

comment document, available in the docket.) Given the health protective assumptions used in this analysis, the value of 0.3 represents a hypothetical exposure that is well above what we would expect actual exposures to be. This is because chlorine is converted to HCl in the presence of sunlight within a few minutes. In addition, the hazard quotient of 0.3, which results from this exposure scenario is well below the safe value of 1. Thus, we have concluded that, even assuming that some chronic exposure to chlorine may occur, none of the sources included in this subcategory will have emissions of chlorine or HCl that exceed a level of exposure which is adequate to protect public health and the environment with an ample margin of safety.

Comment: Two commenters did not support EPA's use of the AEGL2 for use as a short-term exposure limit for chlorine and HCl. One commenter stated that the AEGL2 values would not sufficiently protect public health because they would allow emissions at levels that cause discomfort, and according to the commenter, discomfort is an adverse health effect. The commenter also complained that EPA did not explain why it chose to use AEGL2 rather than AEGL1 or AEGL3. The commenter explained that although emissions from chlorine plants did not exceed AEGL2 values, the emissions may exceed AEGL1 values, and if they did, the proposed action would not meet the statutory requirements. Another commenter stated that AEGL limits are not appropriate for assessing daily human exposure scenarios because they were developed for emergency planning. The commenter recommended that EPA should use the American Conference of Governmental Industrial Hygienists (ACGIH), which has a 1-hour Short Term Exposure Limit (STEL) similar to the AEGL1 value of 1 parts per million (ppm) (for chlorine) and is used to protect against eye and mucous membrane irritation. The commenter's policy as a State agency is to add an additional safety factor of ten to ACGIH STEL values to protect for sensitive individuals, since ACGIH values were established for healthy workers. The commenter stressed that EPA must use conservative benchmarks before concluding that an ample margin of safety exists.

Response: The AEGL values represent short-term threshold or ceiling exposure values intended for the protection of the general public, including susceptible or sensitive individuals, but not hypersusceptible or hypersensitive individuals. The AEGL values represent biological reference values for this

defined human population and consist of three biological endpoints for each of four different exposure periods of 30 minutes, 1 hour, 4 hours, and 8 hours.

The AEGL2 level is defined as follows: AEGL2 is the airborne concentration of a substance at or above which it is predicted that the general population, including susceptible, but excluding hypersusceptible individuals, could experience irreversible or other serious, long-lasting effects or impaired ability to escape. Airborne concentrations below the AEGL2, but at or above AEGL1 represent exposure levels that may cause notable discomfort.

As utilized in the proposed action, the AEGL2 1-hour concentrations for chlorine and HCl are 5,800 $\mu\text{g}/\text{m}^3$ and 33,000 $\mu\text{g}/\text{m}^3$, respectively.

The AEGL1 level is defined as follows: AEGL-1 is the airborne concentration of a substance at or above which it is predicted that the general population, including "susceptible" but excluding "hypersusceptible" individuals, could experience notable discomfort. Airborne concentrations below AEGL-1 represent exposure levels that could produce mild odor, taste, or other sensory irritations.

The 1-hour AEGL1 concentration for chlorine is 2,900 $\mu\text{g}/\text{m}^3$ and the corresponding value for HCl is 2,700 $\mu\text{g}/\text{m}^3$. The ACGIH short term exposure limit for chlorine, which is 1 ppm is approximately equal to the AEGL1 value of 2,900 $\mu\text{g}/\text{m}^3$.

Although we stand by our original analysis, which used the AEGL2 level, we have referenced the commenter's suggested use of the AEGL1 values (possibly with a safety factor) for determining whether an ample margin of safety has been obtained. Therefore, we simply compared the short-term (1-hour average) modeling results from the original acute risk assessment to the AEGL1 values. These results were obtained by modeling the maximum allowable hourly emissions reported in the CAA section 114 responses for each of the sources. For plants that did not report fugitive emissions, fugitive emissions were estimated using worst-case emission factors.

The maximum modeled 1-hour chlorine concentration for 16 of the 20 plants is less than 5 percent of the AEGL-1 (and ACGIH) value for chlorine. Further, the highest modeled concentration for any plant, 346 $\mu\text{g}/\text{m}^3$, is less than 12 percent of the AEGL1 values. The highest modeled 1-hour HCl concentration for any plant, 120 $\mu\text{g}/\text{m}^3$, is less than 5 percent of the AEGL1 value for HCl.

Based on that comparison, we conclude that the chlorine and HCl emissions from non-mercury cell chlorine production plants do not represent an unsafe level of acute exposure. Further, we maintain, along with the chlorine exposure assessment, that proves that an ample margin of safety is provided with no additional control.

Comment: Two commenters supported EPA's method of selecting a risk assessment approach to meet the unique needs of the chlorine production industry. The commenters agreed that the risk assessment methodology should not be interpreted as a standardized approach that would set a precedent for how EPA will apply CAA section 112(d)(4) in future cases. Furthermore, the commenters stated that degree of conservatism built into all aspects of the risk assessment conducted for the chlorine production source category could vary greatly in future risk assessments for other source categories. The commenters stressed that they believe that the conservative assumptions made in the health effects assessment, emissions estimates, and exposure assessment were appropriate for the proposed action.

In contrast, one commenter stated that the risk assessment fell short of the Agency's prior practice. According to the commenter, whenever EPA has made determinations to regulate a specific pollutant based on health considerations (e.g., national ambient air quality standards (NAAQS) for ozone and particulate matter (PM)), the Agency evaluated health effects and exposure in great detail. The commenter contended that in that case, EPA appears to be content with "the bare and unsupported assumptions about what health levels are safe." The commenter argued that it was not appropriate for EPA to use a rigorous approach when setting standards and a more cursory approach when making a decision not to regulate.

Response: We disagree with the one commenter's characterization of the assessment that forms the basis for this decision, and we strongly dispute the characterization of the assessment as "bare and unsupported." We maintain that the RfC and AEGL values used as benchmarks for the assessment are scientifically sound and appropriate. The emissions data and other inputs used for this analysis, which were provided by the industry and checked by our staff, are representative of the industry.

In this assessment, the predicted health effects estimated, using very conservative inputs and assumptions, were well below the recognized health