCl stream is not "HCl production." The commenter explained that dilution is performed by adding de-mineralized water to an aqueous HCl solution and does not result in significant emissions. The commenter further

added that dilute HCl solutions have very low vapor pressures and, therefore, very low emissions.

Response: As discussed in response to several previous comments, we have made several changes to ensure that incidentally-produced HCl is not subject to the rule. We also believe that changes in §63.8985(a)(1) related to the HCl production facility definition, along with the addition of a definition of HCl production unit, make it clear that dilution of a concentrated HCl product would not be covered by the final rule. Therefore, we did not add a specific exemption for either of these situations in the final rule.

Comment: Several commenters (IV-D-12, IV-D-13, IV-D-16, IV-D-22) requested that scrubbers that operate as HCl production units for fewer than 300 hours per year be exempted from the proposed rule. The commenters cited the HON (§63.160(a), §63.162(e)) as an example of a rule with such an exemption. The commenters stated that a scrubber that is designed for occasional use does not generate significant HCl emissions. One commenter (IV-D-16) described a scrubber at his company's facility that is only active for HCl production during times when the HCl production process is shut down. The vent from the scrubber is controlled by a water scrubber that was installed to meet State permitting requirements but might not meet the proposed HCl standards and would be difficult to test because the HCl production process would have to be shut down.

Response: We believe that the 30 weight percent HCl criterion reasonably distinguishes commercial level production of HCl. Therefore, we have not added an exemption for sources that operate less than 300 hours per year.

Comment: Several commenters (IV-D-04, IV-D-12, IV-D-13, IV-D-22) requested that the EPA add an exemption to the rule for research and development (R&D) facilities. The commenters stated that R&D facilities produce and emit very small amounts of HCl but can be located at major source sites and, therefore, subject to the proposed rule. The commenters noted that the CAA directed the EPA to establish a separate source category for R&D facilities and that, accordingly, the EPA has included an R&D exemption in virtually all recently-promulgated NESHAP. The commenters stated that R&D facilities were not considered during the rule development process and concluded that it did not appear as though the EPA intended for R&D facilities to be subject to the proposed rule. One commenter (IV-D-04) further requested that the proposed rule include a definition of "research and development activities."

Response: We think that the 30 weight percent criteria exemption should ensure that R&D facilities not be subject to this rule. However, the commenter is correct in that we have included an exemption for R&D in most part 63 NESHAP. Therefore, we have added a definition of R&D facility, along with an exemption.

Comment: Several commenters (IV-D-06, IV-D-07, IV-D-09, IV-D-13, IV-D-15, IV-D-18, IV-D-22) supported the EPA's decision to exempt from the proposed rule HCl production facilities that are already subject to certain other NESHAP, but requested that the EPA broaden the exemption to include facilities subject to any other NESHAP, whether it is already promulgated or yet to be promulgated. One commenter (IV-D-13) further suggested that the final HCl rule allow facilities that become subject to another NESHAP subsequent to the promulgation of the HCl rule be allowed to choose which rule to comply with, without delaying the affected source's compliance date beyond that specified in the final HCl rule.

Three commenters (IV-D-13, IV-D-15, IV-D-18) also requested that facilities that already have a federally enforceable air permit that requires 95 percent (suggested by IV-D-13) or 99 percent (suggested by IV-D-15 and IV-D-18) removal efficiency be exempted from the proposed rule. The commenters noted that a facility that is already in full compliance with a NESHAP or other federally enforceable requirement should not have to assume additional and burdensome testing, monitoring, reporting, and recordkeeping requirements.

Several commenters (IV-D-12, IV-D-13, IV-D-19, IV-D-21, IV-D-22) requested that the EPA clarify and/or expand exemptions in the proposed rule for facilities subject to other rules. Two commenters (IV-D-12, IV-D-13) requested that the exemption in proposed §63.8985(c)(1) for facilities subject to §63.113(c) of the HON be clarified to also exempt facilities that comply with the referenced section of the HON because they are required by another rule to do so. The commenters also requested that facilities that are complying with §63.994 of Subpart SS (the "standard standards"), which is equivalent to §63.113(c) of the HON, be specifically exempted from the proposed rule, regardless of which subpart referred the facility to §63.994.

One commenter (IV-D-10) requested that the proposed rule explicitly exempt facilities that are subject to the Pharmaceutical MACT (40 CFR Part 63, Subpart GGG). In the proposal preamble, the EPA acknowledged that the Pharmaceutical MACT also regulates HCl streams, but did not specifically exempt these facilities because it did not believe they produced HCl in sufficient concentrations to be subjected to the proposed rule.

The commenter stated that every HCl recovery process at a pharmaceutical manufacturing facility is covered by the Pharmaceutical MACT and that subjecting those operations to the proposed HCl rule would discourage facilities from recycling HCl.

One commenter (IV-D-19) requested that the specific exemptions for operations that produce liquid HCl following the incineration of chlorinated waste gas be expanded to include operations that produce liquid HCl following an incinerator subject to RCRA interim standards (40 CFR Part 265 Subpart O) or permit requirements (40 CFR Part 264 Subpart O). The commenter noted that exemptions in the HON referenced the RCRA provisions (§63.116(b)(5), §63.138(h)(1)).

Response: Just like the commenters, we are interested in avoiding overlapping situations where a process that produces HCl might be subject to more than one federal regulation. At proposal, we exempted processes that were subject to several specific standards, and asked for comments on other potential overlaps. Based on the comments received, we have added exemptions for processes subject to the Pharmaceutical MACT (40 CFR 63 subpart GGG), and §63.994 of subpart SS. We have also expanded the exemption to include any process required by another rule to comply with §63.113(c) of the HON. In addition, according to our proposed decision not to regulate $Cl_2$ and HCl emissions from chlorine production (67 FR 44713; July 3, 2002), we consider direct synthesis HCl production units that are directly associated with chlor-alkali facilities to be part of the chlor-alkali facilities. Therefore, an exemption has been added in the final rule to exempt direct synthesis HCl production processes that are part of chlor-alkali facilities.

We believe that the exemption in the proposed rule for processes subject to 40 CFR 264.343(b), which has been retained in the final rule, adequately addresses the concerns of Commenter IV-D-19.

We exempted the specific situations raised by commenters. However, we cannot include a generic exemption for "any other NESHAP" or any federally enforceable permit. We will consider such situations on a case by case basis under a request for an alternative non-opacity emission standard submitted in accordance with §63.6(g).

Comment: One commenter (IV-D-9) described the configuration at their plant, where the emissions from their HCl production facility were commingled with streams from other processes and routed to a liquid hazardous waste incinerator subject to 40 CFR 63, subpart EEE, which does include emission limitations for chlorine and HCl. The commenter points out that this situation

is not covered by the exemption in the proposed rule because the "operations that produce the HCl" are not subject to subpart EEE, only the incinerator to which the emissions are routed. The commenter suggested that the rule specify that processes are not subject to the rule if the process vent emissions are routed to an incinerator regulated under 40 CFR 63, subpart EEE.

Response: While this commenter raised this issue in regard to exempting entire HCl production facilities, it is actually an issue of exempting specific emission streams that are routed to a shared control device. We feel that it is necessary to demonstrate compliance with the provisions of this rule in situations where emissions from an affected source are routed to a shared control device. Therefore, we have not added the specific exemption requested. We would point out that we have made several changes to reduce the burden in these situations, such as establishing a percent reduction emission limitation and allowing the use of previous test results to demonstrate compliance.

Comment: Another commenter (IV-D-21) described the configuration of equipment at his facility and requested two specific clarifications of the exemptions for operations that produce liquid HCl following the incineration of waste gas streams: (1) clarify whether the intent was to exempt only the production equipment (e.g., absorber) or to also exempt the equipment that supports the production unit (e.g., storage tanks, transfer operations); and (2) whether incineration of liquid and/or solid waste was intended to be exempted or only incineration of gaseous material.

Response: Our intent is to exempt storage tanks, transfer operations, and all other equipment associated with an HCl production unit following the incineration of a waste gas stream. We agree with the commenter that this intent was not clear in the proposed rule. Therefore, we have clarified this point by specifically exempting HCl production facilities (which are defined to include tanks, transfer operations, etc.) following the incineration of waste gas streams, and not just the "operations that produce liquid HCl."

We also have made changes in response to the commenter's second point. Specifically, we have revised the language to include the incineration of "chlorinated waste gas streams, waste liquids, or solid wastes."

Comment: One commenter (IV-D-22) requested that the following statement made in the proposal preamble be changed because it creates confusion regarding overlap between HCl production facilities and HON facilities: "While the HCl

production process would be part of the HON affected source, the HCl emissions from these operations are not covered by the HON." The commenter stated that the sentence appears to make certain HCl production processes part of HON facilities, while at the same time subjecting them to the proposed HCl rule, seemingly creating the regulatory overlap that the EPA was trying to avoid.

Response: Unfortunately, the situation does exist where the same emission stream could be subject to both the HON and the HCl production MACT. Consider a chemical manufacturing process unit that produces ethylene dichloride (EDC) with an anhydrous HCl by-product. If the stream is routed to an absorber where 30 weight percent HCl liquid product is produced, the vent from that absorber would be subject to this HCl production NESHAP. However, the owner or operator would also need to calculate the total resource effectiveness (TRE) index value of the stream to determine if the organic HAP would require control under the HON.

An alternative that would eliminate this overlap would be to revise the HON to require control of HCl, in addition to the control of organic HAP. We believe that the potential regulatory overlap for a few plants with the current approach would be less burdensome than a major revision to the HON.

Comment: Several commenters (IV-D-06, IV-D-13, IV-D-14, IV-D-16, IV-D-18, IV-D-19) supported the proposed exemption for facilities that recycle all HCl production emissions streams or route them to another process, but requested that the exemption be clarified and expanded. One of the commenters (IV-D-06) recommended that legitimate on-site reuse of HCl should be exempted from the rule, because it is a beneficial activity that avoids the need to purchase new raw material. The commenter stated that the proposed rule seems to penalize beneficial reuse of HCl by imposing emission limitations on facilities that capture HCl in an absorber and reuse it while not imposing emission limitations on facilities that discard HCl from a process stream and purchase new HCl for on-site use rather than reclaiming it. The commenter stated that his company has a process that recycles the emissions from an absorber vent and sends the liquid HCl product directly to another process, but the process has a surge control vessel for balancing the production and consumption rates. The commenter stated that such a process should be exempted from the proposed rule even though the surge control tank does vent minimal emissions through a conservation vent.

Another of the commenters (IV-D-13) requested that the EPA exempt facilities that produce HCl as an intermediate product and consume it in another on-site production process. The commenter noted that some such facilities could be exempted under the

exemption in proposed §63.8985(d) for streams that are recycled or routed to another process before being discharged to the atmosphere, but wanted explicit exemption of all such facilities.

Response: We certainly support the recycling and re-use of potential waste materials, including HCl. Further, we are aware that much of the HCl produced is used by other processes on the plant site. However, we do not see a distinction between these processes and processes where the HCl product is truly "sold." We believe an exemption like the one cited by the commenter would unfairly favor large integrated facilities. Consider two similar HCl processes with similar equipment, similar production capacities, and similar emissions potential. We do not believe that distinguishing between these processes based on "where" the HCl is consumed is warranted. We did, however, retain in the final rule the exemption for processes that have no discharges to the atmosphere from process vents, storage tanks, or transfer operations.

As we have consistently stated, our intent is to cover HCl production processes that produce commercial-level concentrations and quantities of liquid HCl product. We believe that the 30 weight percent HCl criterion reasonably distinguishes commercial level production of HCl.

Comment: One commenter (IV-D-16) requested a specific exemption for recycling HCl that is used at a catalyst. The commenter described the process at his facility as follows: anhydrous HCl is input to a process as a catalyst, the outlet stream from the process contains HCl, water, product and unreacted raw material; gaseous water and HCl are separated from the outlet stream and sent to condensers and absorbers for recapture of the aqueous HCl which is converted to anhydrous HCl for reuse in the process. The commenter stated that the capture of HCl for reuse does not constitute "production" and should not be covered under the proposed rule.

Response: As discussed at proposal and in response to numerous comments in this document, our approach for the applicability for this rule was to separate the production of an HCl product from incidental production of HCl using a concentration cutoff, which is 30 percent by weight in the final rule. It is not feasible to base the applicability on the processes generating the anhydrous HCl or the processes using the liquid HCl product. Therefore, for the commenter's process, if the liquid product from the absorbers used to "recapture" the aqueous HCl is 30 weight percent HCl or greater, we would consider it to be an HCl production facility and it would be subject to the rule.

### 2.1.4 Exemptions for Specific Equipment

Comment: Several commenters (IV-D-13, IV-D-14, IV-D-19) requested that the proposed rule exempt individual emission streams that are recycled or routed to other processes, rather than requiring all of the emission streams to be recycled or routed to other processes in order to be exempted. The commenters stated that this revised exemption would serve to encourage pollution prevention in the case where a process vent stream is recycled but the liquid HCl product is sent to storage tanks and transfer operations that would be affected, whereas the existing exemption discourages recycling in this case. One commenter (IV-D-13) further stated that there is no need to impose emissions limitations on equipment that does not emit HAP because the outlet is recycled or routed to another process. One commenter (IV-D-19) pointed out that the proposal preamble states that an absorber whose outlet stream is recycled or routed to another process is "no longer part of the HCl production facility affected source" and requested that the rule text include such a clarification. The commenter specifically requested that gaseous streams from HCl production facilities that are routed to a powerhouse or process heater for use or reuse as fuel be exempted from the rule, as per the HON (§63.107).

Response: We agree with the commenters that specific streams recycled or routed to other processes should not be subject to the rule, in addition to the facility-wide exemption where all emission streams are recycled or routed to other processes. However, we do not feel that the most effective manner of handling this is by exempting these emission streams, primarily because they are not "emission" streams if they are not emitted. Therefore, we addressed this issue by defining an "emission stream" as a gaseous stream that is discharged to the atmosphere. If the stream is recycled or routed to another process, it would not be an emission stream and therefore, would not be subject to the final rule. Following is the specific definition of "emission stream" in the final rule:

> *Emission stream* means a gaseous stream originating from an HCl process vent, an HCl storage tank, an HCl transfer operation, leaking equipment in HCl service, or HCl wastewater operations that is discharged to the atmosphere. Gaseous streams that are routed to another process or recycled for reaction or other use of the HCl and/or chlorine (i.e., for pH control) are not emission streams. Gaseous streams from HCl transfer operations that are vapor balanced

to an HCl storage tank subject to this subpart are not emission streams.

With regard to the requested exemption for streams routed to a powerhouse or process heater, we would point out very significant differences between this rule and the HON. The HON regulates emission of organic HAP, which have a fuel value and are destroyed in a combustion device. Neither of these facts are true for HCl and chlorine, which are covered by this rule. Therefore, we do not believe that such an exemption is appropriate for this rule.

Comment: Several commenters (IV-D-09, IV-D-13) requested that individual vent streams from HCl production facilities that are routed through a control device that is installed to comply with another NESHAP also be exempted from the proposed rule. Two commenters (IV-D-13, IV-D-15) requested that individual emission points be exempted if they already have control equipment and are subject to any federally enforceable emission standard that requires at least 95 percent removal efficiency for HCl and chlorine, as is done in the HON (§63.113(c)(ii)) for "grandfathered" equipment.

Response: We did not make any changes in the final rule in response to these comments. First, we feel that it is necessary to demonstrate compliance with the provisions of this rule, even for shared control devices. General exemptions of the type suggested by the commenter would not ensure that the emission limitations required for the HCl production industry would be met. In fact, a 95 percent emission limitation is considerably less stringent than the emission limitations in the final rule. Exempting such facilities would create inequities within the industry. We would point out that we have made several changes to reduce the burden in these situations, such as establishing a percent reduction emission limitation and allowing the use of previous test results to demonstrate compliance.

Comment: One commenter (IV-D-13) requested that the EPA explicitly state that storage tanks and transfer racks that are used to store and transfer HCl that was purchased rather than produced on-site are not covered by the proposed rule, whether or not the plant site contains an HCl production facility.

Response: Storage tanks and transfer racks used to store and transfer purchased HCl should not be subject to the HCl production MACT. The changes we have made to the definition of HCl production facility make this clear. Specifically, final §63.8985(a)(1) states that an HCl production facility subject to the rule includes tanks that store product *produced in the HCl*

*production unit* and transfer operations that load HCl product *produced in the HCl production unit.*

Comment: One commenter (IV-D-16) requested clarification that process vents that are not associated with the production of HCl are not covered by the proposed rule. The commenter stated that the definition of a "hydrochloric acid process vent" ("a process vent through which an emission stream containing HCl is vented to the atmosphere") does not make this clear because it does not define "process vent" in the context of the definition.

Response: The commenter is correct in that we only intend to cover process vents associated with the production of HCl. We have made this clear in the final rule in the definition of HCl process vent, which states that an HCl process vent is a point of discharge originating from an HCl production unit.

Comment: Several commenters (IV-D-14, IV-D-15, IV-D-18, IV-D-22) requested that the EPA exclude from the affected source storage tanks that are used to store HCl for wastewater treatment (e.g., pH control of wastewater). One commenter inquired as to whether a storage tank that receives HCl directly from an HCl production unit and is used solely for wastewater treatment would be included in the affected source.

Response: We agree that storage tanks storing HCl for pH control of wastewater should not be subject to this rule, because this rule is designed to cover emission sources from the production of HCl, not the use of HCl. Therefore, we have specified in §63.8985(a)(2) that HCl storage tanks dedicated for use in wastewater treatment are not considered to be part of an HCl production facility, and therefore, not subject to the provisions of the final rule.

Comment: One commenter (IV-D-09) requested clarification that the affected source does not include equipment that is connected to an HCl production unit but is owned by another company. The commenter suggested that "located or co-located at a major source" be added to the definition of an HCl production facility to indicate that only equipment located at the major source that produces HCl is covered by the proposed rule.

Response: Our intent is that the rule only cover equipment used to produce, store, and transfer liquid HCl product at a plant site where the HCl production unit is located. However, we do not believe that the commenter's suggestion is the best approach to clarify this point. In the final rule, we have specified that the HCl production facility ends at the point where the HCl product leaves the plant site via pipeline. We

believe that this makes it clear that "off-site" equipment is not subject to the provisions of this rule.

Comment: Two commenters (IV-D-13, IV-D-14) requested that relief vents, sampling vents, and rupture disks be specifically exempted from the proposed rule. The commenters referred to the HON for an example of a definition of a relief valve (§63.111) and relief valve exemption (§63.107(h)(1)).

Response: We have exempted these types of equipment from the final rule.

Comment: Two commenters (IV-D-13, IV-D-16) requested that the proposed rule exempt transfer operations that perform vapor balancing during all loading operations. The commenters explained that vapor balancing means that vapors that are displaced while a mobile vessel (e.g., tank truck, railcar, ship, barge) is being loaded are returned via a vapor return line to the tank from which the vessel is being filled, thereby resulting in the prevention of emissions. The commenters cited the HON (§63.100(f)(10)) as an example of a rule that provides such an exemption. Another commenter (IV-D-22) requested an exemption for HCl distribution performed by mobile transporters (e.g., tank trucks, railcars) because such operations are generally vapor balanced.

Response: In the final rule, we have incorporated an exemption for transfer operations that are vapor balanced, provided that they are vapor balanced to a storage tank subject to the rule. This will ensure that the emissions are controlled because they are routed directly to a storage tank with emissions controls. This exemption is accomplished via the definition of emission stream, which states that gaseous streams from transfer operations that are vapor balanced to a storage tank subject to the rule are not emission streams, and, therefore, not subject to the emission limitations in the rule. We have also added a definition of "vapor balanced," which is consistent with the definition in the HON.

However, we do not believe it is necessary to exempt mobile transporters, as we have specified that the HCl production facility ends at the point that the HCl produced is loaded into a tank truck, rail car, ship, or barge.

Comment: Several commenters (IV-D-09, IV-D-12, IV-D-13, IV-D-14, IV-D-15, IV-D-17, IV-D-18, IV-D-19, IV-D-22) requested that the EPA exempt from the proposed rule storage tanks that are smaller than a certain capacity. The commenters pointed out that the potential emissions from small storage tanks are low while the control costs are very high.

One commenter (IV-D-09) suggested a minimum capacity of 15,000 gallons for storage tanks subject to the proposed rule. Several commenters (IV-D-12, IV-D-15, IV-D-18) requested that storage tanks smaller than 20,000 gallons capacity be exempted from the proposed rule. One commenter further requested an exemption for all portable storage containers (e.g., drums, tank trucks, railcars). Another commenter (IV-D-13) referred to several other rules (40 CFR Subpart G, Table 5; 40 CFR 60.110(b)) which exempt storage tanks with a capacity less than 75 cubic meters (19,817 gallons) and all portable storage containers. Several commenters (IV-D-14, IV-D-17, IV-D-22) reiterated a minimum capacity of 75 cubic meters. One commenter (IV-D-19) suggested that tank capacity and HCl vapor pressure be used together to determine which storage tanks should be exempt.

Response: We understand the commenters' concern about the cost of controlling emissions from small storage tanks. However, we believe that small storage tanks are not likely to be covered by the final rule given the other changes that we have made based on comments received. We have exempted storage tanks that never store liquid HCl product with a concentration of 30 weight percent or greater (see the next comment in this section). We have also defined the HCl production facility such that storage tanks that store HCl for use in wastewater treatment or as feedstock for another process are not part of the HCl production facility (see section 2.1.2). Therefore, we have not added an exemption for small storage tanks.

Comment: Several commenters (IV-D-12, IV-D-13, IV-D-15, IV-D-18) requested that the proposed rule exempt equipment (e.g., absorbers, storage tanks, transfer operations) that contains HCl below the minimum concentration specified in the HCl production facility definition (see comments in section 2.1.1 regarding raising the minimum concentration). The commenters noted that HCl solutions at low concentrations have low vapor pressures and, consequently, low emissions.

Response: As discussed above in section 2.1.1, we have revised the applicability criteria to only include HCl production facilities that produce liquid HCl product with a concentration of 30 percent by weight or greater. And we have specified that only storage tanks that contain, and transfer operations that load, this HCl product produced onsite in the HCl production unit are included in the HCl production facility. In addition, we have added exemptions [in §63.9000(c)] for storage tanks that never contain liquid HCl product with a concentration of 30 percent by weight or greater and transfer operations that never load HCl product at that concentration.

Comment: Several commenters (IV-D-09, IV-D-13, IV-D-14, IV-D-15, IV-D-16, IV-D-22) requested that the proposed rule exempt individual emission points (e.g., absorbers, storage tanks, transfer operations) that emit less than a certain amount of HAP per year because they are costly to control and controlling them contributes little environmental benefit. One commenter suggested that the proposed rule limit uncontrolled emissions from the entire affected source to 1 Mg (1.1 tons) per year. Another commenter (IV-D-13) suggested that the proposed rule exempt emissions points that emit less than 10 Mg (11 tons) of HAP per year. Several commenters (IV-D-13, IV-D-14, IV-D-15, IV-D-16, IV-D-22 )suggested that the proposed rule follow the example used in the HON (§63.113(c)) and exempt emission points that emit less than 0.45 kilograms of HAP per hour.

Response: We have changed the applicability criteria and added exemptions to reduce the burden associated with requiring controls on emission points that have little emission potential. We do not believe an additional exemption based on emissions is practical, as the burden to demonstrate and document the emission levels for these exempted points could approach or exceed the costs of installing controls. Therefore, no such exemptions were added to the final rule.

### 2.1.5 Once In, Always In

Comment: Two commenters (IV-D-13, IV-D-14) requested that the EPA reconsider its policy that, once a facility is subject to a MACT standard, the applicability of that and any other relevant MACT standards, promulgated presently or in the future, cannot be revoked. The commenters requested that language be added to the applicability section of the proposed rule, or to the General Provisions (40 CFR Part 63 Subpart A), to allow facilities to petition for removal of MACT applicability if a facility reduces its potential-to-emit below major source thresholds through measures not required by any applicable standard (e.g., process modifications, pollution prevention activities, material substitution, or process refinements). The commenters further requested that the proposed rule include language stating that the major source status of a facility will be evaluated as of the final promulgation date of the standard.

Response: This is an issue that is much broader than this rule. It is being considered as part of the General Provisions rulemaking. Therefore, it will not be addressed in this rulemaking.

## 2.2 COMPLIANCE DATES

### 2.2.1 Conflict with Electronic Compliance

Comment: Two commenters (IV-D-12, IV-D-13) stated that they will not be able to meet the reporting and recordkeeping deadlines in the proposed HCl rule if the proposed "Establishment of Electronic Reporting: Electronic Records" rule (proposed at 66 FR 46162) is promulgated. The commenters estimated that it would take them at least 10 years to develop and deploy computer systems capable of maintaining the records required under the proposed electronic records rule. The commenters therefore requested that, if the electronic records rule is promulgated, the final HCl production rule extend the dates for submitting applications, notifications, and reports by at least 10 years.

Response: If the proposed electronic reporting and recordkeeping rule is promulgated, electronic reporting and recordkeeping will remain "purely voluntary." The proposal preamble for the electronic records rule further states that the proposed electronic records rule would not amend any existing compliance requirements or affect whether documents need to be created, submitted, or retained under existing rules in Title 40 of the CFR. Facilities that wish to convert to electronic reporting and recordkeeping can continue to retain and submit records and reports in paper format until they develop adequate computer systems. Therefore, we have not changed the compliance dates in the final HCl rule, because the proposed electronic records rule does not provide a valid reason for suspending compliance requirements until facilities can develop appropriate computer systems capable of retaining and submitting electronic records and reports.

### 2.2.2 Specific Compliance Extension

Comment: One commenter (IV-D-11) asked for verification that the six-year compliance extension granted to one of his company's facilities would apply to the HCl production rule. The facility was granted the extension for participating in the Early Reduction Program (40 CFR Subpart D). The commenter assumed that the facility would not have to perform the initial performance test or submit any notifications, other than the Initial Notification, until nine years after the promulgation date of this rule (the 6-year extension plus the three years between promulgation and the compliance date as specified in the rule).

Response: According to section 112(i)(5) of the Clean Air Act, an existing source that achieves a HAP emission reduction of 90 percent or more for gaseous HAP or 95 percent or more for particulate HAP before an applicable standard is proposed shall

be issued a permit allowing the source to meet an alternative emission limitation for a period of six years from the compliance date for the otherwise applicable standard. The alternative limits and other terms and conditions must be put in a Title V permit as specified in 40 CFR subpart D. Sections 63.6(i)(2) (General Provisions) and 63.72 (Subpart D) implement this compliance extension for the Early Reduction Program. Assuming the commenter achieved the reduction before the HCl production MACT rule was proposed and they have been granted a 6-year extension in a Title V permit, the commenter's assumption appears to be consistent with the Clean Air Act provisions. However, a site-specific decision for the commenter's facility with respect to this rule will need to be made by the Administrator, or the delegated authority, after this rule is promulgated. In addition, the facility's compliance obligations under this rule will need to be included in the facility's Title V permit in accordance with Title V and 40 CFR Parts 70 or 71, as appropriate.

## 2.3 DEFINITIONS

### 2.3.1 Hydrochloric Acid Process Vent

Comment: Several commenters (IV-D-12, IV-D-13, IV-D-16) requested that the definition of "hydrochloric acid process vent" be clarified to indicate which vents are subject to the proposed rule because the proposed definition does not specify the equipment or process(es) from which such a vent originates. They also requested that a definition of "process vent" be added to the rule because the term is used in the "hydrochloric acid process vent" definition but not defined. The commenters provided suggested rule language both clarifying what a hydrochloric acid process vent is (e.g., a gas stream exiting a water scrubber/absorber) and defining what a process vent is (e.g., point of discharge to the atmosphere of a gas stream) and is not (e.g., relief valve discharge, etc.).

Response: First, we have changed the term from "hydrochloric acid process vent" to "HCl process vent" in the final rule to be consistent with the language in the affected source definition in §63.8990. We agree with the commenters that the definition of "hydrochloric acid process vent" could be more specific to indicate the parts of the process or unit operations from which an HCl process vent originates. Based on the available information, all of the hydrochloric acid process vents originate from an HCl absorber in which the liquid HCl product is produced (the "HCl production unit"). Therefore, in the final rule, we have specified that a HCl process vent originates from an "HCl production unit," which we have defined in the final rule (see

response to comment in section 2.1.1 regarding the definition of "HCl production facility").

While we agree with the concepts in the definition of process vent cited by the commenters, we decided to incorporate these general concepts into the definition of HCl process vent, rather than having a separate definition. Therefore, the definition of HCl process vent indicates that it is a point of discharge to the atmosphere or the point of entry into a control device of a gas stream and listing several things that are not process vents.

Following is the definition of "HCl process vent" in the final rule:

> HCl process vent means the point of discharge to the atmosphere, or point of entry into a control device, of a gaseous stream that originates from an HCl production unit. The following points of discharge are not HCl process vents:
> (1) A leak from equipment in HCl service subject to this subpart.
> (2) An exit from a control device used to comply with this subpart.
> (3) An HCl storage tank vent or HCl transfer operation vent subject to this subpart.
> (4) A HCl wastewater operation vent subject to this subpart.
> (5) A point of discharge from a relief valve.
> (6) A point of discharge from an analyzer.

### 2.3.2 HCl/$Cl_2$ Service

Comment: Several commenters (IV-D-07, IV-D-12, IV-D-13, IV-D-19) requested that the definition of "in HCl/$Cl_2$ service" be revised so that only equipment containing a certain minimum amount of HCl or $Cl_2$ is included. The commenters noted that, as written, the definition of "in HCl/$Cl_2$ service," which is used to indicate which equipment must be included in a leak detection and repair (LDAR) plan, seems to include any equipment that contains even trace amounts of HCl and chlorine, which could greatly increase the burden for sources to inspect this equipment and keep records of the inspections with minimal emission reduction. The commenters suggested several minimum levels including: one percent, because this is the minimum HCl or $Cl_2$ concentration reported on Material Safety Data Sheets (MSDS); 10 percent; and 31.45 percent, based on comments (see section 2.1.1) that this should be the minimum HCl concentration for an HCl production facility.

One commenter (IV-D-19) suggested that the EPA separate the existing definition into one definition for "in chlorine service" and one definition for "in HCl service." For the definition of "in chlorine service," the commenter suggested that the EPA adopt the concept used in the HON to define "in organic HAP service" (§63.161), which sets a lower limit of five percent by weight. For the definition of "in HCl service," the commenter suggested that 22 percent by weight be used as the lower limit because liquid HCl at a concentration of less than 22 percent by weight has a vapor pressure lower than 500 ppmv, which is the value used in other NESHAP to define the minimum concentration for equipment to be considered "leaking." The commenter reasoned that equipment containing less than 22 percent HCl by weight does not have the potential to be "leaking equipment" and should, therefore, not be included in the LDAR plan.

Response: First, as a result of other comments related to how the term "equipment" was used, the term "in $HCl/Cl_2$ service" has been replaced with "Equipment in HCl service" (see section 2.3.8).

We agree with the commenters that a minimum HCl level should be specified for equipment "in $HCl/Cl_2$ service." In considering the suggestion to separate the HCl service and $Cl_2$ service definitions, we concluded that only a definition of "in HCl service" is needed. A definition of "in $Cl_2$ service" is unnecessary because any equipment at an HCl production facility that contains $Cl_2$ would also contain HCl.

We have decided to establish separate minimum levels for liquid and gaseous HCl because leaking equipment containing gaseous HCl will leak gaseous HCl at the same concentration as that of the gas in the equipment, whereas equipment containing liquid HCl will leak gaseous HCl at the concentration of the gas in equilibrium with the liquid HCl. In the final rule, we define the minimum liquid HCl level as 30 percent by weight, to be consistent with the minimum liquid HCl concentration that defines an "HCl production facility" (see response to comment in section 2.1.1 regarding the minimum HCl concentration). We considered defining the minimum gaseous HCl level as the percent by weight of gaseous HCl in equilibrium with liquid HCl at 30 percent by weight, which is approximately 3.4 percent by weight at 30°C. We chose to define the minimum gaseous HCl level as 5 percent by weight to approximate the concentration in equilibrium with 30 percent liquid HCl by weight and to be consistent with the HON and other rules. The revised definition also reflects the fact that equipment is considered to be "in HCl service" if it ever contains greater than or equal to 30 percent liquid HCl by weight or 5 percent gaseous HCl by weight.

### 2.3.3 Caustic Scrubber

Comment: Several commenters (IV-D-12, IV-D-13, IV-D-16) requested that the definition of "caustic scrubber" be modified to reflect the fact that sodium hydroxide, not lime or limestone, is the most common caustic substance used. One commenter (IV-D-12) recommended that "sodium hydroxide" be added to the parenthetical list of caustic solutions in the definition. Another commenter (IV-D-13) stated that the inclusion of specific examples of caustic substances is unnecessary; the commenter also stated that caustic scrubbers are most often employed to control chlorine emissions.

Response: We agree with the commenters' suggestions and have removed the reference to specific caustic substances. We have also added a reference to the control of chlorine. Finally, to be consistent with our response to the comment in section 2.3.5 regarding the definition of water scrubber/absorber, we have changed the term to "caustic scrubber control device." Following is the definition of "caustic scrubber control device" in the final rule:

> Caustic scrubber control device means any add-on device that mixes an aqueous stream or slurry containing a caustic substance with the exhaust gases from an HCl process vent, HCl storage tank, or HCl transfer operation to control emissions of HCl and/or chlorine.

### 2.3.4 Deviation

Comment: The proposed rule defines a "deviation" as any instance in which an affected source fails to meet any (1) requirement established by this subpart, (2) term or condition included in the operating permit to implement any requirement in this subpart, or (3) emission limitation in this subpart during a startup, shutdown, and malfunction (SSM) event. Two commenters (IV-D-12, IV-D-13) requested that the EPA delete item (2) from the definition. The commenters argued that including this provision appears to extend the definition of deviation, and consequently the reporting requirements for deviations, to requirements imposed under Title V of the Clean Air Act (e.g., specified in a source's Title V permit). The commenters noted that Title III of the Clean Air Act, which authorizes the proposed rule, does not provide the EPA with the authority to enforce compliance with requirements specifically established under Title V.

One commenter (IV-D-12) further requested that the term "excursion" be used instead of "deviation" in the proposed rule

because "deviation" already has a specific connotation under Title V.

Response: We reject the commenters' request to delete item (2) from the proposed definition of the term "deviation." Item (2) is necessary to ensure that failures to comply with terms and conditions of Title V operating permits which implement the applicable requirements of this subpart are reported as deviations under this subpart. Title V and EPA's implementing regulations codified at 40 C.F.R. Part 70 require every major source (and certain other sources) to obtain an operating permit that assures compliance with each applicable standard, regulation or requirement (commonly known as "applicable requirements") under the CAA (CAA §§502(b)(5)(A), 504(a); 40 CFR §70.6(a)(1)). For sources subject to this subpart, the requirements of this subpart will be "applicable requirements" for purposes of Title V (40 CFR §70.2 defines "applicable requirement" to include any standard or other requirement under CAA §112). Accordingly, those sources' Title V operating permits must assure compliance with the requirements of this subpart. It follows that this subpart must define deviations to include failures to meet operating permit terms and conditions that are adopted to assure compliance with this subpart.

This subpart does not change sources' reporting obligations or EPA's enforcement authority under Title V. However, this subpart does allow sources to coordinate the submittal of the deviation reports required under this subpart with the semiannual monitoring reports required under Title V. Section 63.9050(b)(5) provides that where a Title V permitting authority has established dates for submitting semiannual monitoring reports required under 40 CFR §§70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A), affected sources that are subject to Title V permitting may submit the compliance reports required under this subpart according to the dates established by the permitting authority instead of the dates established in this subpart.

We also reject the request that the term "excursion" be used instead of the term "deviation." Use of the broader term "deviation" is consistent with other CAA requirements such as Title V reporting requirements and must be consistent to facilitate coordinated implementation, such as coordinated deviation reporting. Any excursion from an emission limitation or work practice standard is a deviation, regardless of whether such excursion is specifically excused or occurs when the emission limitation or work practice standard does not apply, such as during periods of startup, shutdown, or malfunction. To clarify the meaning of the term "deviation," however, we are adding a reference to any "work practice standard" in order to

make clear that the term applies to the site-specific LDAR program requirements of this subpart.

### 2.3.5 Water Scrubber/Absorber

Comment: Several commenters (IV-D-13, IV-D-16) requested that the definition of "water scrubber/absorber" be revised to reflect the fact that water scrubbers do not neutralize HCl and that, in the context of the proposed rule, they are used to control emissions and not to absorb HCl.

Response: We agree that the definition of "water scrubber/absorber" should be modified to clarify that they do not neutralize HCl, because they do not use caustic substances. In response to the comment that water scrubber/absorbers are not used to absorb HCl, we note that the devices used to produce HCl through absorption into water or dilute hydrochloric acid are very similar (even identical) to the devices that are sometimes used to control emissions from HCl production facility emission points. In the final rule, we have changed the term "water scrubber/absorber" to "water scrubber control device" which specifies that it is used to control emissions from an HCl process vent, HCl storage tank, or HCl transfer operation. Additionally, we have added a definition of "HCl production unit" which specifies that water absorbers are used to produce HCl through absorption into water or dilute HCl (see response to comment in section 2.1.1 regarding the HCl production facility definition). Following is the definition of "water scrubber control device" in the final rule:

> Water scrubber control device means any add-on device that mixes an aqueous stream not containing a caustic substance with the exhaust gases from an HCl process vent, HCl storage tank, or HCl transfer operation to control emissions of HCl and/or chlorine.

### 2.3.6 Transfer Operations

Comment: Two commenters (IV-D-13, IV-D-19) requested that the definitions of "transfer (or loading) rack" and "transfer operation" be amended to clarify that only operations transferring HCl above the minimum HCl concentration specified for an HCl production facility are affected.

Response: First, we have changed the term from "transfer operation" to "HCl transfer operation" in the final rule to be consistent with the language in the affected source definition in §63.8990. We agree with the commenters' point that transfer operations transferring liquid HCl that is more dilute than the

minimum concentration in the applicability criteria should not be subject to the rule. Therefore, §63.9000(c)(3) exempts HCl transfer operations that never load liquid HCl product with a concentration of 30 percent by weight or greater. Furthermore, we have added a clarification to the "HCl transfer operation" definition that only those transfer operations for which HCl is the predominant use are considered "HCl transfer operations." Predominant use is defined within the "HCl transfer operation" definition as the material that is loaded by the transfer rack in the greatest amount.

### 2.3.7 Storage Tanks

Comment: Two commenters (IV-D-13, IV-D-16) requested that the EPA add a definition of "HCl storage tank" to the proposed rule in order to clarify which storage tanks are affected. The commenters suggested that the definition include: a minimum size (10,000 gallons, 75 cubic meters), a minimum concentration of HCl stored in the tank (10 percent), and a list of things that are not storage tanks (e.g., vessels permanently attached to mobile vehicles, bottoms receiver tanks, surge control vessels, and wastewater storage tanks).

Response: We agree with the commenters and have added a definition of "HCl storage tank" to the rule. The definition specifies that vessels permanently attached to vehicles and wastewater storage tanks are not HCl storage tanks. We have chosen to include bottoms receiver tanks and surge control vessels as HCl storage tanks because the control requirements do not necessitate a distinction between storage tanks and bottoms receiver tanks and surge control vessels.

We believe that tanks that only store dilute HCl product produced in the HCl production unit should be considered part of the HCl production facility and the affected source, but should not be subject to the emission limitations. An exemption for such storage tanks is provided in §63.9000(c) of the final rule. We also believe that small storage tanks that store liquid HCl product produced on-site in the HCl production unit should be considered part of the affected source. However, we believe that most small storage tanks are unlikely to be subject to the rule because of the exemptions for wastewater tanks, feedstock tanks, tanks attached to vehicles, and tanks storing dilute HCl. Therefore, the definition does not include a minimum size.

### 2.3.8 Equipment

Comment: One commenter (IV-D-16) stated that the word "equipment" seems be used to mean several things in the proposal preamble and proposed rule. The commenter stated that the

meanings of the word in proposed §63.8985(a)(1) and §63.8990(b)(4) are confusing. The commenter suggested that the EPA include a definition of "equipment" in the proposed rule and make it clear when the use of this meaning is intended.

Response: We agree with the commenter that using the term "equipment" in different contexts could cause confusion. We have added a definition of "equipment in HCl service" to the rule to apply specifically to the "equipment" mentioned in proposed §63.8990(b)(4) that is to be covered by the equipment leak plan. Also, see the response related to the proposed definition of "In $HCl/Cl_2$ service" in section 2.3.2.

To clarify the meaning of "equipment" in the definition of an HCl production facility in proposed §63.8985(a)(1), we have revised the definition of "HCl production facility" to include "unit operations and associated equipment" instead of "equipment" (see response to comments in section 2.1.1).

## 2.4 MACT DETERMINATIONS

### 2.4.1 Basis for MACT Standard

Comment: Many commenters (IV-D-09, IV-D-13, IV-D-14, IV-D-15, IV-D-16, IV-D-17, IV-D-18, IV-D-22) stated that the EPA did not use data that was truly representative of the sources in the source category when determining the MACT emission limitations. The commenters believed that the database used to prepare the proposed rule contained facilities that would not be subject to the proposed rule and did not contain many facilities that would be subject to the proposed rule. One commenter (IV-D-17) stated that the universe of sources subject to the proposed rule is likely to be around 200 to 300, rather than the 64 facilities that the EPA identified as potentially subject. A trade organization (IV-D-13) stated that the universe of sources subject to the proposed rule is likely to be much greater than the 64 sources that the EPA identified as potentially subject. Many companies that are members of the commenter's organization operate HCl production facilities which were not included in the EPA's list of 64 potentially subject sources or in the database of 31 facilities that the EPA used to establish the MACT floor. Some commenters provided specific examples of this inclusion/exclusion. Commenter IV-D-16 noted that the company operates HCl production units at three major source plant sites which were not appropriately represented in the database. One of these sites was listed as potentially subject facility, along with another site owned by the company that is not a major source site. Information for one HCl production unit (associated with fumed silica production) at the major source site was included in the MACT database. Therefore, two major source sites were not

included in the list of 64 potentially subject facilities. Further, there are four HCl production units at these two sites, and two additional units at the site where fumed silica is produced, that were not represented in the MACT database. Therefore, this commenter points out that the EPA's MACT floor database did not contain information regarding six of the commenter's company's seven HCl production units. Commenter IV-D-06 noted two instances of plants listed as owned by their company that should be removed from the list (the company no longer owned a plant at one location listed and another one had been dismantled). Another commenter (IV-D-18) stated that many of the facilities included in the database are currently regulated, or will be regulated, by other MACT standards and are, therefore, not part of the HCl production source category. Commenter IV-D-09 also pointed out several detailed errors related to a facility owned by the commenter's company in the EPA's database.

Commenter IV-D-15 maintained that this lack of representativeness of the source category resulted in proposed emission limitations that were not adequately justified for the HCl production source category. Another commenter believed that the use of more representative data could change the MACT determination (IV-D-13). Commenter IV-D-14 believed that the EPA should withdraw the proposed rule and re-propose it after properly surveying the industry and re-calculating the MACT floor based on accurate data.

Two of the commenters (IV-D-14, IV-D-18) specifically requested that EPA gather data, including control device characterization and stack test data, from a more representative group of potentially affected facilities using its authority under §114 of the Clean Air Act and use the data to re-calculate the MACT floor. Several of the commenters offered to provide additional information.

Commenter IV-D-18 expressed the belief that accurate data would show that a MACT standard is not necessary for this source category because the small emission reduction is not worth the large associated cost.

In addition to comments related to how well the EPA database represents the HCl production source category, one commenter (IV-D-15) questioned the use of information from "hollow" Title V permit applications.

<u>Response</u>: First, we will review the process used to obtain the information for the HCl production source category, followed by responses to the specific issues raised by the commenters.

In creating our list of sources in the HCl production source category, we consulted the *Chemical Economics Handbook*[1] (CEH), a very reliable and well-respected source of information on the chemical industry. We recognized the special difficulty in identifying all HCl production facilities, since HCl is often produced from by-product streams only for internal uses, and considered that this CEH list may not be a comprehensive list of facilities that could be subject to the proposed rule. Therefore, during a February 28, 2001 meeting with the American Chemistry Council (Commenter IV-D-13) and member company representatives, we specifically requested assistance in improving our list of facilities created from the CEH.[2] However, no additional information resulted from this request for assistance.

The CEH listed 86 plant sites where HCl is produced. As pointed out by commenters, it is possible that HAP emissions from HCl production facilities could be covered by another MACT standard, and we attempted to identify such sources in the CEH list and remove them from our list of facilities in the source category.[3] Specifically, we removed facilities that we believed could be subject to NESHAP for the following source categories: chlorine production, steel pickling - HCl process, primary magnesium, and pesticide active ingredient. We also removed facilities that were noted to produce HCl via the combustion of chlorinated organic compounds. This left 61 plant sites. We then added three more plant sites that we were made aware of through contacts with State agencies, for a total of 64 sites.

The applicability provisions of the proposed HCl production NESHAP, especially those aspects related to potential overlaps with other NESHAP, are quite difficult to apply without considerable information about each facility. The complexity is further increased by the fact that several of the NESHAP with potential overlaps have yet to be proposed. Actual site-specific applicability determinations will need to be made by each

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[1] Byth, W.A., Leder, A., and Takei, N. CEH Marketing Research Report: Hydrochloric Acid. SRI International. December 1998.

[2] Memorandum. Friedman, B., EC/R Incorporated, to Maxwell, B., EPA/CG. Summary of Meeting with American Chemistry Council. March 8, 2001. {Docket Item II-E-2}

[3] Memorandum. Maxwell, B., EPA/OAQPS/ESD, to Hydrochloric Acid Production NESHAP Docket. List of Facilities in the Hydrochloric Acid Production Source Category. March 21, 2001. {Docket Item II-B-7}

owner/operator and the appropriate regulatory agency after these NESHAP are finalized.

While commenters claim that there could be potentially two or three times more facilities subject to the HCl production NESHAP than we originally estimated, there was little substantial information provided to support this claim. There were two sites on the list that Commenter IV-D-06 said should be removed. Commenter IV-D-18 reported that all of the HCl production processes located at one site would be subject to other MACT standards, and should not be included in the HCl production source category. Commenter IV-D-16 alluded to the fact that one plant site listed for their company was an area source, and that two additional sites that are major sources where HCl is produced did not appear on the list. One of these missing sites was on the original CEH list but was removed because HCl production was identified as being associated with a chlor-alkali plant. Since the commenter did not provide the location of the final facility, we were unable to add it to the list of potentially subject facilities. Therefore, there were no HCl production plant sites specifically mentioned (i.e., a plant name/site location provided) by commenters that were not on the list of 64 potentially subject facilities.

We removed the three facilities from the list noted by Commenters IV-D-06 and IV-D-18. In addition, we realized that four additional facilities that were identified as HCl producers through contacts with State agencies prior to proposal were inadvertently left off the list. Therefore, the updated list of potentially subject facilities contains 65 plant sites.

As was documented in several items in the docket, our information gathering approach for this source category was to obtain available information from State/Local agencies in States where HCl production facilities are located. Specifically, we obtained information during a visit to the Louisiana Department of Environmental Quality offices for 12 plant sites in Louisiana, and we requested information from every other State agency where four or more HCl production facilities are located (based on the CEH list prior to the removal of facilities).[4] This resulted in data for 24 HCl production units at 19 plant sites in 5 States. In addition, we had information from site visits to 6 additional HCl production units at 5 more plant sites, meaning that the MACT database contained information representing 30 HCl production

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[4] Memorandum. Seaman, J. and Norwood, P. EC/R Incorporated, to Wood, J., EPA/OAQPS/ESD/MICG. Request to State Agencies for Title V Permit Applications. November 16, 1999. {Docket Item II-B-1}

units at 24 plant sites in 9 States. We believe that this was a reasonable approach to obtain information for this industry.

Some commenters requested that we distribute a questionnaire under our section 114 authority to "accurately reflect the source category." However, the commenters did not provide a list of plants to whom this questionnaire should be sent to ensure that the data were more representative than the data set we obtained from State agency files. Some commenters, however, did offer to provide additional information for their HCl production units, which could have resulted in data for a few additional processes. However, we concluded that the original data set was adequate to determine MACT and did not feel it was necessary to burden the industry with a data collection request.

One commenter objected to the use of data from "hollow" Title V permit applications. These applications contained process information, control device information, and emissions information that we believe was adequate to use in determining MACT. Further, unless proven otherwise, we will continue to operate under the assumption that data provided by companies and certified by their responsible officials in Title V permit applications are truthful, accurate and complete representations of the emissions and controls and that such data are appropriate to consider in determining MACT.

Commenters also complained that many of the plants considered in the MACT floor analysis were actually plants that are not in the source category. These commenters are correct, in part, in that we did utilize data from two plants that we have removed from the CEH list because we presumed that these HCl production processes were, or would be, subject to another MACT standard. To eliminate this inconsistency, we have removed these two facilities from the MACT analysis. As noted above, Commenter IV-D-18 provided information that indicated that all HCl production processes at one of their facilities were, or would be, subject to other MACT standards. This facility, which was one that was included in the MACT floor determination at proposal, was also removed from the MACT floor analysis. Two commenters (IV-D-09 and IV-D-18) pointed out that the data used in the floor analysis for two facilities were for related processes at the site that would not be subject to the rule. These were also removed from the analysis. Finally, we recognized that one of the facilities appeared twice in the database, once based on information that was obtained during a site visit (it was listed as a CBI facility in the MACT floor analysis prior to proposal), and once based on information that was provided by a State agency. Since the State data were more complete, we removed the other occurrence from the database.

Therefore, the revised MACT floor analysis is based on facilities that, to the best of our knowledge, are in the source category.

While we did not agree with the commenters regarding the representativeness and adequacy of our MACT database, and we did not undertake an additional data gathering effort after proposal, we did revise our MACT analysis to address many of the other issues raised by commenters regarding the determination of the emission limitations. Specifically, we would point out changes in the methods for determining the MACT floor, alternative emission limitations (including the determination of the alternative concentration limitation), and the assumptions regarding common control devices in the impacts analysis. These are discussed in the following sections.

### 2.4.2 Determination of MACT Floor

Comment: One commenter (IV-D-13) challenged the EPA's application of the requirement in §112(d)(3) of the Clean Air Act to set the MACT floor based on the average emission limitation already being achieved by the best-performing 12 percent of the existing sources (or the best-performing 5 sources for categories or subcategories with fewer than 30 sources). The commenter stated that the EPA should have based the floor calculation on the top 12 percent of the sources rather than on the top 5 sources because it used data for 31 sources and estimated that there are 64 sources in the source category. Additionally, the commenter stated that the EPA should have calculated the floor using the average of the top facilities rather than the median.

Response: As noted above, we currently estimate that there are 65 sources in the source category. Therefore, if data were available for all sources, the MACT floor would be based on the best-performing 12 percent, or 8 sources. In our re-analysis of the MACT floor, we considered the control achieved by the best-performing 8 sources in our database, which contains information on 20 facilities.

We disagree with the commenter's opinion regarding use of the average rather than the median. As was stated in the preamble for the proposed rule (66 FR 48180), we have determined that "average" means any measure of central tendency, whether it be the arithmetic mean, median, or mode, or some other measure based on the central tendency of a data set. We continue to believe that this determination, which we originally published over eight years ago (June 6, 1994, 59 FR 29196), is sound. For the MACT determination for this source category, which was in the format of a percent emission reduction, we determined that selection of the median value was most appropriate. This ensured that a control efficiency actually being achieved was selected,

rather than the mean of values, which would not likely have represented the actual performance of an actual control device.

Comment: Two commenters (IV-D-13, IV-D-14) disagreed with how control efficiencies reported as >99 percent were used in the MACT analysis. Specifically, they stated that the EPA established the MACT floor for transfer operations using reasoning that was inconsistent with that used to establish the MACT floor for process vents and storage tanks. The commenters pointed out that the EPA disregarded data points listed as "greater than 99 percent removal efficiency" when establishing the MACT floor for process vents and storage tanks, but included such values for transfer operations. The commenters stated that, using reasoning consistent with that used for process vents and storage tanks, the MACT floor for transfer operations should be zero percent removal efficiency because the only data point that the EPA has for transfer operations other than two "greater than 99 percent" values was zero percent. One commenter (IV-D-13) requested that the EPA either set the MACT floor at zero percent, or at 66 percent, which would be the mean of the three data points. The other commenter (IV-D-14) requested that the EPA set the MACT floor at zero percent and eliminate all of the testing, monitoring, reporting, and recordkeeping requirements for transfer operations.

Commenter IV-D-13 further stated that, when the EPA disregarded data from top facilities because their control efficiencies were listed as greater than 99 percent rather than as specific numerical control efficiencies, the EPA should have supplemented the data set of "top facilities" using the next best performing sources. For example, if the EPA had used the top 5 process vents, not including those listed as greater than 99 percent, the median would have been 99 percent rather than 99.4 percent.

Response: These commenters are correct in that we were inconsistent in how we considered facilities that reported control efficiencies as >99 percent. In evaluating this issue, we determined that it was inappropriate to have not considered some of the most effective controls in the source category for process vents and storage tanks simply because their efficiencies were reported as "greater than" a particular number. Therefore, in our re-analysis of the MACT floor, we assigned a numerical value of 99 percent emission reduction to each control device that reported an efficiency of > 99 percent or ≥ 99 percent. The data points reported as > 99 percent or ≥ 99 percent were obtained from permit applications and we had no data that indicated more specific control efficiencies in these cases. We believe that rounding these data points down to 99 percent

represents the closest actual control efficiency that we are sure these sources could consistently meet.

### 2.4.3 Re-Evaluation of MACT Floor

As discussed above, commenters had several issues with both the data considered in the MACT floor analysis and aspects of the MACT determination approach. As pointed out above in our responses to these issues, we addressed many of these comments, which resulted in the need to re-evaluate the MACT floor. Following is a summary of the updated MACT floor analysis based on the revised data set and modified approach. As a reminder, the MACT floor addressed HCl emissions from process vents, storage tanks, and transfer operations, and chlorine emissions from process vents. Further, the format of the MACT floor for all emission sources is a percent reduction. For process vents, Table 2-1 shows the control efficiencies for HCl emissions and Table 2-2 shows them for chlorine emissions. The control efficiencies for storage tanks and transfer operations are shown in Tables 2-3 and 2-4, respectively.

In our re-evaluation, we determined the MACT floor for existing sources as the median value of the top eight facilities in the data set for each type of emission source. For HCl emissions from process vents, the highest 8 control efficiencies are 99.4 percent, 99.4 percent, ≥99 percent, >99 percent, 99 percent, 99 percent, 99 percent, and 99 percent. For the values reported as >99 percent, we simply assumed 99 percent. The median of these 8, which is the MACT floor for existing sources, is 99 percent.

For chlorine emissions from process vents, the highest 8 control efficiencies are 99.8 percent, 99.4 percent, ≥99 percent, >99 percent, >99 percent, 99 percent, 99 percent, and 99 percent. Assigning 99 for those facilities reporting >99 percent, the MACT floor for existing sources is 99 percent.

For HCl emissions from storage tanks, the highest 8 control efficiencies are 99.9 percent, 99.85 percent, >99 percent, 99 percent, 98 percent, 95 percent, 90 percent, and 90 percent. The median value, then, is 98.5 percent.

There are only 2 control efficiencies for HCl emissions from transfer operations, both reported as >99 percent. Assigning 99 for these plants, the MACT floor for existing sources is 99 percent.

Therefore, the revised MACT floors for existing sources are 99 percent emission reduction for HCl emissions from process vents and transfer operations, 99 percent for chlorine emissions

from process vents, and 98.5 percent for HCl emissions from storage tanks. For consistency, we believe it is appropriate to round the storage tank value to 99 percent.

The revised MACT floors for new sources are 99.4 percent emission reduction for HCl emissions from process vents, 99.8 percent emission reduction for $Cl_2$ emissions from process vents, 99.9 percent emission reduction for HCl emissions from storage tanks, and 99 percent emission reduction for HCl emissions from transfer operations. These new source MACT floors are based on the level of control achieved by the best controlled source in the category.

**Table 2-1. Process Vent HCl Controls.**

| Company | Location | Control Device(s) | Control Efficiency (percent) |
|---|---|---|---|
| Dow Chemical Co. | Plaquemine, LA | Gas scrubber | 99.4 |
| CBI Facility C | | 2 Caustic scrubbers | 99.4 |
| Louisiana Pigment Co. | Westlake, LA | Gas scrubber | ≥99 |
| Formosa Plastics Corp. | Pt. Comfort, TX | Caustic scrubber | >99 |
| Bayer Corp. | New Martinsville, WV | Water scrubber | 99 |
| Georgia Gulf | Plaquemine, LA | Wet scrubber | 99 |
| E.I. DuPont de Nemours | Parkersburg, WV | Wet scrubber | 99 |
| DuPont Co. | LaPlace, LA | Wet scrubber | 99 |
| Degussa Corp. | Waterford, NY | Wet scrubber | 99 |
| Allied Signal | Baton Rouge, LA | Venturi scrubber | 99 |
| Dow Chemical | Plaquemine, LA | Wet scrubber | >95 |
| DuPont Dow Elastomers | LaPlace, LA | Wet scrubber | 95 |
| CBI Facility E | | Caustic scrubber | 83.3 |
| CBI Facility A | | none | 0 |
| Shell Oil Co. | Norco, LA | Scrubber | not given |
| CBI Facility B | | Caustic scrubber | not given |

**Table 2-2. Process Vent Chlorine Controls.**

| Company | Location | Control Device(s) | Control Efficiency (Percent) |
|---|---|---|---|
| CBI Facility E | | Caustic scrubber | 99.8 |
| Dow Chemical | Plaquemine, LA | Gas scrubber | 99.4 |
| Louisiana Pigment Co. | Westlake, LA | Gas scrubber | ≥99 |
| Formosa Plastics | Pt. Comfort, TX | Water scrubber & caustic absorber | >99 |
| CBI Facility B | | Caustic scrubber | >99 |
| Allied Signal | Baton Rouge, LA | Venturi scrubber | 99 |
| Degussa Corp. | Waterford, NY | Wet scrubber | 99 |
| DuPont Co. | LaPlace, LA | Wet scrubber | 99 |
| Dow Chemical Co. | Plaquemine, LA | Wet scrubber | >95 |
| DuPont Dow Elastomers | LaPlace, LA | Wet scrubber | 95 |
| CBI Facility A | | none | 0 |
| Shell Oil Co. | Norco, LA | Scrubber | not given |
| CBI Facility C | | 2 Caustic scrubbers | not given |

**Table 2-3. Storage Tank HCl Controls.**

| Company | Location | Control Device(s) | Control Efficiency (percent) |
|---|---|---|---|
| Dow Chemical | Plaquemine, LA | Gas Scrubber | 99.9 |
| DuPont | Parkersburg, WV | Scrubber | 99.85 |
| DuPont | Louisville, KY | Scrubber | >99 |
| PPG Industries | Natrium, WV | Scrubber | 99 |
| Allied Signal | Baton Rouge, LA | Wet scrubber | 98 |
| DuPont Dow Elastomers | LaPlace, LA | Wet scrubber | 95 |
| DuPont | Parkersburg, WV | Scrubber | 90 |
| CBI Facility B | | Scrubber | 90 |
| Vista Chemical | Lake Charles, LA | Floating roof | 86.2 |
| CBI Facility C | | Scrubber | not given |
| LaRoche Industries | Baton Rouge, LA | None | 0 |
| Dow Chemical | Plaquemine, LA | None | 0 |
| CBI Facility A | | None | 0 |

**Table 2-4. Transfer Operations HCl Controls.**

| Company | Location | Control Device | Control Efficiency (percent) |
|---|---|---|---|
| DuPont | Louisville, KY | Scrubber | >99 |
| Formosa Plastics Corp | Pt. Comfort, TX | Caustic scrubber | >99 |
| Dow Chemical | Plaquemine, LA | Gas Scrubber | not given |
| Shell Oil Co. | Norco, LA | None | 0 |

### 2.4.4 Concentration Emission Limitations

Comment: Several commenters (IV-D-06, IV-D-13, IV-D-14, IV-D-15, IV-D-16, IV-D-18) disagreed with the basis for the proposed outlet concentration limits. They stated that the EPA established the concentration equivalents to the MACT floor based on data that do not accurately reflect the variability of sources in the source category. Commenter IV-D-13 noted that a recent court decision (*National Lime Association v. EPA*, 233 F. 2d 625 [D.C. Cir. 2001]) reiterated the EPA's duty to consider the variability that best-performing sources experience.

As outlined in the supporting documentation,[5] these limits were developed by applying the MACT floor percent reduction efficiencies to the highest uncontrolled concentrations in the data set. These uncontrolled concentrations were 2,044 ppmv for HCl and 9,650 ppmv for chlorine. Commenters (IV-D-06, IV-D-13, IV-D-14, IV-D-15, and IV-D-16) noted that facilities in the source category often have emission points (with only one exception, all examples raised by the commenters were for storage tanks and transfer operations) that emit much higher concentrations of HCl and $Cl_2$ or emit at much higher air flow rates than the facilities included in the EPA's database. The commenters stated that emission points with high concentrations would need removal efficiencies greater than the MACT floor levels in order to meet the proposed concentration limits, which the EPA proposed as being equivalent to the MACT floor percent removal efficiencies. Therefore, the commenters maintained that the proposed emission limits were far beyond the MACT floor and not justified.

These commenters provided examples to support their position. One commenter (IV-D-14) cited an example of a transfer operation that emits 126,000 ppmv HCl. After control in a scrubber system with a removal efficiency of greater than 99 percent, the outlet concentration is 131 ppmv. The commenter cited another example of a storage tank that emits greater than 7,500 ppmv HCl before control. Another commenter (IV-D-06) stated that his facility has a high air flow multi-stage scrubber system (approximately 25,000 acfm) that removes several pollutants with high control efficiencies, but could not meet the proposed concentration limits. The system would have to be retrofitted at a cost of $1 million in order to meet the concentration limits. Commenter IV-D-13 cited storage tanks

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[5] Memorandum. Hartmann, A. and Norwood, P., EC/R Incorporated, to Maxwell, B., EPA/OAQPS/ESD. Determination of Concentration Equivalents to MACT Floor for the Hydrochloric Acid Production Source Category. March 21, 2001. {Docket Item II-B-6}

containing 21 and 32 weight percent HCl that are controlled by a scrubber guaranteed by the manufacturer to achieve a control efficiency of over 99 percent that cannot achieve the proposed emission limits. Commenter IV-D-16 also gave an example of a storage tank that could not meet the proposed concentration limit, even though the MACT floor emission reduction percentage is being achieved. Commenter IV-D-14 noted that the uncontrolled chlorine concentration from the company's process vents can exceed 35,000 ppmv.

Alternatively, one commenter (IV-D-08) stated that the proposed emission limits are not as stringent as they should be. The commenter stated that the MACT floor control efficiencies are appropriate, but that they were inappropriately converted to equivalent concentration limits. The commenter stated that the EPA chose as equivalent to the MACT floor control efficiency the highest concentration (e.g., 12 ppmv HCl) from the range of concentrations that are already being achieved (e.g., 0.03 - 12.3 ppmv HCl) and noted that recent court decisions reiterate that the EPA must set the MACT floor at the average already being achieved by the best performing 12 percent of the sources, not at a level at which all sources can easily meet. The commenter urged the EPA to establish emission limits that are appropriately stringent based on the MACT floor control efficiencies.

Commenters offered three basic suggestions on how to deal with this perceived problem. Several commenters (IV-D-13, IV-D-14, IV-D-15, and IV-D-18) requested that the EPA collect and examine inlet concentration data from a variety of additional process vents, storage tanks, and transfer operations, and develop emission limits that are more appropriate to the actual inlet concentrations observed in the source category.

In the absence of more data, commenters (IV-D-13, IV-D-14, IV-D-15) encouraged the EPA to establish a tiered control efficiency based on flow rate. This would avoid the situation in which already-well-controlled scrubbers with high air flow rates incur a high additional cost to achieve the proposed concentration limit. Commenters IV-D-13 and IV-D-14 recommended a 99.4 percent removal efficiency for scrubbers with flow rates less than 1,000 dry standard cubic feet per minute (dscfm), and 95-96 percent removal efficiency for scrubbers with flow rates greater than 1,000 dscfm. This suggestion was based on a review of the data used to establish the concentration equivalents to the MACT floor. The commenters pointed out that the only two scrubbers in the EPA's database that achieved a 99.4 percent removal efficiency have flow rates less than 1,000 dscfm. Based on the stack tests from the industry as well as the EPA's database, the commenter stated that a control efficiency of 95 to 96 percent is more accurate for high air flow scrubbers.

The final suggestion by several commenters (IV-D-06, IV-D-13, IV-D-14, IV-D-15, IV-D-16, IV-D-18) was that the EPA allow compliance with either a control efficiency or an emission limit, whichever is less stringent. The commenters stated that such an alternative would relieve the situation where control devices have high removal efficiencies but cannot meet the proposed concentration limits because they have high inlet concentrations. Commenter IV-D-14 stated that the alternative compliance options are necessary because, given the EPA's small data set and the variability of inlet concentrations found in the source category, the EPA did not have adequate grounds for establishing one HCl concentration limit for all process vents, storage tanks, and transfer operations. The commenter stated that allowing alternative compliance options would eliminate the burden for sources to control trivial amounts of emissions (e.g., from already-well-controlled sources that do not meet the proposed concentration limits). This commenter also countered the EPA's argument that it would be difficult to determine how and where to measure a control efficiency (versus the relative ease of measuring a concentration) by stating that, for most units in the source category, the HCl production unit (e.g., absorber) is easily distinguishable from the control device (e.g., scrubber system), which would make it relatively easy to measure a control efficiency over the control device. These commenters cited several part 63 NESHAP that contained such alternative emission limits.

Response: First, we reject the commenters' opinion that additional data are needed to establish these concentration equivalents. As discussed in detail in section 2.4.1, we believe that our data gathering approach was sound and are not convinced that additional data gathering would necessarily result in data that better characterizes the industry.

However, we recognize that none of the data used to establish the concentration equivalents were from storage tanks or transfer operations. We agree that uncontrolled concentrations from storage tanks and transfer operations are likely to be much higher than those for the process vents in our data set because HCl remains in storage tanks and transfer operations for a long enough time for the concentration in the vapor to reach equilibrium with the concentration in the liquid, whereas HCl passes through HCl production units quickly. We would expect that, in many cases, the vapor space in storage tanks and transfer operations will be saturated. As discussed in section 2.1, we have revised the source category definition to include production of liquid HCl at a concentration of 30 percent (by weight) or greater. At saturation, the HCl vapor concentration above a 30 percent HCl liquid would be around 12,000 ppmv. Applying the existing source MACT floor reduction

efficiencies (99 percent for storage tanks and for transfer operations) to this concentration results in an outlet concentration of 120 ppmv. Applying the new source MACT floor reduction efficiencies (99.9 percent for storage tanks and 99 percent for transfer operations) to this concentration results in an outlet concentration of 12 ppmv for storage tanks and 120 ppmv for transfer operations. These are the emission limitations for storage tanks and transfer operations in the final rule.

With one exception, the comments did not indicate that the uncontrolled concentrations used to determination the emission limitations for process vents (2,044 ppmv for HCl and 9,650 ppmv for chlorine) were inappropriate. Therefore, we applied the revised existing source MACT floor control efficiencies (99 percent for both HCl and chlorine emissions from process vents) to these concentrations to obtain 20 ppmv HCl and approximately 100 ppmv chlorine. Applying the new source MACT floor reduction efficiencies (99.4 percent for HCl emissions from process vents and 99.8 percent for $Cl_2$ emissions from process vents) to this concentration results in outlet concentrations of 12 ppmv HCl and 20 ppmv $Cl_2$ (rounded up from 19 ppmv). These are the emission limitations for process vents in the final rule. We believe instances cited by one commenter (IV-D-14) regarding inlet chlorine concentrations in process vents would be addressed by the alternative format in the final rule, which is discussed below.

We disagree with the commenter who believed that the emission limitations were not as stringent as they should be. The percent reduction limits represent the "average" control level of the best controlled sources, in accordance with section 112(d)(3) of the CAA. The alternative concentration limits were determined using the appropriate percent reduction limits (which, again, were based on the average of the best controlled sources) and the available data on control device inlet concentrations. In determining the concentration limits, we made assumptions about these inlet concentrations for each type of emission source (for example, we chose the highest concentration) to consider the variability that will be encountered by the best-performing sources. We strongly disagree that all sources can easily meet these limits and we believe that significant control measures will be required for facilities to meet the limits.

Regarding the suggestion to establish a tiered control efficiency based on flow rate, we do not agree with the commenters that our available data leads to this conclusion. As was shown above in Tables 2-1 through 2-4, 27 of the 38 control efficiencies reported were 99 percent or greater. We believe that establishing an emission limitation based on an efficiency less than 99 percent would not reflect the level of control

mandated by section 112 of the Clean Air Act. We would point out that the efficiencies less than 99 percent are represented in Tables 2-1 through 2-4, they just are not among the best controlled sources. Therefore, the use of these data was not to establish the MACT floor but to generate an array of concentration levels to characterize the potential uncontrolled concentrations from process vents.

We do recognize, nevertheless, that the data may not completely characterize the industry and that sources could achieve the MACT floor reduction efficiency but fail to meet the applicable outlet concentration emission limitations. Further, the commenters alleviated our concerns at proposal regarding this form of emission standard. We were concerned that it would be difficult to determine how and where to measure a control efficiency but commenters alleviated this concern by stating that the HCl production unit is distinguishable from the control device, which makes it clear where to measure the control device inlet and outlet in order to calculate a control efficiency over the control device.

Therefore, we have incorporated the third suggestion of the commenters (compliance with either a control efficiency or a concentration limit) into the final rule. Owners or operators will have the option of complying with a percent reduction efficiency instead of the outlet concentration limitation. For storage tanks and transfer operations, the percent reduction and concentration limit are equivalent assuming that a 30 weight percent liquid HCl product is stored in the tanks or used in the transfer operations. For process vents, the percent reduction and concentration limits are equivalent assuming process vent outlet concentrations of approximately 2,000 ppmv HCl and 10,000 ppmv $Cl_2$. These outlet concentrations were assumed in order to take into account the variability of outlet concentrations from HCl process vents. The percent reduction will be measured across the control device, or series of control devices, that follow the HCl production unit, storage tank, or transfer rack. We have added definitions of "HCl production unit" and "control device" to ensure that there is no confusion regarding where the percent reduction must be measured.

<u>Comment</u>: Regarding the format of the standards, one commenter (IV-D-22) supported the use of the concentration limit format for the standard because it does not require two sets of measurements, as would be the case for a control efficiency format. Another (IV-D-18) suggested that the compliance options be either a control efficiency or a mass emission limit, such as is used in the HON (§63.113(c)).

Response: We understand the commenter's points regarding the advantages of a concentration limit format, and have retained this format in the final rule. However, as discussed above, we were compelled to also provide the option of complying with a percent reduction emission limitation to ensure that the rule provides flexibility to deal with the variability of the industry. We do not feel that a mass emission limit would provide this flexibility, as it could lead to restrictions in production, which we do not believe are warranted in this situation. Therefore, the final rule does not contain emission limitations in the format of a mass emission limit.

Comment: Two commenters (IV-D-15, IV-D-18) recommended that the EPA establish separate emission limitations for control equipment that was installed on emission points at HCl production facilities prior to the date of the proposed rule (September 18, 2001). The commenters cited §63.113(c)(1)(ii) of the HON as an example of such a "grandfather" provision.

One commenter (IV-D-15) recommended that the EPA use the same 95 percent control efficiency requirement for grandfathered control devices that was used in the HON.

One commenter (IV-D-18) suggested that the EPA require facilities to reduce emissions from grandfathered control equipment by a certain percent reduction or to a specified mass emission rate, whichever is less stringent. The commenter further suggested that the specific limits be based on an evaluation of accurate data on existing control devices.

Response: While the HON does contain the provisions referred to by the commenter, it has not been our policy in subsequent part 63 NESHAP to allow existing control devices to be "grandfathered" in this manner. Given the high levels of control present in this industry at the baseline, we do not believe it is warranted to allow such exemptions for facilities with substandard controls.

### 2.4.5 Transfer Operations

Comment: One commenter (IV-D-19) requested that the EPA reconsider the need to set emission limitations for transfer operations. The commenter noted that emissions from transfer operations contribute less than one percent of the total emissions from HCl production facilities, according to the EPA's dataset. The commenter further stated that most transfer operations at HCl production facilities are already controlled and that further control would contribute little additional environmental benefit.

Response: The available information is consistent with the commenter's statement that "most transfer operations are already controlled." Indeed, the MACT floor for transfer operations was determined to be 99 percent control efficiency because most transfer operations are already controlled (three of the four in our dataset). Section 112(d) of the CAA requires that we set emission limitations at least as stringent as the MACT floor, which we are required to establish for existing sources based on the average emission limitation achieved by the best-performing existing sources, regardless of the percentage of total emissions attributable to the specific equipment or process. For new sources, we are required to establish the MACT floor at a level not less stringent than the emission control that is achieved in practice by the best controlled similar source. Sources that are subject to the proposed rule and are already controlled to the level of the proposed standard would not need to install any further controls beyond those that are already installed. We have not deleted or changed the emission limitation for transfer operations in the final rule.

### 2.4.6 Equipment Leaks

Comment: Many commenters (IV-D-06, IV-D-09, IV-D-12, IV-D-13, IV-D-14, IV-D-15, IV-D-16, IV-D-17, IV-D-18, IV-D-22) submitted comments regarding the proposed LDAR plan. Several commenters (IV-D-14, IV-D-16, IV-D-17) argued that the EPA should eliminate any and all references to an LDAR plan from the proposed rule. One commenter (IV-D-09) agreed that monitoring for leaks using instruments is unnecessary, and stated that an LDAR plan based on visual observation is consistent with his company's operating practices. The commenter asked for clarification of the flexibility allowed for components that cannot be visually inspected, such as underground transfer lines. Some commenters stated that formal LDAR requirements are not necessary because HCl leaks are easily identified (humans can smell HCl leaks at less than 10 ppm and can easily see the corrosion that results from leaking HCl) and facilities typically identify and repair leaking equipment as part of their routine maintenance activities due to the health and safety concerns associated with leaking HCl. One commenter (IV-D-22) added that there is no analytical instrument or monitor with which facilities can detect HCl leaks. The commenters argued that formalizing existing leak detection and repair activities with labor-intensive monitoring, inspection, reporting, and recordkeeping activities does not provide any additional environmental benefit.

Most of the commenters requested that the EPA eliminate the requirement to submit the LDAR plan to a permitting authority for review and approval. Several commenters (IV-D-09, IV-D-18)

stated that they are not aware of any NESHAP that requires LDAR plans to be submitted for approval, and noted that the HON does not have such a requirement. One commenter (IV-D-14) claimed that requiring facilities to submit LDAR plans for approval constitutes a "beyond the floor" requirement. The commenters stated that requiring these plans to be submitted for approval effectively makes them part of a facility's Title V operating permit and, consequently, implementation of the initial plan and any changes to the plan would require a formal permit amendment, which is a time-consuming (6 - 18 months) and unnecessary burden. Several commenters (IV-D-09, IV-D-12, IV-D-13) noted that the proposed rule does not address how the plan is to be approved, and requested that, if the requirement to submit the plan is not eliminated, the EPA provide criteria for permitting authorities to use in reviewing LDAR plans. The commenters asserted that eliminating the requirement to submit LDAR plans alleviates the burdens associated with Title V permits and also allows informal or routine maintenance programs to constitute the LDAR plan. Two commenters (IV-D-12, IV-D-13) suggested that the LDAR plan be included as an addition to a facility's SSM plan. This would ensure that the plan is generated, maintained, and available for inspection on-site, while eliminating the difficulties associated with Title V permits. The plan itself would not be part of the Title V permit, only the requirement to keep the plan on-site.

One commenter (IV-D-18) proposed that the EPA require only the following LDAR activities: (1) if you see, smell, or hear a leak, make the first attempt to repair within 5 days, and repair within 15 days, and (2) maintain records of leaks and when they were repaired.

Response: In developing the proposed rule, we determined that the MACT floor for leaking equipment is a general plan to detect and repair leaks of HCl because most HCl production facilities are already performing leak detection and repair activities. Again, we are required to establish the MACT floor based on the average emission limitation achieved by the best-performing existing sources. We cannot eliminate "any and all references" to requirements to detect and repair leaks. We also believe it is important that LDAR plans be submitted to the Administrator to facilitate enforcement of this rule and public access to non-confidential plan requirements, and this rule retains the proposed requirement for submittal. However, in response to the commenters' concerns, we have eliminated the proposed requirement that LDAR plans be affirmatively approved. Instead, we have clarified that any deficiencies in LDAR plans must be promptly corrected upon request by the Administrator, in order to allow the Administrator to review and approve LDAR plans if she so chooses.

Moreover, we do not intend that the contents of a LDAR plan itself must be included in a facility's Title V permit. Rather, like other requirements of this final rule, the requirements to develop, implement, and submit a LDAR plan to control emissions from equipment leaks - but not the contents of the plan - are applicable requirements under Title V and must be reflected in a facility's Title V operating permit. We have clarified that you may incorporate by reference into your LDAR plan existing manuals that describe LDAR activities required under other federally enforceable rules, provided that copies of all manuals that are incorporated by reference are submitted to the Administrator. We are also requiring that a current copy of the plan be maintained on-site, and that previous versions be maintained on-site for a period of 5 years after any revision of the plan.

### 2.4.7 Wastewater Treatment Operations

Comment: Several commenters (IV-D-09, IV-D-12, IV-D-13, IV-D-16, IV-D-19) supported the EPA's decision not to set any emission limitations or work practice standards for wastewater treatment operations. One commenter (IV-D-09) stated that HCl is used in the wastewater treatment operations to neutralize wastewater and added that the facility might use an alternative acid for that purpose if the operations were subject to emission limitations solely because there was an HCl production facility on-site. The commenter further stated that it would be inequitable to require emission controls on wastewater treatment operations at a facility that produces HCl and uses it for wastewater neutralization while not requiring controls for an identical operation at a facility that purchases HCl for wastewater neutralization. Two commenters (IV-D-12, IV-D-19) noted that HCl-containing wastewater contains HCl in diluted concentrations, which have very low vapor pressures (e.g., 11 ppmv for a 10 weight percent HCl solution at 25°C) and, therefore, very low emissions, making control unnecessary. Several commenters (IV-D-13, IV-D-16, IV-D-19) concurred that HCl emissions from wastewater treatment operations are very low.

Response: We would point out that, as with storage tanks and transfer operations, we selected the MACT floor as MACT for wastewater treatment operations, rather than more stringent controls. However, unlike for storage tanks and transfer operations, the data we had indicated that none of the facilities use add-on controls to reduce emissions from wastewater treatment operations. The data also indicated that no process changes or other pollution-prevention type measures to reduce HCl emissions from wastewater treatment operations are currently used. The MACT floor, consequently, was no emission reduction for new and existing sources. In the final rule, we have kept wastewater treatment operations in the affected source without any emission

limitations or work practice standards. As discussed in the preamble to the proposed rule, we believe that all of the operations within the definition of "affected source" are sufficiently interrelated that it would be problematic for owners, operators and regulators to create separate affected sources for different types of emission sources. We also believe that including wastewater treatment operations in the affected source even without requiring emission limits or work practice standards will facilitate consideration of wastewater treatment operations in future site-specific MACT determinations or rulemakings.

Comment: One commenter (IV-D-19) requested clarification that wastewater collection equipment (e.g., sumps, individual drain systems, oil-water separators, surface impoundments, containers) is not subject to any of the proposed emission limitations or work practice standards.

Response: We agree that equipment associated with wastewater treatment operations should not be subject to any emission limitations or work practice standards. We have revised the rule language in §63.8990(b)(5) to state that there are no emission limitations or other requirements for equipment used for HCl wastewater operations.

## 2.5 COMPLIANCE ISSUES

### 2.5.1 Performance Testing

Comment: Many commenters (IV-D-06, IV-D-11, IV-D-12, IV-D-13, IV-D-14, IV-D-15, IV-D-16, IV-D-18, IV-D-21) stated that annual performance testing of scrubbers is unnecessary and requested that the requirements for annual performance testing be deleted from the proposed rule. Two commenters (IV-D-13, IV-D-16) suggested that States be allowed to set performance testing frequencies in facilities' operating permits. The commenters stated that the initial performance test is sufficient to demonstrate initial compliance and establish operating parameter ranges and that monitoring of those parameters is sufficient to demonstrate continuous compliance because scrubbers operate very consistently and reliably, as long as they are operated within the operating parameter ranges. The commenters further stated that performance tests are expensive and provide no additional environmental benefit, and that the cost of annual performance tests was not accounted for in the cost impact analysis. Two commenters (IV-D-06, IV-D-14) stated that the cost of an annual performance test is $10,000 per scrubber, and that there are usually at least several scrubbers at an HCl production facility.

The commenters stated that other NESHAP (e.g., Cellulose Products Manufacturing NESHAP) only require periodic parameter monitoring after the initial performance test. One commenter (IV-D-11) pointed out that the EPA's authority, under §63.7(a)(3) of the General Provisions, to require a facility to conduct a performance test at any time for the reasons stated in section 114 of the Clean Air Act makes annual performance testing requirements unnecessary. Several commenters (IV-D-14, IV-D-15, IV-D-21) suggested that repeat performance tests only be required after a modification that requires a permit change and/or affects emissions has been made to the affected source. One commenter (IV-D-15) further suggested that alternate means of compliance (e.g., engineering assessments, design evaluations, representative testing of similar vent systems, past performance test results) be allowed for demonstrating compliance after a modification.

Response: We agree with the commenters that it is reasonable to perform subsequent performance tests less frequently than annually and have decided to change the requirement for subsequent performance testing from annually to every 5 years or each time a facility's Title V permit is renewed, whichever is more frequent. Additionally, as discussed in response to comments below, we have decided to allow facilities to use alternate means of demonstrating both initial and subsequent compliance for storage tanks and transfer operations.

Comment: Several commenters (IV-D-12, IV-D-13, IV-D-16, IV-D-22) stated that the time period allowed for facilities to conduct subsequent annual performance tests should be changed. The commenters stated that the two-month window allowed for the first subsequent annual performance test (10 to 12 months after the initial performance test) is insufficient because (1) it takes time to submit a notice to the permitting authority, meet with them to review the test plan, and receive approval of the test plan, and (2) facilities may not be operating at "representative" operating conditions during that window and would need to change to other, non-income-generating process conditions in order to perform the test under representative conditions. The commenters suggested that a six-month window be provided for subsequent annual performance tests; two of the commenters (IV-D-12, IV-D-13) further suggested that the specific bounds of this window be established by agreement with the permitting authority when the initial performance test plan is reviewed. One commenter (IV-D-22) suggested that subsequent performance tests be performed on or after the date of the initial test but no more than 14 months after the initial test.

Response: In response to the previous comment, we have changed the requirement for subsequent performance testing from

annually to every 5 years or each time a facility's permit is renewed, whichever is more frequent. Therefore, this comment is no longer relevant.

Comment: Several commenters (IV-D-09, IV-D-13, IV-D-14, IV-D-15, IV-D-16, IV-D-19, IV-D-22) stated that the performance test requirements in the proposed rule are not appropriate for storage tanks and transfer operations. Several commenters (IV-D-09, IV-D-19, IV-D-22) stated that storage tanks and transfer operations are batch operations which often do not operate for long enough time periods to conduct three one-hour sampling runs. One commenter (IV-D-09) gave the example of a 12,000 gallon tank located at his facility's wastewater treatment plant which is occasionally filled with liquid HCl at a rate of 50 gallons per minute and stated that the 240 minutes that it would take to completely fill the tank, if it were empty, is insufficient for performing three one-hour sampling runs and the associated activities (e.g., determining the volumetric flow rate, calculating the sampling flow rate to achieve isokinetic conditions, and cleaning the sample train between test runs). The commenter noted that, if a sampling contractor needed to visit the facility on two or more separate occasions in order to complete three sampling runs, the performance testing cost would be higher than estimated for a single test. This commenter (IV-D-09) additionally noted that the scrubber vent on a storage tank like the example he cited would have a very low volumetric flow rate (e.g., 6.7 acfm), and usually a curved vent pipe (a "goose neck") that would have to be modified in order to measure vent gas velocity using traditional methods. Another commenter (IV-D-16) also stated that some control devices (e.g., water eductor on a storage tank) are not designed with locations for measuring parameters or HAP concentration. Another commenter (IV-D-13) noted that performance tests should not be required for small storage tanks because they have very low emissions which could not reasonably be expected to cause adverse human health effects.

Several commenters suggested alternate means of demonstrating compliance for storage tanks and transfer operations. One commenter (IV-D-14) requested that all testing requirements for storage tanks and transfer operations be removed from the proposed rule because the EPA has published established methods (e.g., AP-42, TANKS software) for calculating emissions from storage tanks and transfer operations. One commenter (IV-D-15) suggested alternative means including: engineering assessments, design evaluations, representative testing of similar vent systems, and past performance test results. The commenter stated that performance tests are unnecessary for storage tanks and transfer operations because they are designed with ample margins of safety based on their maximum filling rates. One commenter (IV-D-16) requested that facilities be

allowed to demonstrate compliance using a design evaluation, as per the HON (§63.120(d)). One commenter (IV-D-19) suggested that design evaluations be allowed as a means of compliance demonstration for control devices on storage tanks and transfer operations, as per the HON (§63.138(j)) and the Polyether Polyols MACT (§63.1426(f)). One commenter (IV-D-22) recommended that the EPA shorten the required sampling periods for performance tests for storage tanks and transfer operations. One commenter (IV-D-09) recommended that the performance testing frequency be changed to five years, instead of one year, and cited the Standards of Performance for New Stationary Sources for Commercial and Industrial Solid Waste Incineration Units as an example of a recent rule that allowed for a lower testing frequency.

Response: We appreciate the comments and have decided to allow design evaluations as an alternate means of demonstrating both initial and subsequent compliance for storage tanks and transfer operations that are independently controlled (e.g., not routed to a control device that also controls HCl process vent emissions or any other continuous vent stream). The final rule requires that the design evaluation include documentation demonstrating that the control technique 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.

Comment: Several commenters (IV-D-14, IV-D-15, IV-D-18, IV-D-22) disagreed with the proposed requirement that all affected HCl production facilities must conduct performance tests for chlorine from process vents.

One commenter (IV-D-18) stated that chlorine is only present in process vent emission streams at facilities that burn chlorine to produce HCl, not at facilities that produce HCl as a by-product, and requested that the testing requirements for chlorine only be applied to facilities that burn chlorine to produce HCl. One commenter (IV-D-22) stated that the EPA did not provide any supporting references for its claim that chlorine gas is emitted from HCl production processes and noted that, while HCl and chlorine can form an equilibrium, the temperature required to shift the equilibrium to form measurable amounts of chlorine is much higher than typical process conditions. One commenter (IV-D-14) requested that facilities be allowed to demonstrate through the use of design parameters, process knowledge, and/or previous performance test results that chlorine (or HCl) is not likely to be present in a process vent emission stream and, therefore, be exempted from the requirement to conduct a test for chlorine (or HCl). The commenter asserted that the Notice of Compliance Status is the appropriate medium for facilities to report to EPA which emission points are appropriate to be tested for which HAP.

The commenter suggested language similar to that used in the HON (§63.145(a)(6)) be used in the rule. Another commenter (IV-D-15) suggested that facilities be required to demonstrate the presence or absence of chlorine in the process vent emission stream through an initial performance test or documentation of process knowledge and then be exempted from further testing for chlorine if it is demonstrated to be absent. The commenter also cited the HON (§63.145(a)(6)).

Response: First, the docket for the proposed rulemaking does include numerous supporting references for our assertion that chlorine can be emitted from HCl production process vents. Of the 21 facilities for which we had emissions data for HCl production process vents, 16 reported emissions of chlorine. In fact, 15 of these 16 facilities do not produce HCl in a direct synthesis process (e.g., from "burning chlorine"). However, we acknowledge that there are a variety of processes that produce HCl, not all of which have the potential to emit chlorine. Therefore, we have added a provision to the final rule allowing facilities to use process knowledge and previous performance test results to demonstrate that chlorine is not likely to be present in a process vent emission stream. This provision allows facilities to be exempted from the requirement to test process vents for chlorine provided that the appropriate documentation is submitted with the site-specific test plan.

Comment: Two commenters (IV-D-13, IV-D-16) requested that facilities be allowed to use existing performance test data to demonstrate initial compliance in lieu of conducting an initial performance test. One commenter (IV-D-13) suggested that language similar to that used in the Hazardous Waste Combustors NESHAP (§63.1206(b)(7)) be incorporated into the proposed rule. One commenter (IV-D-16) stated that many facilities have already conducted testing of affected emission streams to demonstrate compliance with other Federal or State standards and continue to operate in the same manner as when the testing was conducted.

Response: We concur with the commenter's request and have added a provision to the final rule allowing facilities to use existing performance test data to demonstrate initial compliance for the emission point on which the test was conducted if (1) the performance test was conducted within the previous 5-year period, (2) the performance test was conducted using the same test methods required by this rule, and (3) no modifications have been made to the process or emission point since the previous performance test was conducted or the owner or operator can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes.

Comment: Two commenters (IV-D-12, IV-D-13) requested that the requirements in §63.7(c) of the General Provisions to have site-specific test plans reviewed and approved should be waived for all but the initial performance test. The commenters noted that §63.7(b)(1) provides the EPA with adequate time and authority to request and review a test plan if necessary due to deviations from the initial test plan.

Response: In response to another comment received, we have changed the frequency for subsequent performance tests from annually to every 5 years or each time a facility's Title V operating permit is renewed, whichever is more frequent. We believe that it is necessary to develop a site-specific test plan for each of these subsequent performance tests because process conditions and testing procedures could change during the time between performance tests. However, the requirement in §63.7(c)(2)(i) regarding submission of site-specific test plans for approval specifies that they are to be submitted "if requested by the Administrator," not necessarily each time a performance test is conducted. Therefore, we believe that the proposed requirements relating to the site-specific test plan are appropriate and we have not changed the requirements in the final rule.

Comment: Two commenters (IV-D-13, IV-D-16) requested that representative testing of similar sources (e.g., storage tanks in a tank farm that all have identical scrubbers) be allowed. The commenters suggested that facilities be required to make an adequate demonstration of the acceptability of representative testing in their site-specific test plan in order to gain approval.

Response: In response to other comments received, we have added a provision to the final rule allowing facilities to use design evaluations in lieu of performance testing for any and all of their storage tanks and transfer operations. Since a design evaluation could be used to show that a performance test conducted for one storage tank is sufficient to demonstrate compliance of a similar storage tank, we have not added a provision to the final rule explicitly allowing representative testing of similar sources.

### 2.5.2 Operating Parameters

Comment: One commenter (IV-D-12) requested that the EPA allow facilities to supplement performance test data on operating parameter ranges with engineering analysis in order to adjust the parameter ranges to be consistent with the range of operations at a facility.

Response: Since the operating limits that are established for an HCl production facility will be used to demonstrate continuous compliance with the emission limitations in the rule, we believe that it is important that compliance with the emission limitations be initially demonstrated at the actual operating limits that are established. This initial demonstration is accomplished by conducting a performance test. Therefore, we have not changed the requirement that operating limits be established based on parameter values measured during a performance test. However, an owner or operator may establish the operating limits based on more than one performance test, including tests that were conducted within the past five years on the same emission point using the same test methods.

Comment: One commenter (IV-D-14) stated that the proposed rule did not clearly define the relationship between performance testing and operating limits. The commenter requested that facilities be allowed to delay a performance test for 60 days after approval of their site-specific test plan in order to ensure that process conditions are such that the operating limits measured during the performance test will fall within a reasonable range. The commenter stated that this time would allow facilities to adjust processes and process controls, and train operators, in order to ensure compliance with the rule.

Response: We agree with the commenter that the proposed rule did not adequately address the relationship between performance testing and operating limits. In response to this comment and others, we have changed the final rule to clearly state the procedures for establishing operating limits using performance test data, as well as other information, if desired.

However, we have not added any explicit provisions allowing facilities 60 days after approval of site-specific test to adjust processes before conducting the performance test. The Notification of Intent to Conduct a Performance Test must be submitted at least 60 days before the performance test is scheduled to begin, but may be submitted more than 60 days before the test is scheduled to begin if the owner/operator thinks more time is needed between submission of the notice and performance of the test. Facilities are allowed to reschedule performance tests under §63.7(b)(2) of the General Provisions. Under the final rule, facilities have until the compliance date to conduct a performance test. We believe that these requirements and provisions allow ample time for the activities mentioned by the commenter.

Comment: Two commenters (IV-D-12, IV-D-13) stated that the requirement to verify or report changes in operating limits in each annual performance test report should not apply to

parameters that are already specified in the facility's Title V permit. The commenters noted that it would be illegal to make a change in operating limits that are specified in the Title V permit without officially amending the permit. One commenter (IV-D-12) further stated that the requirement to establish operating limits during a performance test should also exclude parameters for which a facility already has limits established in their Title V permit because establishing new limits would be illegal without amending the permit.

Response: If changes in process conditions, control device performance, or any other situation that results in the operating parameters in the Title V permit no longer being appropriate to demonstrate compliance with the emission limit occurs, we believe that the operating limits should be amended. However, in response to other comments received, we have changed the frequency of subsequent performance tests from annually to every 5 years or each time a facility's Title V permit is renewed, whichever is more frequent. As facilities will have the opportunity to modify operating limits in their Title V permits in conjunction with each performance test, we have not removed the requirement to verify or report changes in operating limits in each performance test report.

Comment: Two commenters (IV-D-13, IV-D-16) stated that the term "inlet liquid flow rate" is unclear when applied to recirculating scrubbers. The commenters requested that the term be modified to "inlet liquid or recirculating liquid flow rate, as appropriate" everywhere that it is mentioned in the proposed rule.

Response: We agree with the commenters and have made the requested change throughout the rule.

### 2.5.3 Monitoring Alternatives

Comment: Several commenters (IV-D-06, IV-D-14, IV-D-15, IV-D-16, IV-D-22) stated that the operating parameters specified in the proposed rule, especially scrubber effluent pH, are not appropriate in all cases. One commenter (IV-D-06) stated that, for a water scrubber with any HCl in the effluent, the pH of the scrubber effluent will be too low to determine any relationship to the concentration of HCl in the effluent and, for a caustic scrubber, the pH of the effluent will only indicate whether caustic is present in excess of the acid being scrubbed. The commenter stated that monitoring the pH is only appropriate for the inlet stream of a caustic scrubber because it would demonstrate whether the alkalinity is sufficient for absorption of HCl. Two commenters (IV-D-14, IV-D-16) stated that measuring the pH of a caustic scrubber is not an appropriate way to ensure

a sufficient caustic concentration for adequate emission control because the pH will always be greater than 14. Instead, commenter IV-D-16's company analyzes grab samples from the scrubber once per shift to measure the caustic concentration. One commenter (IV-D-16) gave an additional example of a once-through water scrubber which operates very consistently and for which pH monitoring is not necessary because the water flow rate is sufficient to demonstrate continuous compliance, unless the loading to the scrubber changes. The commenter further stated that his company does not typically monitor the flow rate on a once-through water scrubber but rather sets the flow rate at an appropriate level or uses a design analysis to be assured that the scrubber is operating properly.

The commenters requested that EPA allow monitoring of alternate parameters when pH and the other specified parameters are not appropriate. One commenter (IV-D-06) pointed out that, while the proposed rule has provisions for alternate monitoring parameters for control devices other than scrubbers, it does not have explicit provisions for alternate monitoring parameters for scrubbers. One commenter (IV-D-06) stated that some facilities may already be monitoring a different parameter than those specified for a particular control device or may be using different but equivalent monitoring and recordkeeping procedures and requested that the EPA add provisions to the proposed rule that allow flexibility and accommodate existing monitoring practices, such as provisions used in the Polymers & Resins I MACT (§63.506(f),(g),(h)). One commenter (IV-D-16) requested that facilities be allowed to use non-continuous monitoring methods, such as grab samples, when continuous methods are infeasible. One commenter (IV-D-06) suggested that appropriate parameters to monitor to demonstrate continuous compliance using a scrubber (water or caustic) are liquid flowrate or pressure drop, or temperature or ionic conductance for a process that operates at a very consistent steady-state. One commenter (IV-D-15) suggested that some alternatives to pH monitoring include caustic feed rate, water flow rate, and temperature and requested that facilities be allowed to use process knowledge to select the most appropriate monitoring parameter(s) for demonstrating continuous compliance.

Response: Section 63.8(f) of the General Provisions allows facilities to apply for approval to use alternative monitoring procedures, and Table 7 in the proposed rule indicates that these provisions apply to Subpart NNNNN. So, the proposed rule allowed for monitoring of alternate parameters. However, in order to clarify in the rule text that facilities can apply to use alternate monitoring parameters, we have added rule language to that effect.

Comment: One commenter (IV-D-11) stated that his facility uses a continuous emission monitor (CEM) to monitor HCl and chlorine emissions from an HCl production facility emission point. The commenter noted that this requirement is in the facility's Title V permit as part of the early reduction program. The commenter requested that facilities with existing CEM be allowed to used data from the CEM to demonstrate continuous compliance.

Response: We encourage facilities to use monitoring devices that directly measure pollutant concentrations to demonstrate continuous compliance with this rule if they so choose. The commenter is welcome to request approval, in accordance with §63.8(f) of the General Provisions, to monitor HCl and chlorine emissions as an alternative to the continuous compliance procedures specified in the rule; a performance test would still need to be conducted in order to demonstrate initial compliance. Such a request should include detailed technical specifications along with procedures for initial installation, initial calibration, initial validation, quality assurance, and quality control. We have often approved such requests for MACT rules.

Comment: Two commenters (IV-D-13, IV-D-16) noted that the requirements for monitoring using a control device other than a scrubber listed in §63.9025(d) conflict with the requirements listed in Table 5, item #2. Paragraphs b, d, and e of item #2 in Table 5 refer to a scrubber, while §63.9025(d) seems to allow for control devices other than scrubbers. The commenters requested that paragraphs b, c, d, and e for item #2 of Table 5 be deleted and a new paragraph (b) be inserted that instructs facilities using control devices other than scrubbers to conduct monitoring according to their monitoring plan.

Response: We agree with the commenter and have changed Table 5, item #2 to reflect final §63.9025(e) (proposed §63.9025(d)), which allows facilities using control devices other than scrubbers to determine their own monitoring parameters.

### 2.5.4 Site-Specific Monitoring Plans

Comment: Several commenters (IV-D-11, IV-D-12, IV-D-13) disagreed with the requirement to submit the site-specific monitoring plan for approval. One commenter (IV-D-11) cited the absence of a site-specific monitoring plan in general MACT regulations along with the lack of details in the proposed rule regarding plan submittal and recommended that all requirements for the plan be removed from the proposed rule. Two commenters (IV-D-12, IV-D-13) stated that requiring submission of the plan would result in the details of the plan being included in a facility's Title V permit and would cause a delay in

implementation and modification of the plan because of the lengthy time period typical for approval of elements of a Title V permit. The commenters suggested that the site-specific monitoring plan be treated the same way as an SSM plan (e.g., Title V permit would require a facility to have the plan but the details of the plan would not be part of the permit), thereby providing flexibility for facilities to modify the plans while ensuring that the plans are available for inspection.

Response: It was never our intent that all of the substantive provisions of a site-specific monitoring plan necessarily would become part of a facility's Title V operating permit. We have changed the final rule to require the site-specific monitoring plan to be developed, implemented, and submitted to the Administrator, but not subject to the Administrator's approval. We also have clarified that any deficiencies in site-specific monitoring plans must be promptly corrected upon request of the Administrator, in order to allow the Administrator to review and approve site-specific monitoring plans if she chooses to do so. We expect that the Title V permit would contain the requirement to develop and implement the plan but not incorporate the plan itself, even if the Administrator requests the plan to be submitted. We have also added a requirement that a current copy of the plan be maintained on-site, and that previous versions be maintained on-site for a period of 5 years after the revision of the plan.

Comment: One commenter (IV-D-12) stated that the detailed requirements in proposed §63.9025(b) & (c) for operation, inspection, and maintenance of pH and liquid flow monitoring devices are unnecessary because proposed §63.9005(e) and (f) require facilities to develop their own site-specific monitoring plans with operation, inspection, and maintenance procedures. The commenter requested that proposed §63.9025(b) & (c) be deleted.

Response: We included the detailed operation, inspection, and maintenance requirements for monitoring devices in the proposed rule because no Performance Specification had yet been promulgated for pH or liquid flow monitoring devices. However, we are currently developing Performance Specifications for continuous monitoring systems that must be followed by owners and operators of all sources subject to standards under 40 CFR part 63. Therefore, we have decided to removed the detailed requirements in §63.9025(b) & (c) from this rule and wait for the rulemaking that will propose performance specifications for all of 40 CFR part 63. We decided it would be premature to promulgate performance specifications for this rule when the specifications that would ultimately be promulgated for all of 40 CFR part 63 may be significantly different as a result of

possible public comments received on that rulemaking. We did add language in the final rule to require that "all monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately." Therefore, owners and operators will be required by the final rule to follow written performance specifications, but not necessarily the ones that we proposed. In addition, the requirement to develop a site-specific monitoring plan, which must include performance specifications, is retained in the final rule, as the mechanism for formalizing the performance specifications.

Until the Performance Specifications are promulgated for pH and liquid flow rate, facilities can design their own operation, inspection, and monitoring procedures for incorporation into their site-specific monitoring plans. Once we promulgate the Performance Specifications for pH and liquid flow monitoring devices, facilities that monitor pH and liquid flow rate can simply cite these requirements; facilities that monitor other parameters not covered by promulgated Performance Specifications can continue using their own procedures.

Comment: Several commenters (IV-D-06, IV-D-11, IV-D-12, IV-D-13, IV-D-14, IV-D-15, IV-D-16, IV-D-18, IV-D-22) stated that the inspection and maintenance requirements for monitoring equipment are unnecessarily burdensome and requested that facilities be allowed to develop their own site-specific procedures for inspection and maintenance of monitoring equipment instead.

The commenters (IV-D-06, IV-D-11, IV-D-12, IV-D-13, IV-D-14, IV-D-15, IV-D-16) stated that the requirement to inspect all components and electrical and mechanical connections of the monitoring devices monthly is burdensome since it would result in long periods of downtime because the process and monitoring equipment would need to be shut down during inspections. Several commenters (IV-D-12, IV-D-13, IV-D-16) stated the scope of "all electrical connections" could be interpreted to be very broad, which would mean the inspection requirement would be very burdensome. One commenter (IV-D-12) noted that the inspection requirements would also increase the recordkeeping burden associated with the additional startups and shutdowns, malfunctions, and emissions exceedances. The commenter added that the burden associated with the specific detailed requirements has not been included in the regulatory impact analysis and could significantly increase the burden such that the proposed rule becomes a major rulemaking. Several commenters (IV-D-12, IV-D-13, IV-D-14) stated that the monthly inspections

would lead to increased HAP emissions because of the additional startups and shutdowns and because electrical failures would be more likely after the connections are frequently disturbed. The commenters stressed the fact that opening monitoring systems regularly and disturbing the wires and connections would cause the systems to fail sooner than if more appropriate inspection procedures were employed. One commenter (IV-D-16) noted that it does not make sense to disconnect a functioning system to check its continuity. Two commenters (IV-D-11, IV-D-16) added that any failure of a monitoring device component would be immediately apparent because the system readout would default to either the minimum or maximum of the scale.

One commenter (IV-D-18) agreed with the need to conduct monthly inspections of monitoring devices in order to ensure that they remain in good working order, but requested clarification of what types of inspection are required. The commenter questioned the meaning of "all electrical connections for continuity."

Several commenters (IV-D-06, IV-D-11, IV-D-13, IV-D-14, IV-D-16, IV-D-22) stated that the proposed calibration requirements for pH and liquid flow rate monitoring devices are inappropriate and should instead depend on the manufacturer's recommendations and the service requirements of the specific application. The commenters specifically noted that the requirement to calibrate the pH monitor every 8 hours is unnecessary and would yield three hours worth of invalid data per day as well as cause facilities to incur high maintenance costs. The commenters stated based on their experience that pH monitors are very reliable and weekly or bi-weekly calibration, which would result in a 98 to 99 percent availability of the monitor, is sufficient for continuous pH monitors. One commenter's (IV-D-11) facility instead uses two online pH monitors, one to control pH and one to monitor pH, which are calibrated every two weeks; additionally, an alarm is set to sound when the difference between the two monitors is 0.2 pH units or greater. The pH is then checked by an independent pH monitor, and the incorrect unit is recalibrated. One commenter (IV-D-14) noted that the EPA's Test Method 150.2 allows facilities to either directly calibrate each pH probe or evaluate pH measurement accuracy with a "laboratory-type pH meter" and stated that the proposed rule contravenes this method. The commenter also noted problems inherent in measuring the pH of particular streams: (1) fluorine-containing streams etch pH probes, and (2) sulfur-containing streams plug the pH probe elements.

Several commenters (IV-D-06, IV-D-13, IV-D-14) suggested that the EPA allow facilities to design their own inspection and maintenance procedures for monitoring equipment and include them in the facility's SSM plan. This would ensure that a plan is

subject to agency review on demand while not making it part of a facility's Title V permit, thereby avoiding a 6 to 18 month delay when a change is made to a plan. One commenter (IV-D-14) cited the Polyether Polyols NESHAP (Subpart PPP; §63.1438 & 1439) as an example of a rule that provides a structure for facilities to describe their site-specific monitoring plans in their Precompliance Report, which is subject to the 45-day review program and requested that such a program be included in the proposed rule. The commenter recognized that the proposed rule does allow facilities to petition for alternative monitoring plans but found several problems with this option: (1) permitting authorities do not have enough resources to review the large number of requests which would likely be generated by this rule, and (2) the review process would not allow facilities adequate time to design their monitoring plans and be in compliance by the compliance date.

Response: As stated above, we have removed all of the specific operation, inspection, and maintenance requirements for monitoring devices from the final rule because we are planning to propose similar requirements that will be applicable to all 40 CFR part 63 sources. An opportunity will be provided to comment on that rulemaking after it is proposed.

In response to the suggestion that facilities design their own inspection and maintenance procedures for monitoring equipment and include them in a plan, we would point out that the proposed rule included a requirement to develop a site-specific monitoring plan, which would include such information as inspection and maintenance procedures for monitoring equipment.

Comment: Two commenters (IV-D-12, IV-D-13) stated that the requirement to ensure, and certify annually under Title V, that a pH monitor sample is properly mixed and representative is impossible to meet. The commenters requested that the requirement be changed to require the monitor installation to be designed to provide a well-mixed and representative sample, because a design requirement can at least be demonstrated. The commenters also noted, that the requirement is redundant because it is already covered under §63.8(c)(2) of the General Provisions.

Response: Section 63.8(c)(2) of the General Provisions requires continuous monitoring systems (CMS) to be installed such that representative measurements of parameters are obtained. As stated above, the requirement to ensure that a pH CMS sample is properly mixed and representative, along with other monitoring operation, inspection, and maintenance requirements, has been removed from the final rule.

### 2.5.5 Other Comments Regarding Monitoring

Comment: Two commenters (IV-D-09, IV-D-19) requested that the proposed rule be revised to state that continuous parameter monitoring is only required while the HCl production process equipment is operating. One commenter suggested that periods of stoppage for maintenance and repairs should be covered under a facility's SSM plan.

Response: The proposed rule stated, in both §63.9025(a)(1) and §63.9035(d), that continuous parameter monitoring is only required while the affected source is operating. The proposed rule further stated in §63.9035(d) that continuous parameter monitoring is required during "periods of startup, shutdown, or malfunction when the affected source is operating," but not during periods of "monitor malfunctions, associated repairs, and require quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments)." Therefore, we believe that the rule already addressed the commenter's request and these provisions remain in the final rule.

Comment: One commenter (IV-D-12) requested that only one valid data point per minute be required to be used to calculate the hourly average when data are available more often than that. The commenter noted that modern computers collect many data points per second, but the data are often not retained long enough to be used to calculate an hourly average. The commenter cited the HON, the Standard Standards (Subpart SS), and the SOCMI Consolidated Air Rule as examples of rules that have such a requirement.

Response: We agree with the commenter and have changed the final rule to state that, for data collected using an automated CMS, you must use at least one measured value per minute to calculate hourly average values if values are measured more than once per minute.

Comment: One commenter (IV-D-16) requested that monitoring data not be required to be collected during periods of maintenance and calibration. The commenter suggested that the requirement to have valid data for 75 percent of the hours in a 24-hour period specifically exempt hours during which maintenance and calibration are performed.

Response: The proposed rule does not require facilities to collect monitoring data during periods of "monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments)" [proposed §63.9035(d)]. We

believe that 25 percent of operating hours is a sufficient amount of time to perform calibration and maintenance activities, and that valid data can reasonably be expected to be obtained during the other 75 percent of the operating hours. Therefore, we disagree with the commenter's request to exempt periods of calibration and maintenance from the requirement to have valid data for 75 percent of the hours in a 24-hour period. However, we have clarified that valid data are required for 75 percent of the "operating hours" (e.g., the hours during which the affected source is operating) in a 24-hour period.

### 2.5.6 Compliance During SSM Events

Comment: One commenter (IV-D-07) stated that it could sometimes be difficult to comply with the section of the General Provisions which states that owners or operators must minimize emissions at an affected source "at least to the levels required by all relevant standards," even during periods of startup, shutdown, and malfunction (§63.6(e)(1)(i)). The commenter gave an example of a situation in which an air pollution control device malfunctions and cannot meet an emission limitation (e.g., 12 ppm HCl and/or 20 ppm $Cl_2$ in the proposed rule). The commenter suggested that the EPA allow affected sources to take measures to prevent or minimize excess emissions to the extent practical, rather that to the level of the standard, during periods of startup, shutdown, and malfunction.

Response: This comment addresses the General Provisions rather than the proposed HCl Production rule, so we cannot consider any rule changes based on this comment. However, we note that we proposed to revise this language in the General Provisions (66 FR 16318) to state that owners or operators shall, "at all times, including periods of startup, shutdown, and malfunction," minimize emissions "to the levels required by the relevant standards, i.e., meet the emission standard or comply with the startup, shutdown, and malfunction plan."

Comment: One commenter (IV-D-14) requested that the EPA address the issue of monitoring requirements during SSM events that are addressed in the SSM plan. The commenter suggested that a provision be added to the proposed rule similar to §63.1420(h), which states that facilities do not have to collect monitoring data during an SSM event if the owner/operator has provided justification in the Precompliance Report for shutting down the monitoring device during the specific SSM event and received approval from the Administrator.

Response: The proposed rule did address the issue of monitoring requirements during SSM events in §63.9035(d), which requires facilities to collect monitoring data during periods of

SSM when the affected source is operating. We do not believe that a provision exempting facilities from collecting monitoring data during SSM events, under certain circumstances, is necessary. The commenter did not provide any technical basis for why such a provision would be necessary for this specific industry.

## 2.6 NOTIFICATIONS, REPORTS, AND RECORDS

### 2.6.1 Submission Dates

Comment: One commenter (IV-D-06) stated that there are inconsistencies between the General Provisions and the proposed rule regarding dates for testing and reports. The commenter stated that the proposed rule appears to require performance testing and submission of the Notice of Compliance Status (NOCS) before the compliance date, whereas the General Provisions set deadlines for these activities after the compliance date.

Response: We acknowledge the referenced inconsistency between the proposed rule and the General Provisions and have changed the final rule to conform with the General Provisions. The final rule requires the performance test to be completed within 180 days after the compliance date. The final rule does not change the requirement to submit the NOCS within 60 days after completion of the performance test, because this requirement was already consistent with the General Provisions.

Comment: Several commenters (IV-D-07, IV-D-12, IV-D-13) requested that owners or operators be allowed to submit semiannual compliance reports 60 days after the end of each semiannual reporting period, rather than the 30 days that is specified in the proposed rule. Two commenters (IV-D-12, IV-D-13) stated that, since there are similar schedules for Title V and State reports, a minimum of 60 days would be necessary for facilities to review and compile all of their monitoring data for all of their semiannual compliance reports. One commenter (IV-D-07) stated that this change would be consistent with other NESHAP, such as the Oil and Natural Gas NESHAP and the HON.

Response: We believe that 30 days is sufficient time to prepare and submit semiannual compliance reports. An owner or operator is not required to include all monitoring data from the reporting period in the semiannual compliance report, but rather to report information regarding each deviation from an emission limitation and each SSM event. If no deviations or SSM events have occurred during the reporting period, relatively little time should be required to prepare a report stating so. If deviations or SSM events have occurred during the reporting period, the owner or operator should be documenting the information required

for each event as soon as it occurs, rather than waiting until the end of the reporting period to document all of the deviations and SSM events. Furthermore, the proposed rule allows a facility whose permitting authority has already established dates for submitting semiannual compliance reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 71.6(a)(3)(iii)(A) to submit reports for this subpart according to those dates. Therefore, we have not changed the requirements for the submission of semiannual compliance reports in the final rule.

### 2.6.2 SSM Reports

Comment: Several commenters (IV-D-07, IV-D-12, IV-D-13) requested that the EPA allow reports of startups, shutdowns, and *malfunction* events to be submitted with the semiannual compliance report rather than as individual immediate reports following each event. Both commenters stated that this change would be consistent with other NESHAP, including the HON.

Two of the commenters (IV-D-12, IV-D-13) stated that most deviations from the SSM plan involve paperwork variances with no impact on emissions. Further, the commenter stated that, for events that do have a potential impact on emissions or require community response, facilities are required to submit reports within 15 minutes to one hour of the event under CERCLA, SARA, and State requirements. The commenter concluded that no purpose is served in submitting reports to the EPA or delegated authority 2 days and one week after an SSM event.

Response: Immediate SSM reports are only required when an SSM event is inconsistent with a facility's SSM plan. So, the more thorough a facility's SSM plan is, the fewer events will trigger this immediate reporting requirement. The requirement to submit immediate SSM reports 2 days and 7 days after an SSM event that is inconsistent with a facility's SSM plan is based on §63.10(d)(5)(ii) of the General Provisions. We believe that this requirement is necessary in order to ensure that the proper authorities are made aware of such events. Therefore, we have retained the requirement for immediate SSM reports in the final rule.

### 2.6.3 Unnecessary/Burdensome Reporting and Recordkeeping Requirements

Comment: One commenter (IV-D-15) questioned the need for semiannual compliance reporting and recommended that, as an alternative, facilities be required to keep records on-site for review by compliance personnel.

Response: The General Provisions require facilities subject to part 63 NESHAP to semiannually report excess emissions and monitoring system performance. The semiannual compliance report required by the proposed rule is consistent with the mechanism used by other part 63 NESHAP to submit the required information. We believe that it is necessary to submit this information, rather than simply keep records on-site for review by compliance personnel, because it provides better compliance assurance. Therefore, the final rule retains the requirement to submit semiannual compliance reports.

Comment: Two commenters (IV-D-15, IV-D-18) requested that the EPA eliminate the requirement to calculate and keep records of daily, hourly, and annualized CMS data. The commenters recommended that facilities record and, perhaps, periodically report the occasions when their emission control devices are malfunctioning or operating at less than their known efficiency. The commenters suggested that these reporting and recordkeeping requirements be established in a facility's SSM plan rather than in the rule.

Response: The proposed rule required owners or operators to collect parameter monitoring data and calculate hourly and daily averages, as well as keep records of the collected and calculated values. We believe that these requirements are reasonable, especially given the computer technology that is readily available to record data and perform calculations. Further, we believe that these records are necessary in order to demonstrate compliance, and that merely keeping records of non-compliance events would not be sufficient to demonstrate compliance.

Comment: Two commenters (IV-D-12, IV-D-13) commented on the requirement to include information about CMS downtime in semiannual compliance reports. The commenters requested that the requirement to report the date and time that each CMS was inoperative and the requirement to report the total duration of CMPS downtime both explicitly exclude times when the CMS is inoperative for pH calibration checks and other inspection and maintenance activities required by the proposed rule. The commenters stated that the required calibration and inspection and maintenance (I/M) requirements will result in a high amount of downtime which will overshadow the effect of downtime due to true problems.

Response: We understand the commenter's concern regarding including downtime for required I/M activities in the reported total downtime for CMS. However, the requirement to report total CMS downtime is based on a similar requirement in the General Provisions (§63.10(e)(3)(vi)(J)), so we have not removed it from the final rule. The owner or operator may, however, report a

breakdown of the total CMS downtime into periods due to calibration and I/M activities, monitoring malfunctions, and other applicable causes.

Comment: Two commenters (IV-D-12, IV-D-13) requested that the requirement to include a brief description of the process units in each semiannual compliance report be deleted. The commenters stated that a description of an HCl production process unit is already given in the rulemaking package and that repeating the description every six months is an unnecessary burden.

Response: First, the requirement to include a brief description of the process units in each semiannual compliance report is intended to be more than merely repeating the generic process description included in the rulemaking package. The intent of the requirement is for an owner or operator to give their permitting authority a more detailed description of the specific equipment at their facility that is subject to this subpart. Once these process descriptions have been written for a facility, we do not believe it is a burden to simply copy them into subsequent semiannual compliance reports. Furthermore, it is helpful to the permitting authority reviewing the compliance report to have that information in each report. Therefore, the final rule retains the requirement to include a brief description of each process unit in each semiannual compliance report.

Comment: Two commenters (IV-D-12, IV-D-13) requested that the EPA delete the requirement to include in the semiannual compliance report a description of any changes in CMS, processes, or controls since the last reporting period. The commenters stated that these changes require a Title V permit change, making the reporting of them in the semiannual compliance report unnecessary.

Response: The requirement to include in semiannual compliance reports a description of any changes in CMS, processes, or controls is not intended to replace a facility's obligation to modify its Title V permit when such a change occurs. Rather, it is meant to be helpful to the permitting authority to have this information included in the semiannual compliance report. We do not believe that it is a significant burden to report this information on those occasions when changes have been made.

Comment: Two commenters (IV-D-12, IV-D-13) stated that the entries in Table 7 referring to §63.1(b)(3) and §63.10(b)(3) of the General Provisions imply that every major source in the United States must keep records stating that their facility is not an HCl production facility. The commenters requested that

the entry in the "Applies to Subpart NNNNN" column be changed from "yes" to "no" for the specified sections of the General Provisions in order to avoid imposing unnecessary recordkeeping requirements on a very large number of sources.

Response: We believe that the commenters' interpretation of the requirement to keep records indicating that a facility is not subject to this subpart is incorrect. It is not necessary that every facility in the country keep records stating that they are not subject to every published standard that does not apply to them. Rather, an owner or operator should apply a "reasonableness test" to determine whether to keep such records (e.g., a dry cleaning facility does not need to keep records indicating it is not subject to the Steel Pickling NESHAP). Furthermore, the proposed revisions to the referenced sections of the General Provisions indicate that only sources in a particular source category need to keep records indicating that they are not subject to the relevant standards for that source category.

The final rule for this source category, in particular, includes complicated applicability provisions. In many cases, it will not be immediately obvious to an inspector or enforcement official whether a particular facility is subject to this subpart. Therefore, if an owner or operator determines that his facility, which produces HCl, is not subject to this subpart, it is in his best interest to keep records indicating that the facility is not subject.

Comment: Two commenters (IV-D-12, IV-D-13) requested that the EPA delete the requirement to maintain a log detailing the operation and maintenance of process and control equipment between the compliance date and the time when CMS are installed and validated and operating limits are established. The commenters stated that the requirement is too general and unclear and serves no environmental purpose while exposing facilities to an unknown compliance liability. The commenters further stated that keeping operating records that good practices are being employed and compliance is being achieved has always been adequate during that short time period and requested that the requirement to keep a log be deleted.

Response: We agree with the commenters that the referenced requirement is not entirely clear as to what should be recorded and what the associated liabilities are. We have, therefore, decided to remove this requirement from the final rule.

### 2.6.4 Inconsistencies in Proposed Rule

Comment: One commenter (IV-D-06) noted that §63.9045(a) is not consistent with Table 7, particularly with respect to section 63.9(f) of the General Provisions.

Response: Proposed §63.9045(a) stated that owners or operators must submit all of the notifications in, among others, § 63.9(b) through (h) of the General Provisions that apply to them. As noted in Table 7 of the proposed rule, §63.9(f) does not apply to this subpart because it pertains only to opacity and visible emissions standards, which are not included in the proposed rule. We do not consider this to be an inconsistency because §63.9045(a) clearly states that the owner or operator only has to comply with those sections that apply to them, and Table 7 specifies which sections of the General Provisions specifically apply to this subpart.

### 2.6.5 Electronic Recordkeeping

Comment: Two commenters (IV-D-12, IV-D-13) requested clarification of the requirement to maintain records on-site for at least two years following the date of each report/event. The commenters stated that many records are now kept in electronic format, so the requirement should be clarified to indicate that records must be accessible from on-site for at least two years. The commenters cited the HON (§63.103(c)(1)) as an example of a rule with such a clarification.

Response: We agree with the commenters that records required to be kept on-site may be kept on-site in electronic format (e.g., computer files). The final rule has been changed to reflect this clarification.

### 2.6.6 Report Addressee

Comment: One commenter (IV-D-07) asked to whom the required reports should be addressed. The commenter was unsure whether the EPA or a State agency was the appropriate recipient of the reports.

Response: The appropriate recipient of the reports required under this subpart is either your permitting authority (State, local, or tribal agency, S/L/T) or, if the Administrator has not delegated authority to your S/L/T, the EPA. As stated in §63.9070(a) of the proposed rule, an owner or operator should contact his EPA Regional Office to find out whether this subpart has been delegated to his permitting authority. An owner or operator can determine which is the appropriate EPA Regional

Office to contact by viewing the following webpage: http://www.epa.gov/epahome/locate2.htm.

## 2.7 EMISSION ESTIMATES

Comment: One commenter (IV-D-09) stated that the EPA overestimated both the baseline emissions and the projected emission reductions. The commenter stated that the EPA's misinterpretation of the data it collected regarding the commenters' facility contributed to the overestimated emission estimates.

Response: We calculated the baseline emissions using HCl emission data from the Toxic Release Inventory, primarily for the year 1998. In the memorandum[6] in the docket documenting our calculation of the baseline emissions, we stated that our estimate of the baseline emissions was possibly an overestimate because we used TRI data which did not indicate whether all of the HCl emissions from a plant site came from the HCl production processes. Because we used these baseline emissions to calculate the projected emission reductions from the proposed rule, the projected emission reductions could also be slightly overestimated. However, because the MACT floor regulatory alternative (which is the minimum level of stringency allowed by the Clean Air Act and is entirely technology-based) was selected, the estimate of projected emission reductions did not directly impact the decision.

Therefore, in the final rule, we have not changed the assumptions and methodology used to calculate the baseline emissions and the projected emission reductions. We have, however, made specific changes to our emission estimates based on the details the commenter provided regarding the facility owned by his company, as documented in a memorandum in the docket.[7] We would point out that the commenter's situation is somewhat unique as ownership of the facility has changed several times between the time represented by the permit data and the present, and the processes that were previously all owned by the same corporation are now divided among several companies.

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[6] Memorandum. Hartmann, A., and Norwood, P., EC/R Incorporated, to Maxwell, B., EPA/CG. Baseline Conditions for Hydrochloric Acid Production. March 21, 2001. {Docket Item II-B-5}

[7] Memorandum. Deering, A., and Norwood, P., EC/R Incorporated, to Maxwell, B., EPA/CG. Baseline Conditions and MACT Floor Impacts for the Final Hydrochloric Acid Production NESHAP. October 4, 2002 {Docket Item IV-B-4}

## 2.8 COST IMPACTS

### 2.8.1 Assumption of Common Scrubber

Comment: Several commenters (IV-D-13, IV-D-14, IV-D-15, IV-D-16, IV-D-18) stated that a key assumption that the EPA used in calculating the cost impacts is invalid. The EPA assumed that facilities could control multiple emission streams using a single control device, thereby reducing control and monitoring costs. The commenters stated that it is not feasible for most facilities to use a common control device for all of their HCl production emission streams because of the physical layouts of their facilities and because of the long distances between emission points. Additionally, the commenters noted that storage tanks and transfer operations tend to emit higher concentrations of HCl and be controlled with simpler control devices than process vents, which would make combining these emissions streams impractical. The commenters also noted that safety concerns often preclude the combination of multiple emission streams into a single control device. The commenters asserted that the EPA grossly underestimated the cost impacts of the proposed rule because each facility would need to install many control devices and, consequently, many parameter monitoring systems. The commenters requested that the EPA gather more accurate data concerning the number of control devices that each facility would need to install and then re-calculate the cost impacts.

However, another commenter (IV-D-08) stated that routing all of these emission points to a common control device is feasible because the efficiency of the control device can be maximized by matching it with the emission stream that has the highest pollutant loading and the least variability (e.g., process vent if included in common control device). The commenter stated that, for HCl production facilities, the process vents typically have the highest pollutant loading with the least variability, storage tanks have typically have the lowest pollutant loading with the most variability, and transfer operations fall in between.

Response: In response to another comment we received (see section 2.1.1), we have clarified that the final rule applies only to HCl storage tanks that are directly related to the HCl production unit. This should mean that the distance between an HCl process vent and associated storage tanks and transfer operations is shorter than it would be were all HCl storage tanks on-site to be included in the HCl production affected source, making it more feasible to use a common control device. In response to the comment that it would be difficult to combine emission streams with different concentrations, we point out commenter IV-D-08's assertion that it is feasible to combine

emission streams of varying concentrations if the control device is matched to the emission stream with the highest pollutant loading. We acknowledge the comment that safety concerns are an issue in combining emission streams into one control device.

We don't agree entirely with all of the points raised by the commenters and we continue to believe that there are situations in which a common control device would be possible and is, in fact, used. However, to be most conservative in estimating the potential impacts of this rule, we have revised our estimate of the control costs for the final rule using the assumption that each emission point that would need to be controlled would have its own dedicated control device installed. This resulted in a total estimated capital cost of $12.4 million and a total estimated annual cost of $5.9 million (total annualized control and monitoring capital cost of $1.4 million; total annual equipment operation and maintenance cost of $380,000; and total reporting and recordkeeping cost of $4.2 million). This represents an increase of around $245,000 from the total annual cost estimated at proposal (see section IV.C. of the proposal preamble).[8]

### 2.8.2 Cost Not Justifiable

Comment: One commenter (IV-D-06) stated that the true cost impacts of the proposed rule are too high given the small environmental benefit that would be achieved. The commenter asserted that the cost impacts estimated by the EPA are too low and estimated the total annual compliance cost for the proposed rule to be in excess of $1 million for the commenters' company, which owns several potentially subject facilities. Since several of the facilities owned by the commenters' company emit less than 5 tons of HCl per year, the commenter concluded that it does not make sense to impose $250,000 worth of compliance costs (per facility) to reduce only a few tons of emissions per year.

However, another commenter (IV-D-05) noted their support for the EPA's decision to regulate HCl production facilities and stated that the cost to the industry is justifiable considering

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[8] Note that we revised our estimate of the cost for individual control devices because we changed the emission limitations in responses to comments received. The control efficiency required by the final rule is lower than the control efficiency that was equivalent to the concentration emission limitations proposed. Therefore, the cost for each control device is lower in the final calculation of cost impacts than it was in the proposed calculation of cost impacts.

the protection of human health that would be provided if the proposed rule were implemented.

Response: In accordance with section 112(d)(3) of the Clean Air Act, we are required to establish emission limitations at least as stringent as the MACT floor. The emission limitations in the proposed rule represent the MACT floor and we, therefore, must impose limits at least as stringent as this floor level, without regard to the associated cost impacts. In the consideration of alternatives more stringent than this floor level, we do consider the relative costs and other impacts. Additionally, HCl production facilities that are located at major source plant sites cannot be exempted from the rule, even if it is a low-emitting HCl production facility.

The commenter did not provide information on their estimate of annual costs "in excess of $1 million," nor did they provide detailed comments on aspects of our cost impacts estimate. Therefore, we were not able to address the claim that our estimated impacts were too low.

We have, however, made several changes to the final rule that should serve to reduce the cost impacts of the MACT floor emission limitations for low-emitting facilities and emission points. For example, in response to a comment in section 2.1.1, we have revised the applicability to include only those facilities that produce greater than or equal to 30 percent liquid HCl by weight, thus eliminating the possibility that producers of dilute HCl with little emission potential are subject. Also, in response to a comment we received (see section 2.1.1), we have clarified that the final rule applies only to HCl storage tanks that are directly related to the HCl production unit, which means that small, remote tanks would not be subject to control requirements. Further, in response to another comment (see section 2.1.3), we have added a size cutoff for storage tanks based on the cost-effectiveness of control. In response to another comment received (see section 2.5.1), we have eliminated the annual performance test requirement. These measures should reduce the number of emission points needing control devices and the frequency of performance testing, thereby reducing the cost impacts of the final rule. Since the commenter did not provide specific details as to which portions of the cost impact analysis were underestimated, we have not made any specific changes to the cost impact analysis in response to this comment.

## 2.9 MISCELLANEOUS

### 2.9.1 ASTM Method Changes

Comment: One commenter (IV-D-01) informed the EPA that the ASTM test methods cited in the proposal preamble do not have the most current dates listed. The commenter provided the correct method names and dates. These corrections are presented in Table 2-5.

**Table 2-5. Corrected ASTM Test Method Names.**

| Method Name Listed in FR Notice | Corrected Method Names |
|---|---|
| D3154-91 | D3154-00 |
| D3796-90(1996) | D3796-90(1998) |
| E337-84(1996) | same |
| D3464-96 | D3464-96(2001) |

The commenter explained that methods D 3796, E 337, and D 3464 have been reapproved without changes, but method D 3154 has changed. If requested, the commenter stated that they would provide the EPA with a copy of the current version of the recently-revised Method D 3154 with the rationale for the changes.

Response: These methods were cited in section VI.H of the proposal preamble as voluntary consensus standards potentially applicable to the proposed rule. All four of the methods mentioned by the commenter were determined to be impractical alternatives to EPA test methods for the purposes of the proposed rule. We have, however, changed the method names in the final preamble to reflect the most current version of the ASTM methods cited.

### 2.9.2 Word Changes

Comment: Two commenters (IV-D-13, IV-D-16) requested that the word "scrubber" in the right-hand column of Table 3, item #1 be changed to "control device, if any." The commenters stated that this change would address situations in which an alternate control device is used or no control device is needed to meet the standard.

Response: We have made the requested change in the final rule.

Comment: Two commenters (IV-D-13, IV-D-16) requested that the term "major alternatives" be changed to "major changes" in §63.9070 of the proposed rule. The commenters stated that this change would be consistent with the language in §63.90.

Response: We have made the requested change in the final rule.

Comment: Two commenters (IV-D-13, IV-D-16) stated that the word "immediate" in §63.9050(f) is unnecessary and should be deleted. The commenters noted that paragraphs (1) and (2) of that section detail the timing for submission of the reports, making the word "immediate" inappropriate.

Response: The term "immediate startup, shutdown, and malfunction report" is used in §63.10(d)(5) of the General Provisions to distinguish it from a "periodic startup, shutdown, and malfunction report." An immediate SSM report is submitted within the specified time period after an SSM event for which the procedures in the SSM plan were not followed. A periodic SSM report is submitted semiannually for SSM events for which the SSM plan was followed. Therefore, in order to be consistent with the General Provisions and retain this distinction, we have not removed the word "immediate" from the final rule.

### 2.9.3 Typographical Errors

Comment: Commenters provided the following comments regarding typographical errors in the proposed rule.

One commenter (IV-D-16) noted that the reference to "paragraphs (f)(1) through (3) of this section" in §63.9005(e) appears erroneous. The commenter suggested that the reference should be to paragraphs (e)(1) through (3) of that section, which appear to be more germane than paragraphs (f)(1) through (3).

Two commenters (IV-D-13, IV-D-16) noted that §63.9005(f) refers to "paragraphs (g)(1) through (3) of this section," which do not exist. The commenters suggested that the EPA intended to refer to paragraphs (f)(1) through (3) of that section.

One commenter (IV-D-13) noted that §63.9025(e) referred to in §63.9035(c) does not exist. The commenter stated that the reference should be to §63.9025(d) instead.

Two commenters (IV-D-13, IV-D-16) noted that the word "following" in the heading of the right-hand column of Table 4 appears to be out of place and should be deleted.

Three commenters (IV-D-13, IV-D-16, IV-D-22) noted that the word "austic" in the left-hand column of Table 4, item #1 should be corrected to "caustic."

Two commenters (IV-D-13, IV-D-16) noted an inconsistency between Table 1 and Tables 4 and 5. Items #1 and 2 of Table 4 and items #1a and 2a of Table 5 read "is less than the concentration limit specified in Table 1..," while Table 1 reads "...concentration shall not exceed..." The commenters requested that the EPA add the words "equal to or" before "less than" in the specified sections of Tables 4 and 5.

One commenter (IV-D-16) noted that the entry for item #3 in the right-hand column of Table 4 should begin with the word "you."

Response: We have made all of the corrections in the final rule.

Comment: Two commenters (IV-D-13, IV-D-16) noted that the reference in §63.9005(f)(1) to §63.9030 appears erroneous. The reference in §63.9005(f)(1) says "Ongoing operation and maintenance procedures in accordance with ... 63.9030." However, §63.9030 presents initial compliance requirements.

Response: We have changed §63.9005(f)(1) to reference §63.9025 instead of §63.9030.

### 2.9.4 Subpart A Comments

Comment: One commenter (IV-D-19) submitted a copy of his comments regarding the proposed revisions to the General Provisions in Subpart A. The commenter requested that these comments be considered in this rulemaking because the proposed HCl production NESHAP relies heavily on the General Provisions. The commenter highlighted two of his comments regarding the proposed General Provisions: (1) EPA should delete the sections from which MACT standards have been consistently exempted, and (2) some of the compliance requirements (e.g., immediate reporting of SSM events, CMS downtime calculations, and submission of SSM plan revisions) are beyond what is necessary to demonstrate compliance. The commenter encouraged the EPA to promulgate the revised General Provisions in order to allow industry to determine the interaction between the proposed rule and the revised General Provisions.

Response: We appreciate the additional comments. These comments are being considered under the General Provisions rulemaking.

# TECHNICAL REPORT DATA

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| | | |
|---|---|---|
| 1 REPORT NO<br>EPA-453/R-03-004 | 2 | 3 RECIPIENT'S ACCESSION NO |
| 4 TITLE AND SUBTITLE<br>National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Hydrochloric Acid Production Industry: Summary of Public Comments and Responses | | 5 REPORT DATE<br>January 2003<br>6 PERFORMING ORGANIZATION CODE |
| 7 AUTHOR(S) | | 8 PERFORMING ORGANIZATION REPORT NO |
| 9 PERFORMING ORGANIZATION NAME AND ADDRESS<br>Emission Standards Division<br>Office of Air Quality Planning and Standards<br>U.S. Environmental Protection Agency<br>Research Triangle Park, NC 27711 | | 10 PROGRAM ELEMENT NO<br>11 CONTRACT/GRANT NO<br>68-D-01-055 |
| 12 SPONSORING AGENCY NAME AND ADDRESS<br>Director<br>Office of Air Quality Planning and Standards<br>Office of Air and Radiation<br>U.S. Environmental Protection Agency<br>Research Triangle Park, NC 27711 | | 13 TYPE OF REPORT AND PERIOD COVERED<br>14 SPONSORING AGENCY CODE<br>EPA/200/04 |

15 SUPPLEMENTARY NOTES

16 ABSTRACT

This document contains a summary of public comments received on the NESHAP for Hydrochloric Acid Production (40 CFR 63, subpart NNNNN), which was proposed on September 18, 2001 (66 FR 48174). This document also provides the EPA's response to each comment, and outlines the changes made to the regulation in response to public comments.

17 KEY WORDS AND DOCUMENT ANALYSIS

| a DESCRIPTORS | b IDENTIFIERS/OPEN ENDED TERMS | c COSATI Field/Group |
|---|---|---|
| Air pollution<br>Hazardous air pollutants<br>Emission reduction<br>Hydrochloric acid production | Air Pollution control | |

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