acceptable proposal prior to ordering the equipment. Installation may take 10–14 weeks. Therefore, this company believes it will take 59-67 weeks to replace this pre-packaged industrial unit. Another company has a facility with four process refrigeration systems for chlorine production, each with a compressor driven by a 4,000 horsepower motor and refrigerant charge of approximately 175,000 pounds. These are massive systems that were individually engineered for the needs of the plant and any changes will also have to be engineered on an individual basis. The owner believes that even under ideal circumstances retrofitting the facility may take three years.²

EPA is proposing to revise $\S 82.156(i)(3)$ to allow more than one year to complete the retrofit of industrial process refrigeration equipment in certain circumstances. While the scenarios described above may justify more than one year to retrofit a facility, EPA does not believe additional time is always necessary. Therefore, EPA intends to only allow for additional time when the owners or operators of the industrial process refrigeration equipment can provide information detailing the need for additional time in accordance with the proposed requirements described below.

1. Additional Time Based on Regulatory Delays and/or the Need for a Suitable Replacement

EPA is proposing that additional time, to the extent reasonably necessary, would be allowed due to delays occasioned by the requirements of other applicable federal, state, or local regulations, or due to the unavailability of a suitable replacement refrigerant with a lower ozone depletion potential. To be a suitable replacement, a refrigerant would have to be acceptable under section 612(c) of the Act and implementing regulations, compatible with other materials with which it may come into contact, and be able to achieve the temperatures required for the process in a technically feasible manner.

If these circumstances apply, the owner or operator of the facility would have to notify EPA within six months after the 30-day period following the discovery of an exceedance of the 35% leak rate. Records that would provide evidence that other regulations or the unavailability of a suitable alternative refrigerant prevent retrofit or

replacement within one year must be submitted to EPA to allow EPA to determine that these provisions apply and assess the length of time necessary to complete the work. EPA proposes that it notify the owner or operator of its determination within 60 days of submittal. Specific recordkeeping requirements are discussed later in this subsection. EPA proposes that such records be maintained by the owner or operator and kept on-site.

EPA has already discussed examples of the types of other federal, state, or local regulations that may limit the ability of a facility to retrofit within one year. One example involved delays that would impact the ability of any facility in California that intended to retrofit using ammonia. Because ammonia is treated as a hazardous substance under the California RMPP program, companies need to prepare risk management plans that meet the approval of the local fire department before ammonia can be brought to the site. For one company, the process of receiving such approval took six months. Since other activities may be delayed or revised based on the acceptability or unacceptability of the risk management plans, more than one year may be necessary to complete retrofit activities.

Regulations promulgated under section 612 of the Act, known as the Significant New Alternatives Policy (SNAP) program, establish acceptable and unacceptable alternatives for particular end-uses, including refrigeration. The SNAP program regulations were published on March 18, 1994 (59 FR 13045). Subsequently, additional alternatives were approved on August 26, 1994 (59 FR 44240). To date, several replacement substances with lower ozone-depleting potentials have been listed as acceptable by the Agency. However, there has been difficulty in locating acceptable alternatives for R-22 systems that have flooded evaporators.

A flooded-evaporator system uses a pool of refrigerant, which absorbs heat as it vaporizes. All potential replacements to date are non-azeotropic in these systems, meaning they consist of components that do not vaporize uniformly. This has the effect of making the refrigeration system function like a distillation column, and greatly reduces the system's cooling capacity to the point where it probably will not be able to perform its intended function. In addition, a replacement refrigerant must be compatible with the manufacturing process to be cooled. There is always the potential for leaks to occur that could result in the intermingling of the

refrigerant and the process chemicals. If an inappropriate chemical is selected as a refrigerant, this potential intermingling could cause a chemical reaction that would damage or destroy refrigeration equipment or process equipment and potentially create a risk to human health or the environment.

Any refrigerant may theoretically be capable of achieving virtually any operating temperature; however, the amount of energy required to compress and circulate each refrigerant at given temperatures varies widely. It is not uncommon to determine that one refrigerant may require four times as much horsepower per ton of refrigeration capacity as another. The lower the temperature, the wider the difference. At any given temperature, particularly extremely low temperatures, some refrigerants may be able to utilize lower-powered, more efficient compressors while other refrigerants would need extremely large, powerful multiple-stage compressors. Physical constraints, such as the size of the room into which the refrigeration system must fit, may need to be considered. Therefore, the horsepower requirements could make a particular refrigerant impractical as a replacement.

EPA believes that it is appropriate to require the owners and operators of industrial process refrigeration equipment needing more than one year to complete retrofitting the system to maintain certain records and submit information to the Agency. Through this action, EPA is proposing that if additional time is necessary due to regulatory delays or the need for a suitable replacement, the owner or operator of the facility would have to notify EPA within six months after the 30-day period following the discovery of an exceedance of the 35 percent leak rate. Records necessary to allow a determination that these provisions apply and that document the length of time necessary to complete the work would need to be maintained. EPA believes that these records and the information submitted to EPA should include the following:

- (1) Identification of the industrial process facility;
 - (2) Leak rate;
- (3) Method used to determine the leak rate and full charge;
- (4) Date a leak rate of 35 percent or greater was discovered:
- (5) Location of leaks(s) to the extent determined to date;
- (6) Any repair work that has been completed thus far and the date that work was completed;

(7) Plan to complete the retrofit or replacement of the system;

² Information EPA has received to date indicates that this system will most likely take the longest of those reviewed to retrofit.