ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA–HQ–OAR–2005–0155; FRL–8200–2]

RIN 2060–AK18

National Perchloroethylene Air Emission Standards for Dry Cleaning Facilities

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is promulgating revised standards to limit emissions of perchloroethylene (PCE) from existing and new dry cleaning facilities. On September 22, 1993, EPA promulgated technology-based emission standards to control emissions of PCE from dry cleaning facilities. EPA has reviewed these standards and is promulgating revisions to take into account new developments in production practices, processes, and control technologies. In addition, EPA has evaluated the remaining risk to public health and the environment following implementation of the technology-based rule and is promulgating more stringent standards for major sources in order to protect public health with an ample margin of safety. The final standards are expected to provide further reductions of PCE beyond the 1993 national emission standards for hazardous air pollutants (NESHAP), based on application of equipment and work practice standards and, in certain situations, disallowing the use of PCE at dry cleaning facilities. In addition, EPA is taking this opportunity to make some technical corrections to the 1993 Dry Cleaning NESHAP.

DATES: *Effective Date:* This final rule is effective July 27, 2006.

ADDRESSES: EPA has established a docket for this action under Docket ID No. EPA–HQ–OAR–2005–0155. All documents in the docket are listed on the *www.regulations.gov* Web site. Although listed in the index, some information is not publicly available (*e.g.*, Confidential Business Information (CBI) or other information whose disclosure is restricted by statute). Certain other material, such as copyrighted material, will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *www.regulations.gov* or in hard copy at the EPA Docket Center, Docket ID No. EPA–HQ–OAR–2005–0155, EPA West Building, Room B–102, 1301 Constitution Ave., NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the Air and Radiation Docket is (202) 566–1742.

At this time, the EPA/DC's Public Reading Room is closed until further notice due to flooding. Fax numbers for Docket offices in the EPA/DC are temporarily unavailable. EPA visitors are required to show photographic identification and sign the EPA visitor log. After processing through the X-ray and magnetometer machines, visitors will be given an EPA/DC badge that must be visible at all times.

Informational updates will be provided via the EPA Web site at *http://www.epa.gov/epahome/dockets.htm* as they are available.

FOR FURTHER INFORMATION CONTACT: For questions about the final rule amendments, contact Mr. Warren Johnson, EPA, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Natural Resources and Commerce Group (E143–03), Research Triangle Park, NC 27711; telephone number (919) 541–5124; fax number (919) 541–3470; e-mail address: *johnson.warren@epa.gov.* For questions on the residual risk analysis, contact Mr. Neal Fann, EPA, Office of Air Quality Planning and Standards, Health and Environmental Impacts Division, Air Benefits Cost Group (C439–02), Research Triangle Park, NC 27711; telephone number (919) 541–0209; fax number (919) 541–0839; e-mail address: *fann.neal@epa.gov.*

SUPPLEMENTARY INFORMATION: *Regulated Entities.* Categories and entities potentially regulated by the final rule are industrial and commercial PCE dry cleaners. The final rule affects the following categories of sources:

Category	NAICS [1] code	Examples of potentially regulated entities
Coin-operated Laundries and Dry Cleaners	812310	Dry-to-dry machines Transfer machines.
Dry Cleaning and Laundry Services (except coin-operated)	812320	Dry-to-dry machines Transfer machines.
Industrial Launderers	812332	Dry-to-dry machines Transfer machines.

[1] North American Industry Classification System.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by the final rule. To determine whether your facility is regulated by the final rule, you should examine the applicability criteria in 40 CFR 63.320 of subpart M (1993 Dry Cleaning NESHAP). If you have any questions regarding the applicability of the final rule to a particular entity, contact the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

Docket. The docket number for the National PCE Air Emission Standards for Dry Cleaning Facilities (40 CFR part 63, subpart M) is Docket ID No. EPA–HQ–OAR–2005–0155.

Worldwide Web (WWW). In addition to being available in the docket, an electronic copy of the final rule is also available on the WWW. Following the Administrator's signature, a copy of the final rule will be posted on EPA's Technology Transfer Network (TTN) policy and guidance page for newly proposed or promulgated rules at *http://www.epa.gov/ttn/oarpg.* The TTN provides information and technology exchange in various areas of air pollution control.

Judicial Review. Under section 307(b)(1) of the Clean Air Act (CAA), judicial review of the final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by September 25, 2006. Under CAA section 307(d)(7)(B), only an objection to the final rule that was raised with reasonable specificity during the period for public comment can be raised during judicial review. Moreover, under CAA section 307(b)(2), the requirements established by this final action may not be challenged separately in any civil or criminal proceedings brought by EPA to enforce these requirements.

Section 307(d)(7)(B) of the CAA further provides that ''only an objection to a rule or procedure which was raised with reasonable specificity during the period for public comment (including any public hearing) may be raised during judicial review.'' This section also provides a mechanism for EPA to convene a proceeding for reconsideration, ''if the person raising the objection can demonstrate to the EPA that it was impracticable to raise such an objection [within the period for public comment] or if the grounds for such objection arose after the period for

public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule.'' Any person seeking to make such a demonstration to the EPA should submit a Petition for Reconsideration to the Office of the Administrator, U.S. EPA, Room 3000, Ariel Rios Building, 1200 Pennsylvania Ave., NW., Washington, DC 20460, with a copy to both the person(s) listed in the preceding **FOR FURTHER INFORMATION CONTACT** section, and the Director of the Air and Radiation Law Office, Office of General Counsel (Mail Code 2344A), U.S. EPA, 1200 Pennsylvania Ave., NW., Washington, DC 20004.

Outline. The information presented in this preamble is organized as follows:

I. Background

A. What Is the Statutory Authority for Regulating Hazardous Air Pollutants?

Section 112 of the CAA requires us to regulate hazardous air pollutants (HAP) emitted by categories of stationary sources. For ''major'' sources of HAP, the CAA directs us to first establish technology-based standards reflecting maximum achievable control technology (''MACT''), and to second establish residual risk standards if such standards are required in order to provide an ample margin of safety to protect public health or prevent an adverse environmental effect. For non-major ''area'' sources of HAP, the CAA allows us to establish standards reflecting generally available control technology (''GACT''), in lieu of MACT and residual risk standards. The HAP we must regulate are listed at CAA section 112(b). The types of technology-based standards we must promulgate differ based on whether the regulated sources are ''major'' sources or ''area'' sources. Under CAA section 112(a)(1), major sources are those that emit or have the potential to emit 10 tons per year or more of any HAP or 25 tons per year or more of any combination of HAP, including fugitive emissions. Section 112(a)(2) of the CAA provides that area sources are all other non-major stationary sources of HAP. For major sources, our initial technology-based standards must reflect maximum achievable control technology (MACT) as set forth in CAA sections 112(d)(2)–(3). For area sources, we may set less stringent standards based on generally available control technology (GACT) under CAA section 112(d)(5). For both MACT and GACT, CAA section 112(h) allows us to establish design, equipment, work practice, or operational standards where we determine it is not feasible to prescribe or enforce an emission standard.

Section 112(f)(2) of the CAA requires us to determine for each category of major sources regulated under CAA section 112(d) whether the MACT standard protects public health with an ample margin of safety, eight years after we promulgate MACT for that source category. Section 112(f)(5) of the CAA provides that we are not required to conduct this review for categories of area sources regulated by GACT standards. If the MACT standards for HAP classified as a known, probable, or possible human carcinogen do not reduce lifetime excess cancer risks to the individual most exposed to emissions from a source in the category or subcategory to less than 1-in-1 million, we must promulgate ''residual risk'' standards under CAA section 112(f) for the source category (or subcategory) as necessary to protect public health with an ample margin of safety. We must also adopt more stringent standards if required to prevent an ''adverse environmental effect'' as defined in CAA section 112(a)(7), after considering costs, energy, safety, and other relevant factors.

We are also required by CAA section 112(d)(6) to periodically review all standards we promulgate under CAA section 112 and to revise them as necessary, taking into account developments in practices, processes and control technologies. The first such review must occur eight years after we promulgate MACT and GACT standards, and can be combined with the residual risk review performed under CAA section 112(f)(2). The section CAA 112(d)(6) review is thereafter to be repeated no less frequently than every eight years.

B. What Are PCE Dry Cleaning Facilities?

Most dry cleaners use PCE in a dry cleaning machine to clean all types of garments, including clothes, gloves, leather garments, blankets, and absorbent materials. There are approximately 34,000 dry cleaning facilities in the United States, approximately 28,000 of which use PCE. Of the 28,000 PCE-using dry cleaners, 12 of the facilities are major sources and the remainder are area sources. As defined in the 1993 Dry Cleaning NESHAP, major source PCE dry cleaners are those that purchase more than 2,100 gallons (gal) of PCE per year (1,800 gal per year if the facility uses transfer machines). In the 1993 Dry Cleaning NESHAP, area sources were defined as either large or small, with large area sources defined as facilities that use between 140 to 2,100 gal of PCE per year (or 140 to 1,800 gal per year if the facility uses transfer machines) and small area sources defined as those facilities using less than 140 gal per year. Some area sources are located in the same buildings where people live. In the 1993 Dry Cleaning NESHAP we did not specifically discuss these sources, but in this notice we refer to them as co-residential dry cleaners. A co-residential dry cleaning facility is located in a building in which people reside. Co-residential facilities are located primarily in urban areas.

In general, PCE dry cleaning facilities can be classified into three types: Commercial, industrial, and leather. Commercial facilities typically clean household items such as suits, dresses, coats, pants, comforters, curtains, and formal wear. Industrial dry cleaners clean heavily-stained articles such as work gloves, uniforms, mechanics' overalls, mops, and shop rags. Leather cleaners mostly clean household leather products like jackets and other leather clothing. The 12 major sources include seven industrial facilities and five commercial facilities. The commercial facilities are each the central plant for a chain of retail storefronts. We do not expect any new PCE dry cleaning facilities constructed in the future to be major sources. Based on the emission rates of current PCE dry cleaning machines and the typical business models used in the industrial and commercial dry cleaning sectors, it is unlikely that any new sources that are constructed will emit PCE at major source levels, or that any existing area sources will become major sources due to business growth.

PCE dry cleaning machines can be classified into two types: Transfer and dry-to-dry. Similar to residential washing machines and dryers, transfer machines have a unit for washing/extracting and another unit for drying. Following the wash cycle, PCE containing articles are manually transferred from the washer/extractor to the dryer. The transfer of wet fabrics is the predominant source of PCE emissions in these systems. Dry-to-dry machines wash, extract, and dry the articles in the same drum in a single machine, so the articles enter and exit the machine dry. Because the transfer step is eliminated, dry-to-dry machines have much lower emissions than transfer machines.

New transfer machines are effectively prohibited at major and area sources due to the 1993 Dry Cleaning NESHAP requirement that new dry cleaning systems eliminate any emissions of PCE while transferring articles from the washer to the dryer. Therefore, transfer machines are no longer sold. Existing transfer machines are becoming an increasingly smaller segment of the dry cleaning population as these machines reach the end of their useful lives and are replaced by dry-to-dry machines. There are approximately 200 transfer machines currently being used, all at area sources.

The primary sources of PCE emissions from dry-to-dry machines are the drying cycle and fugitive emissions from the dry cleaning equipment (including equipment used to recycle PCE and dispose of PCE containing waste). Machines are designed to be either vented or non-vented during the drying cycle. Approximately 200 dry cleaners (1 percent) use vented machines, and the remaining facilities use the lower-polluting, non-vented machines. (For both major and area sources, the 1993 Dry Cleaning NESHAP prohibits new dry cleaning machines that vent to the atmosphere while the dry cleaning drum is rotating.) In vented machines, the majority of emissions from the drying cycle are vented outside the building. In non-vented machines, dryer emissions are released when the door is opened to remove garments. Currently, the largest sources of emissions from dry cleaning are from equipment leaks, which come from leaking valves and seals, and the loading and unloading of garments.

C. What Are the Health Effects of PCE?

The main effects of PCE in humans are neurological, liver, and kidney damage following acute (short-term) and chronic (long-term) inhalation exposure. The results of epidemiological studies evaluating the relative risk of cancer associated with PCE exposure have been mixed; some studies reported an increased incidence of a variety of tumors, while other studies did not report any carcinogenic effects. Animal studies have reported an increased incidence of liver cancer in mice, via inhalation and gavage (experimentally placing the chemical in the stomach), and kidney and mononuclear cell leukemia in rats.

Although PCE has not yet been reassessed under the Agency's recently revised Guidelines for Cancer Risk assessment, it was considered in one review by the EPA's Science Advisory Board to be intermediate between a ''probable'' and ''possible'' human carcinogen (Group B/C) when assessed under the previous 1986 Guidelines. Since that time, the U.S. Department of Health and Human Services has concluded that PCE is ''reasonably anticipated to be a human carcinogen,'' and the International Agency for Research on Cancer has concluded that PCE is ''probably carcinogenic to humans.''

Effects other than cancer associated with long-term inhalation of PCE in worker or animal studies include neurotoxicity, liver and kidney damage, and, at higher levels, developmental effects. To characterize noncancer hazard in lieu of the completed Integrated Risk Information System (IRIS) assessment, which is being revised, we used the Agency for Toxic Substances and Disease Registry's (ATSDR) Minimum Risk Level (MRL). This value is based on a study of neurological effects in workers in dry cleaning shops, and is derived in a manner similar to EPA's method for derivation of reference concentrations, including scientific and public review.

The Agency's IRIS chemical assessment for PCE is currently being revised. A final IRIS determination on PCE is not expected until 2008. Because EPA has not yet issued a final IRIS document for PCE, to estimate cancer risk, we used the California EPA (CalEPA) unit risk estimate (URE) as well as a URE value developed by the EPA's Office of Prevention, Pesticides and Toxics (OPPTS) in 1998. The final IRIS reassessment may result in a URE that is different than these two values. Among the available Acute Reference Levels (ARL), the one-hour California Reference Exposure Level (REL) was considered the most appropriate to use in the assessment because it may be used to characterize acute risk for exposure an exposure duration of one hour. In contrast, the ATSDR acute MRL is appropriate to characterize acute risk for up to 14 days of exposure.

See the risk characterization memorandum in the public docket for additional information regarding the health effects of PCE.

D. What Does the 1993 NESHAP Require?

The 1993 NESHAP prescribes a combination of equipment, work practices, and operational requirements. The requirements for process controls are summarized in table 1 of this preamble. The 1993 Dry Cleaning NESHAP defines major and area sources based on the annual PCE purchases for all machines at a facility. The consumption criterion (which affects the amount of PCE purchased) varies depending on whether the facility has dry-to-dry machines only, transfer machines only, or a combination of both. The affected source is each individual dry cleaning system. Consequently, under the 1993 Dry Cleaning NESHAP, a single dry cleaning facility could be comprised of multiple affected sources, if it has multiple dry cleaning systems onsite. As a result, some of a facility's systems could be subject to ''new'' source requirements under the NESHAP, and some could be ''existing'' sources, depending upon when they were placed into service.

TABLE 1.—SUMMARY OF THE 1993 DRY CLEANING NESHAP PROCESS CONTROLS

Sources	Annual PCE purchased	New [1] (installed after 12/9/91)	Existing [2]
Major Sources	Dry-to-dry only > 2,100 gal/yr Transfer only >1,800 gal/yr Dry-to-dry and Transfer > 1,800 gal/yr	Closed-loop, dry-to-dry machines with a refrigerated condenser, and carbon adsorber operated immediately before or as the door is opened.	Dry-to-dry machines: Must have refrigerated condenser.[3] Transfer machines: Must be enclosed in a room exhausting to a dedicated carbon adsorber.
Large Area Sources	Dry-to-dry only 140 to 2,100 gal/yr Transfer only 200 to 1,800 gal/yr Dry-to-dry and Transfer 140 to 1,800 gal/yr	Closed-loop, dry-to-dry machines with a refrigerated condenser..	Dry-to-dry machines: Must have a refrigerated condenser [3] Transfer machines: No controls required.
Small Area Sources	Dry-to-dry ONLY < 140 gal/yr Transfer ONLY < 200 gal/yr Dry-to-dry AND Transfer < 140 gal/yr	Same as large area sources	No controls required.

[1] No new transfer machines are allowed after 9/23/93.
[2] Compliance date = 9/23/96.
[3] Alternatively, carbon adsorber is allowed only if installed before 9/22/93.

In addition, all sources must comply with certain operating requirements, including recording PCE purchases, storing PCE and PCE-containing waste in non-leaking containers, and inspecting for perceptible leaks. Owners or operators are required to operate and maintain the control equipment according to procedures specified in the 1993 Dry Cleaning NESHAP and to use pollution prevention procedures, such as good operation and maintenance, for both dry cleaning machines and auxiliary equipment (such as filter, muck cookers, stills, and solvent tanks) to prevent liquid and vapor leaks of PCE from these sources.

II. Summary of the Proposed Rule

A. What Were the Proposed Requirements for Major Sources?

Under the proposal, the requirements for all new and existing major sources were the same. The proposed requirements included the implementation of an enhanced leak detection and repair (LDAR) program and the use of dry-to-dry machines that do not vent to the atmosphere (closed-loop) during any phase of the dry cleaning cycle. A refrigerated condenser and a secondary carbon adsorber were proposed for all machines.

Under the proposed enhanced LDAR program, the facility owner or operator would be required to use a PCE gas analyzer (photoionization detector, flame ionization detector, or infrared analyzer) and perform leak checks according to EPA Method 21 on a monthly basis. The facility owner or operator would also continue the weekly perceptible leak check according to the requirements of the 1993 Dry Cleaning NESHAP.

B. What Were the Proposed Requirements for Area Sources?

For existing area sources (large and small), the proposed requirements included implementation of an enhanced LDAR program and a prohibition on the use of existing transfer machines. For new area sources (large and small), the proposed requirements included implementation of an enhanced LDAR program and use of a non-vented dry-to-dry machine with a refrigerated condenser and secondary carbon adsorber.

The enhanced LDAR program for area sources would require facilities to use a halogenated leak detector (instead of a more costly gas analyzer proposed for major sources) to perform leak checks on a monthly basis. The facility would also continue to inspect for perceptible leaks biweekly for small area sources and weekly for large area sources according to the requirements of the 1993 Dry Cleaning NESHAP.

For co-residential area sources, we proposed two options. The first option would effectively prohibit new PCE sources from locating in residential buildings by requiring that owners or operators eliminate PCE emissions from the dry cleaning process. Existing co-residential sources, under this proposed option, would be subject to the same requirements proposed for all other existing area sources (*i.e.*, enhanced LDAR and elimination of transfer machines). Instead of a prohibition on new co-residential sources, the second option would require that existing and new co-residential sources comply with standards based on those required by New York State Department of Environmental Conservation (NYSDEC) in their Title 6 New York Conservation Rules and Regulations (NYCRR) Part 232 rules, which include using machines equipped with refrigerated condensers and carbon adsorbers, enclosed in a vapor barrier to help prevent exposures to PCE emissions.

C. What Were the Proposed Requirements for Transfer Machines at Major and Area Sources?

The proposed rule included a prohibition on the use of all existing transfer machines 90 days after publication of the final rule by requiring owners or operators to eliminate any PCE emissions from clothing transfer between the washer and dryer. The installation of new transfer machines was prohibited by the 1993 Dry Cleaning NESHAP.

III. Summary of the Final Rule

A. What are the Requirements for Major Sources?

Under the final rule revisions, the requirements for all new and existing major sources are the same. In addition to the previous 1993 NESHAP requirements, the final revisions require the implementation of an enhanced LDAR program. Under the enhanced LDAR program, the facility owner or operator must use a PCE gas analyzer (photoionization detector, flame ionization detector, or infrared analyzer) and perform leak checks according to EPA Method 21 on a monthly basis. The facility owner or operator is also required to continue the weekly perceptible leak check according to the

requirements of the 1993 Dry Cleaning NESHAP.

B. What Are the Requirements for Area Sources?

For existing area sources (large and small), in addition to the previous 1993 NESHAP requirements, the final rule revisions require implementation of an enhanced LDAR program and prohibit the use of existing transfer machines. This requirement and prohibition apply to all types of existing area sources, including co-residential sources (for the remaining time in which the latter are permitted to use PCE at all).

For new area sources (large and small), the final rule revisions add to the previous 1993 NESHAP by requiring implementation of an enhanced LDAR program and use of a non-vented dry-to-dry machine with a refrigerated condenser and secondary carbon adsorber. These added requirements do not apply to new co-residential sources since these sources are prohibited from using PCE, as discussed later in this notice. The enhanced LDAR program for new and existing area sources requires facilities to use a halogenated leak detector (instead of a more costly gas analyzer for major sources) to perform leak checks on a monthly basis. The facility is also required to continue to inspect for perceptible leaks biweekly for small area sources and weekly for large area sources according to the requirements of the 1993 Dry Cleaning NESHAP.

C. What Are the Requirements for Transfer Machines at Existing Major and Area Sources?

The final rule prohibits the use of all existing transfer machines two years from the effective date of the final rule by requiring owners or operators to eliminate any PCE emissions from clothing transfer between the washer and dryer. The installation of new transfer machines was prohibited by the 1993 Dry Cleaning NESHAP. We estimate that about 200 transfer machines remain in use within the population of 28,000 PCE dry cleaning sources. Most of these machines are near the end of their useful economic lives. The typical useful life of a dry cleaning machine is 10 to 15 years. By the end of 2008, the newest transfer machines in the industry will be 15 years old.

D. What Are the Requirements for Co-residential Sources?

For co-residential area sources, the final rule effectively prohibits new PCE machines in residential buildings by requiring that owners or operators eliminate PCE emissions from dry cleaning systems that are installed after December 21, 2005. This requirement applies to any newly installed dry cleaning system that is located in a building with a residence, regardless of whether the dry cleaning system is a newly fabricated system or one that is relocated from another facility. In addition, the final rule revisions include a ''sunset date'' for the use of PCE at currently operating co-residential sources: All existing PCE machines in co-residential facilities are prohibited after December 21, 2020. This sunset date allows owners of existing co-residential sources to operate their machines for their maximum estimated useful life, 15 years, assuming they were first installed no later than the date of the proposed rule. We have concluded that it is reasonable to establish the sunset date at that point to allow such owners to recoup the cost of their investment in their current machines. We also decided not to allow for a later sunset date since on the date of our proposal owners were first placed on notice that we were considering a sunset provision for co-residential sources. This sunset period, during which existing machines will be required to comply with the same revised requirements that apply to other existing area sources, will provide adequate time for source owners and operators to switch to non-PCE equipment or move their PCE equipment to a non-residential location. In the interim before the sunset date, existing co-residential sources are subject to the same requirements that apply to all other existing area sources under the final rule revisions (*i.e.,* enhanced LDAR and elimination of transfer machines).

IV. Responses to Significant Comments

A. Statutory Authority

Comment: Two commenters questioned whether we have the legal authority to impose risk-based standards on area sources that are regulated under GACT. The commenters quoted sections of the Congressional Record (appropriate sections were attached to the comments) concerning this point and provided analysis to demonstrate a legislative intent to exempt area sources, specifically, dry cleaners from residual risk standards.

Response: While we do not concede that the commenter's interpretation of our authority under section 112(f) to impose risk based standards on area sources regulated under GACT is correct, we note that since we are not relying upon CAA section 112(f) as the authority for any of the requirements promulgated in this action for area sources, the commenters' arguments are moot for purposes of this final rulemaking.

Under CAA section 112(d)(6), we are required to conduct a review and, if appropriate, revise the dry cleaning standard as necessary to reflect advances in practices, processes, and control technologies. At proposal, we evaluated the emission reductions that could be achieved under CAA section 112(d)(6). After assessing advances in control technologies and considering the public comments, we have determined that, given the current knowledge of the health effects of PCE, additional requirements we proposed under the combined authorities of CAA sections 112(f)(2) and (d)(6) for area sources are equally supportable under CAA section 112(d)(6) alone. In light of public comments we received regarding possible risks posed by area sources, and EPA's pending IRIS review of PCE, we have determined that we are able to address the risks posed by area sources by revising our standards under the authority of section 112(d)(6). The standards for all area sources in this final rule are promulgated under the authority of CAA section 112(d)(6), and fulfill the Agency's statutory requirements under this authority for these sources.

The Agency's Office of Research and Development is currently re-evaluating the available information on human health effects of PCE as part of a hazard and dose-response assessment for the Agency's IRIS, which may result in revised metrics which are different enough from those used in our current assessment to warrant a re-assessment of risks from these sources. The project schedule for completion of the IRIS assessment is available at *http://cfpub.epa.gov/iristrac/index.cfm.* Also, additional information is needed to accurately estimate chronic and short-term exposures and risks to individuals located next to area sources other than co-residential (*e.g.,* sources co-located with schools and day care centers). While we received some information on measured PCE concentrations at such area sources in public comments, much of these data were collected based on complaints and may not be representative of PCE exposures from sources in compliance with the relevant regulations. EPA is aware of other data collected to support a peer-reviewed article; however, these data represent a very limited number of samples and sampling locations. As the results of the Agency's final PCE health assessment and additional scientifically peer

reviewed data become available, we may choose to further assess PCE risks and may re-evaluate our decision for area sources.

B. Methods Used for the Risk Assessment

Comment: A commenter requested that EPA account for any uncertainty in the ATSDR MRL and the OPPTS provisional Reference Concentration (RfC) by providing a greater margin of (public) safety when selecting a dose-response value for PCE. Two commenters requested EPA to use the New York State Department of Health (NYSDOH) non-cancer reference value. Many commenters questioned the use of the CalEPA and OPPTS URE in the absence of the revised IRIS re-assessment number. Several hundred commenters, using a form letter, questioned the carcinogenicity of PCE and referenced a Nordic study.

Response: The ATSDR MRL and the OPPTS provisional RfC, both based on 1992 occupational studies indicating effects at essentially identical exposure levels, are within a factor of two of each other, which, given the precision of the underlying data, is not a large difference. Additionally, a recent document by the World Health Organization (World Health Organization. 2006. Concise International Chemical Assessment Document 68.TETRACHLOROETHENE Wissenchaftliche Verlagsgesellschaft mbH, Stuttgart, Germany, available on-line at *http://www.who.int/ipcs/publications/cicad/cicad68.pdf*) included the derivation of a noncancer value termed a ''tolerable concentration'' which falls intermediate between the OPPTS provisional RfC and the ATSDR MRL. With regard to addressing uncertainty in the underlying database, both the ATSDR and OPPTS values (and the WHO value) were derived using similar approaches which rely on the inclusion of uncertainty factors to account for recognized uncertainties in the extrapolations from the experimental data conditions to an estimate appropriate to the assumed human scenario. The method employed by NYSDOH to derive their criterion differs from that employed by ATSDR, which is consistent with EPA methodology.

As the Agency has not yet completed its own cancer assessment for PCE, we have evaluated PCE cancer risk based on consideration of both the CalEPA and OPPTS cancer dose-response assessments, as well as more recently available data. Data are available from the Japanese Industrial Safety Association (1993) for rodent cancer bioassays by inhalation, which were not considered in either the CalEPA or OPPTS assessments. These data were considered in a recent WHO document, which presented a range of inhalation cancer unit risk estimates derived using the various available data sets and default methods for extrapolation to humans. The highest unit risk estimate derived from these data was quite similar to the CalEPA estimate, while the lowest was about an order of magnitude lower, similar to the OPPTS URE. While the Nordic study did not find an association between PCE exposures of the study population and cancer risk, this study needs to be thoroughly evaluated in the context of all epidemiological studies to determine whether or not it will change the weight of evidence evaluation. The EPA IRIS reassessment will include consideration of this study as well. Since the last EPA assessment of PCE carcinogenicity, the United States Department of Health and Human Services has concluded that PCE is ''reasonably anticipated to be a human carcinogen'' and the International Agency for Research on Cancer has concluded that PCE is ''probably carcinogenic to humans.''

C. Compliance Dates

1. Two Years for Existing Sources

Comment: Most of the comments received on compliance dates for the regulation were in favor of extending the date to more than 90 days. Some commenters asked for a one year extension, while others asked that the date be extended to three years. The commenters cited references in the CAA that stated that CAA section 112(i)(3)(A) governs the compliance times for CAA section 112, including residual risk standards, and that compliance is required as expeditiously as possible, but in no event later than three years from the effective date of the standard. The commenters added that CAA section 112(f)(4) merely states that EPA may not set a compliance date earlier than 90 days. The commenters believe that the CAA section 112(f)(4)(b) provision for waivers of up to two years would apply only in cases where the rule established a compliance date of more than 90 days but less than two years.

Another commenter, a State representative, recommended that the compliance deadline for area sources that need to purchase new machines should be extended to one year, because State agencies need time to conduct outreach. States do not have lists of area source dry cleaners and will need to collect this information during facility inspections.

Response: As we have recently explained in another rulemaking, the National Emission Standards for Hazardous Air Pollutants for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry; Proposed Rule, published on June 14, 2006 (71 FR 34422), we have since revisited our prior view regarding which CAA provisions govern compliance dates for residual risk rules. We hereby incorporate that discussion by reference. In response to the commenters, we are adopting different compliance deadlines for the existing source requirements than we proposed. We interpret CAA section 112(i) as providing the comprehensive framework for compliance deadlines for all rules adopted under CAA section 112, even where the provisions of CAA section 112(f)(4) may appear to conflict with those of CAA section 112(i).

As explained in the proposed residual risk rule for the HON source category, for new sources, CAA section 112(i)(1) requires that after the effective date of any standard under subsections (d), (f) or (h), no new source may be constructed or reconstructed except in compliance with the standard, as determined by EPA or the applicable permitting authority under title V of the CAA. A new source, under CAA section 112(a)(4), is any stationary source that commences construction or reconstruction after EPA proposes regulations applicable to the source category under CAA section 112. Sections 112(e)(10) and (f)(3) of the CAA provide that CAA section 112(d)(6) and residual risk standards, respectively, become effective immediately upon promulgation. This means generally that a new source that is constructed after a proposed rule is issued must comply with the final standard, when promulgated, immediately upon the rule's effective date or upon startup, which ever occurs later.

Sections 112(i)(7) and 112(i)(2)(A)–(B) of the CAA provide some exceptions to this general rule. The former provision essentially ensures that new sources that are built in compliance with MACT but before a residual risk rule is proposed will not be forced to undergo modifications to comply with a residual risk rule unreasonably early. The second set of provisions essentially treats new sources as if they are existing sources, where a final standard is more stringent than its proposed version and a source constructs after proposal but before final promulgation: Such sources have three years to comply with the final standard,

provided they comply with the standard as proposed in the meantime.

For existing sources, CAA section 112(i)(3) allows EPA to set compliance deadlines of up to three years for ''any emission standard, limitation or regulation promulgated under this section.'' This up-to-3-year compliance period matches the 3-year period provided under CAA section 112(i)(2), which potentially applies to any standard issued under CAA sections 112(d), (f) or (h). There is also an exception to the 3-year deadline for existing sources: CAA section 112(i)(3)(B) allows EPA or a State title V permitting authority to issue a permit granting an existing source an additional year to comply with standards under subsection (d), if it is necessary for the installation of controls. We believe that this reference to only subsection (d) was accidental on Congress's part and presents a conflict with the rest of the statutory scheme Congress enacted in 1990 to govern compliance deadlines under CAA section 112.

In addition to adding section 112(i) in the 1990 CAA Amendments, the amended CAA section 112 included provisions in section 112(f) left over from the previous version of CAA section 112 that in several ways differ from those in CAA section 112(i). First, CAA section 112(f)(4) includes a requirement that new sources comply immediately with CAA section 112(f) final rules, which is redundant with CAA section 112(i). This provision also fails to account for the allowable exceptions to the immediate compliance requirement in CAA section 112(i) and fails to refer to the new title V implementation mechanism added in the 1990 CAA Amendments. In light of the overall statutory scheme regarding compliance deadlines for new sources reflected in CAA section 112(i), we believe that where those provisions conflict with the provisions of CAA section 112(f)(4), the most reasonable approach is to view CAA section 112(i) as controlling.

In addition, for existing sources, CAA section 112(f)(4)(A) imposes a 90-day compliance deadline following promulgation of residual risk rules. Section 112(f)(4)(B) of the CAA then states that EPA, without reference to a title V permitting authority, may grant a waiver for up to two years if such period is necessary for the installation of controls. Both of these provisions conflict with CAA section 112(i). The 90-day deadline conflicts with the up-to-3-year deadline available for existing sources under ''any'' rule adopted under CAA section 112 and has the result of imposing a shorter deadline on existing sources than may apply for new sources under CAA section 112(i)(2). The CAA section 112(f)(4)(B) waiver provision also fails to rely upon the new title V implementation mechanism, even though, of course, residual risk rules are required to be reflected in title V permits to the same extent as MACT rules to which CAA section 112(i)(3) clearly applies.

Notwithstanding CAA section 112(i)(3)(B)'s limited reference to standards adopted under subsection (d), we interpret CAA section 112(i)(3) as applying to ''any'' standards promulgated under CAA section 112, including those under CAA section 112(f), since CAA section 112(i)(3)(A) uses the term ''any'' without limitation. Moreover, it is clear that Congress intended the CAA section 112(i) provisions applicable to new sources to govern compliance under CAA section 112(f) standards, notwithstanding the language of CAA section 112(f)(4), based on their explicit reference to such standards. Reading CAA section 112(i)(3)(B) as reaching only subsection (d) standards, conversely, with CAA section 112(f)(4)(B) governing subsection (f) standards, would leave unanswered the question of which provision applies to subsection (h) standards, which may also require the installation of controls. A narrow reading of the scope of CAA section 112(i)(3) would also ignore the fact that in many cases, including this rule, the enabling authority will be both CAA sections 112(f)(2) and 112(d)(6). We conclude that the only reasonable way to avoid a conflict in the provisions addressing compliance deadlines for existing sources in these situations is to read the more specific and comprehensive set of provisions in CAA section 112(i) as govern both the CAA section 112(d) and CAA section 112(f) aspects of the regulation.

In our proposed rule, we asked for comments on the issue of whether a 90-day compliance deadline was sufficient for our proposed elimination of transfer machines. In response to this, and in response to our proposed deadlines for other requirements for existing sources, we received significant comments on this compliance deadline issue generally. Therefore, we believe that our approach promulgated in this action is a logical outgrowth of our proposed rule. In anticipation of an objection claiming that our resolution of the conflict between CAA sections 112(i) and 112(f)(4) was not adequately noticed in our proposal, we note that the same 2-year compliance deadline we are adopting for existing sources in the final rule is also fully supported under an alternative interpretation that CAA section 112(f)(4)(A)–(B) controls. This is because CAA section 112(f)(4) would allow us to grant a 2-year extension of the compliance deadline for existing sources, on top of the 90-day compliance deadline otherwise required. Since we find that the 2-year total compliance deadline is necessary for the installation of controls at existing dry cleaners that would have to replace transfer machines with equipment compliant with new source standards (as further discussed below), and as the total 2-year compliance deadline falls within the 2-year plus 90-day period that would be allowed under CAA section 112(f)(4)(A)–(B), the final rule deadline is within the permissible range of CAA section 112(f)(4), if it applies. In addition, since we explicitly asked for comment on the 90-day deadline proposed under CAA section 112(f)(4) for eliminating transfer machines and received substantial comments on this issue and on the compliance deadline issue in general, our final decision, to the extent it must rely on the authority of CAA section 112(f)(4), is also a logical outgrowth of our proposal.

We agree with the commenters that existing sources will need more than 90 days to fully implement the requirements of the rule. Existing area sources will require up to two years to comply with the revised standards. Approximately 200 facilities will need to replace their transfer machines with dry-to-dry machines. These facilities generally are small proprietorships that will need a sufficient amount of time to save the money to purchase new machines. Also, due to the large number of area sources in the U.S., time is needed for outreach to inform these facilities about the rule changes. Moreover, there could be a supply shortage if 28,000 area sources were required to obtain a leak detection instruments within 90 days of promulgation. Similarly, major sources will need additional time to obtain leak detection equipment and fully implement enhanced LDAR requirements.

2. Clarification of New Source Requirements

Comment: One commenter requested clarification on whether the proposed revisions for new sources apply to those constructed after the proposal date of the original NESHAP or of the date of the current proposal.

Response: The revised requirements for new sources apply only to new dry cleaning machines that are constructed or reconstructed after December 21,

2005. Under the general provisions, a new source is any affected source that commences construction or reconstruction after the date that a relevant emission standard is proposed in the **Federal Register**. Therefore, new dry cleaning machines build after the proposal date of the original rule but before December 21, 2005, are subject to the new source requirements of the original rule, and to any additional requirements of the revised rule that would apply to existing sources. New machines built after December 21, 2005, are subject to the requirements of the rule as revised upon the effective date of the final rule or upon their startup, whichever occurs later.

D. Control Requirements for Major Sources

Comment: Most comments received about the requirements for major sources supported EPA's proposed requirements of non-venting machines with refrigerated condenser, secondary carbon adsorber, and an enhanced LDAR program. Most major sources were estimated to incur an annual cost savings by implementing these requirements. We received a few comments that asked us to require more stringent requirements. These commenters asked us to require all major sources to upgrade their machines with a PCE analyzer and lockout and another asked to ban new PCE machines at major sources, require PCE sensor and lockout equipment for existing machines, and adopt an equipment standard that prohibits the use of PCE machines more than 15 years old. One commenter, a major source stated that they would face substantial negative economic impacts if required to replace their existing equipment with closed-loop systems with refrigerated condensers and carbon adsorbers as proposed.

Response: Since proposal, 3 major source facilities, including the proposal MIR facility, have been removed from our risk analysis, which has affected our risk estimates for existing major sources. The MIR facility ceased operation due to a change in ownership to a company that does not use PCE in the cleaning process. One additional facility ceased operation, and another was determined to have been an area source prior to the compliance date for the original NESHAP, and is therefore not subject to major source requirements. The resulting cancer risks at baseline for the remaining facilities range between 50 and 400 in-1-million.

In assessing the appropriate level of control to address these risks, we revisited the proposal level of control, which included enhanced LDAR, along with the requirements to use dry-to-dry machines that do not vent to the atmosphere (closed loop) during any phase of the dry cleaning cycle, and to have refrigerated condensers and secondary carbon adsorbers to control the PCE emissions during the final stage of the dry cleaning cycle immediately before and as the drum door is opened. Enhanced LDAR alone, which will require owners and operators to use a PCE gas analyzer and perform leak checks according to EPA Method 21 on a monthly basis (as well as continue weekly perceptible leak checks), is expected to reduce MIR from existing major sources to between 20 and 200 in-a-million. We have determined that this range of MIR levels is acceptable within the meaning of the Benzene NESHAP decision framework. In arriving at this determination we considered the MIR levels and other factors in making our determination of acceptability, as directed by the 1989 Benzene NESHAP. Nearly all of the population living within 10 km of each remaining major source facility is estimated to be exposed at risk levels of less than 1-in-1 million at this level of control. Considering the very small number of individuals that are estimated to be exposed at risk levels greater than 100-in-1 million cancer risk coupled with the exposure and dose response assessment methodology that was conservatively health protective, it is likely that no actual persons are exposed to PCE emissions from major sources causing cancer risk levels above 100-in-1 million. Among the exposed population of 9 million individuals, a maximum of 2 people are estimated to be exposed at risk levels of more than 100-in-1 million. In addition, no significant non-cancer health effects are predicted. The maximum HQ would be reduced from 0.3 to 0.06, and no adverse ecological impacts are predicted from exposure to emissions at this level of control. We expect that PCE usage will continue to drop as has been the trend over the past 10 years. This trend has been caused by the greater use of alternative solvents, older machines at the end of their useful lives being replaced with newer, lower emitting dry-to-dry machines with refrigerated condensers and secondary carbon adsorbers, and State and industry programs that improve machine efficiency and reduce PCE consumption. All of these factors will cause risks to continue to decrease in the future in the absence of further Federal regulatory requirements. Therefore, we have determined that the risks associated with enhanced LDAR at existing major sources are acceptable after considering MIR, the population exposed at different risk levels, and the projected decline in PCE usage. While not relevant in the analysis of acceptable level of risks, the costs for this option include a capital cost of approximately $30,000, and an annual cost savings of approximately $250,000.

In the second step of the residual risk process, we determined whether a standard more stringent than enhanced LDAR is warranted to protect public health with an ample margin of safety. We considered the estimate of health risk and other health information along with additional factors relating to the appropriate level of control, including costs and economic impacts of controls, technological feasibility, uncertainties, and other relevant factors, consistent with the approach of the 1989 Benzene NESHAP. The requirements to use closed loop dry-to-dry machines and for machines to be controlled with refrigerated condensers and carbon adsorbers as proposed would further reduce MIR to between 10 and 100 in-a-million. However, the additional costs and associated impacts from application of these controls at existing major sources do not warrant the level of incremental risk reductions this option would achieve, especially when considering the distribution of costs, emissions and risk reductions among the affected facilities. For example, of the seven existing facilities with major sources that would be impacted by this additional level of control, the bulk of the costs are incurred by one facility, and would result in minimal risk reductions from the facility. This facility would incur costs of approximately $2 million to replace equipment which could not be retrofitted to meet this level of control. Annual costs for this facility would be approximately $200,000. The risk range associated with this facility upon implementation of enhanced LDAR is estimated to be between 5 and 50 in-1 million. The risk range with the additional level of controls of closed loop dry-to-dry machines and refrigerated condenser and carbon adsorber would be between 2 and 20-in-1 million. While two of the remaining six facilities would achieve somewhat higher risk reductions that would be realized from the example facility, the remaining four are expected to only achieve minimal risk reductions, as represented by the range of incremental emissions reductions from the added layer of control (between 0 and 4 tons per year). The capital costs to achieve these emissions and risk

reductions would be $2.3 million, with annual costs of $53,000. Consequently, we have determined that the risks associated with enhanced LDAR at existing major sources represent an ample margin of safety after considering costs, remaining risks and population cancer risk.

As proposed, new major sources would be required to perform enhanced LDAR in addition to the 1993 NESHAP requirement of closed-loop, dry-to-dry systems with refrigerated condensers and carbon adsorbers. As explained in the proposal, we do not expect that any new major sources will be built, or that any existing area sources will increase PCE usage to major source levels. However, if this situation occurs, the additional LDAR requirements will continue to reduce emissions from equipment leaks. The risks posed by major sources do not warrant further control given the costs and the relatively low levels of emission and risk reduction that would be achieved by these additional controls. The available data indicated that closed-loop systems with refrigerated condensers and carbon adsorbers, as well as PCE analyzer and lockout costs were unreasonably high considering the range of impacts across facilities. Consequently, we determined that requiring these additional controls was not a reasonable or economically feasible option for all major sources. The costs to eliminate PCE usage at major sources would require a capital cost to the industry of approximately $8.2 million. This estimate was based on the total costs of replacing all PCE machines with machines using hydrocarbon solvent, the most common and lowest cost alternative in large-scale operations.

1. Risks From Major Sources

Comment: One commenter stated that the risk assessment is biased and does not represent all sources. Data regarding the performance of pollution control equipment used at each facility is critical. The commenter stated that the control technology at their facility is unlike that at any other facility. They believe the risk assessment for the group of major sources is invalid because it depended heavily on the risk of one outlier facility, ALAC, which recently closed. Therefore, they contend ALAC greatly increased the MIR for all major sources.

Response: We disagree with the commenter that the risk assessment is biased and is driven by the results of the assessment for a single facility. While we did use this facility's MIR at the time of proposal, we assessed risks using data from major source facilities that we concluded were representative of all major sources. Our final regulatory decision is based on a revised MIR for major sources, which ranges between 50-in-1 million and 400-in-1 million, after excluding data from sources that have ceased operation, such as the ALAC facility. This revised MIR supports our decision for major source under both sections 112(f) and 112(d)(6) of the CAA.

For the risk assessment, major sources were subdivided into three cleaning specializations-commercial, industrial and leather. EPA collected site-specific information from 10 of the 15 facilities (9 surveys and 1 site visit) to develop a cross-section of the three specializations within the source category. Facilities within each specialization tend to be homogenous with respect to factors that affect the emissions, pollutant dispersion, and population size in the modeling radius, allowing EPA to extrapolate risks from the facilities it modeled to those it did not.

The information EPA collected included:

- Source locations and emission points,
- Building dimensions,
- PCE consumption,
- Annual disposal of PCE in sludge or residual waste (still bottoms),
- Annual facility operating hours, and
- Locations of sensitive receptors, including neighboring houses.

Based on these survey and site-visit data, we estimated annual and hourly emissions by performing a mass balance calculation on PCE concentrations. Using this mass balance data, we then estimated annual average emission rates. Finally, we estimated maximum one-hour emissions by dividing the total emissions level by the total number of operational hours at that facility and then accounting for hourly variation in these emissions.

Comment: One commenter stated that EPA should have informed the public that two major sources recently ceased operations.

Response: The largest major source ceased operations in June 2005. One other source ceased dry cleaning operations and another source was determined to have been an area source. By the time we learned of the closures, the proposed rule package was at the later stages of senior-level Agency review. Since proposal, we re-evaluated the risk assessment without these sources. The baseline estimate for MIR eliminating the sources that ceased operation ranges between 50 in-one-million to 400 in-one-million. The MIR at the level of control promulgated in this final rule is between 20 in-one-million and about 200 in-one-million.

2. Site Specific Risk Assessment

Comment: Two commenters supported the concept of incorporating a site-specific risk assessment (SSRA) for both major and area sources. The commenters believe that substantial flexibility is needed to improve the cost-effectiveness of the rules and to avoid potentially adverse impacts on specific sources. They believe that EPA has published adequate guidance on conducting an SSRA. The commenters believe that the SSRA should be used both to demonstrate equivalence to specific emission reduction requirements and to determine applicability to the residual risk requirements. The commenters believe that the CAA allows EPA to focus the applicability of the residual risk requirements only on those sources whose remaining risks after application of MACT do not provide an ample margin of safety (citing Senate Report language to support their case).

Response: We have decided not to adopt an SSRA option for major or area sources as part of this action. As a result of the revised risk analysis for major source given the elimination of 3 sources from the analysis, including the MIR facility, baseline risks from major sources are much lower than estimated for proposal, and the associated risk reduction measures are less stringent than originally proposed. Major sources are required to perform enhanced LDAR, which is expected to reduce MIR from between 50 and 400 in a million, to between 20 and 200 in a million, which the Agency has determined meets ample margin of safety considering cost, population cancer risk at different control levels and other factors. Furthermore, an annual cost savings of about $250,000 is estimated for major sources from implementing enhanced LDAR. Similarly, an annual cost savings of about $2.7 million is estimated for area sources from implementing enhanced LDAR programs and eliminating existing transfer machines. We believe these requirements will be cost-effective. Therefore, we have determined that an option for major or area sources to perform an SSRA is not necessary.

For co-residential sources, we are promulgating a ban on new sources and a sunset date for existing sources. An option for co-residential sources to perform an SSRA to determine low risk and avoid these requirements is not feasible as part of this action. There is no established protocol for self assessment for co-residential sources

which would account for exposures inside of co-located apartments. Traditional methods of dispersion modeling of emissions would not accurately assess risks in this exposure scenario, as no modeling methodology exists that could determine dispersion patterns throughout buildings. Also, there may be practical difficulties for these small businesses to pay for, perform or obtain monitored samples of PCE concentrations in private residences, to be used as part of an SSRA in the absence of a modeling methodology. Therefore, an option for an SSRA is not included in this action.

3. PCE Analyzer and Lockout

Comment: Six commenters recommended that EPA require major sources to install a PCE sensor and lockout to further reduce health risk. Among the six commenters, two commenters suggested that if EPA receives additional information they should revisit the cost-effectiveness analysis. Another commenter stated that 40 tons per year of PCE removed by this control option at cost of $17,000 per ton would be worthwhile. One commenter stated that the sensor and lockout will help to reduce the PCE emissions from operator error, which is, along with poorly maintained older machines, the cause of the majority of emissions.

One commenter, a vendor of dry cleaning machines, advised EPA to be cautious regarding the use PCE analyzers inside the drum because of their high sensitivity to humidity, heat, and vibration which necessitates frequent recalibration. Another commenter, a major source, noted that a lockout system would increase cycle times significantly thereby increasing operating costs.

Response: Based on the revised risk assessment for major sources post proposal and the resulting cancer and non-cancer risk estimates, we have determined that the requirement for enhanced LDAR in addition to the existing requirements in the 1993 NESHAP are sufficient to protect public health with an ample margin of safety. We considered a variety of other factors in making our determination, as directed by the 1989 Benzene NESHAP (described above). Consequently, we believe that the additional costs of further controls are not warranted.

We agree with the commenter about the effect of operator error on emissions. Because our estimated emission reductions are based on subjective estimates by industry experts of typical performance over time, variations in operations have been taken into account in the emissions estimate. We also agree with the comment about the potential for unreliable readings from improperly calibrated PCE analyzers. While PCE analyzers are sometimes employed as PCE sensors, PCE analyzers are typically more advanced than sensors, as the analyzers typically employ technologies such as single-beam infrared photometers, and tend to be more sensitive instruments than those used as sensors. We did not take into account any additional costs associated with performing periodic calibration tests. As a result, the cost of the technology may be more than what we estimated. Due to the interlock, a high reading from a PCE analyzer can unnecessarily prevent the completion of a load. In a high-throughput operation, such increases in cycle time can impose a considerable decrease in production.

4. Economic Analysis

Comment: One major source commenter stated that financial impacts for his facility are much higher than what EPA estimated. The commenter contends that the Economic Impact Analysis is based on underestimated costs and revenue that is more than double the company's actual revenue. The commenter also contends that his company's machines cannot be retrofitted with a refrigerated condenser and would need to be replaced, that the cost to replace the machines has been estimated by EPA to be $1.9 million, that substantial lost revenue while machines are under construction was not considered, and that estimated financing and permitting costs were also not considered. This commenter strenuously disagreed with the conclusion of the Economic Impact Analysis that no negative impact would be incurred by major sources, and contends that EPA used incorrect revenue estimates. According to this commenter, the requirements of the proposed rule, if implemented within 90 days of promulgation, would result in the closure of this facility and the loss of 120 jobs in economically desolate Detroit, Michigan.

Response: Our economic analysis of the impacts associated with the proposed level of control for major sources from implementing the rule is based on comparing the estimated annualized compliance costs to the estimated revenues for the parent firm. The estimate for the rule is annualized compliance costs of 0.4 percent of the firm's sales (or cost per sales hereafter). This estimate is contingent on the accuracy of the compliance costs and the revenue estimate for the firm. Our revenue estimate is from 2002 fiscal year data collected for the firm. We collected this data for 2002 to be consistent with the year for which the costs are estimated. This is consistent with how EPA has estimated economic impacts in a variety of recent rulemakings for residual risk and other standards. Thus, the comment that the revenue estimate is incorrect is not accurate. If we were to recalculate the compliance costs for this facility assuming that all of their machines would need to be replaced, then the cost per sales will be 1.65 percent given the annualized costs of about $240,000 for the rule.

We have also adopted a 2-year compliance schedule in the final rule. This compliance schedule should provide adequate time for this facility fully implement requirements for enhanced LDAR.

We have not concluded that there is no negative economic impact on major sources resulting from the final rule. Rather, we have stated that there is not a significant economic impact to a substantial number of small entities (or SISNOSE). The commenter's facility is not a small business according to the SBA definition. While estimated cost savings are expected for a number of firms that are major dry cleaning sources, some firms are likely to experience some negative economic impacts. The Agency does not believe that such impacts are likely to be unreasonable for the affected major source-owning firms, however. This statement is based on our impact estimates that most of the affected major source-owning firms have annualized compliance cost to sales of less than 1 percent. These estimates can be found in the economic impact analysis for this final rule.

5. Performance-Based Standard for Existing Major Sources

Comment: One commenter supported incorporating a performance-based standard for major sources in the final rule. They believe a performance-based standard provides an incentive for sources to convert to safer alternatives for some or all of the articles handled by a source. Other commenters supported the alternative compliance option (facility-wide PCE usage or other metrics) for existing major sources to provide the maximum compliance flexibility possible.

Response: We appreciate the supportive comments regarding this concept, however a performance-based option has not been incorporated in the rule in part because we did not receive any indication from any of the major sources to which this option would have applied that they would have

found it useful. None of the major sources responded with comments supporting the need for a performance-based option, which suggests to us that their preferred compliance option would be to meet the required standards. Therefore, it is not necessary for us to further pursue a performance-based option for this specific industry.

E. Area Sources

Most comments received about the requirements for typical area sources supported EPA's proposed requirements of banning transfer machines, requiring existing facilities to implement an enhanced LDAR program, and requiring new sources to install a closed-loop dry-to-dry machine with refrigerated condenser and carbon adsorber. A few commenters opposed the ban on transfer machines based on the cost of the machine replacement. We received a few comments requesting more stringent requirements. These commenters asked EPA to require all typical area sources to upgrade their machines with a secondary carbon adsorber.

Based on our review of the advances in technology since the 1993 rule, we have determined that adopting the rule revisions for area sources as proposed satisfies the requirements of CAA section 112(d)(6). The preponderance of comments supported the proposed rule, and we received very few negative comments. Existing sources were estimated to incur a cost savings because both replacement of transfer machines and enhanced LDAR will reduce annual PCE consumption. The reduction in annual PCE consumption at the 200 businesses that would replace transfer machines is more than sufficient to offset the annualized cost of the new equipment. In particular, we believe most of the transfer machines are at the end of their useful life and it would be economically beneficial for the facilities to replace the transfer machines with dry-to-dry machines. Thus, we believe the economic impacts to the affected businesses and facilities are negligible. Finally, these costs and risk estimates do not consider the impacts of future trends of declining PCE usage. Therefore, consistent with our analysis at proposal, we are not requiring a secondary carbon adsorber on existing area sources because the emission and risk reduction would be relatively minor and the costs would impose unnecessary adverse economic impacts on a number of small businesses.

1. LDAR Program

Comment: One commenter believes the proposed LDAR requirements are not necessary, explaining that most States now require the PCE dry cleaners to inspect their equipment on a regular basis and State inspectors make periodic inspections.

Response: EPA disagrees. Most States do not have requirements beyond the 1993 NESHAP and do not inspect dry cleaners more than once every few years. Sensory methods are ineffective in identifying leaks early. Substantial PCE emissions occur between the point when failure begins and the leak can be detected by sensory methods. An instrument will enable earlier detection.

Comment: One commenter, a vendor of dry cleaning equipment, disagreed with the EPA's conclusion that leaks are the largest source of emissions. Leak inspections are a waste of time because serious leaks are repaired immediately without need for an inspection. More significant sources of emissions are:

1. Unloading incompletely-dried garments.
2. Routine maintenance.
3. Cleaning distillation units.
4. Receipt of new PCE.

Response: Our analysis has shown that the filling of PCE tanks is not a significant source of emissions. We agree that the first three sources named can be significant if dry cleaning systems are not operated properly. Under the General Provisions of 40 CFR 63, all regulated sources have a general duty to operate systems and control devices according to good air pollution control practices for minimizing emissions. This requirement includes following manufacturer's specifications for operation and maintenance of the system. We have concluded that it is not necessary at this time to specify in the rule additional operating and maintenance procedures. Leaks, however, are an important source of emissions, and controlling them is an integral part of an effective pollution prevention program. Leaks can be detected and controlled at a reasonable cost using an enhanced LDAR program. In a study by the South Coast Air Quality Management District, over half of the dry cleaning machines tested had leaky gaskets, which are replaceable parts that can cause significant PCE emissions. The enhanced LDAR program requirement is expected to result in earlier leak detection from these types of emission points, and is the best method to determine when gaskets need replacing and when they do not.

2. Banning PCE

Comment: Two commenters, a state agency and a manufacturer of PCE alternative solvent dry cleaning machines, stated that EPA failed to adequately assess the feasibility of alternative solvents because the negative impacts of alternative solvent technologies were not sufficiently considered. Any action that would result in the ban of PCE at some or all facilities requires the use of an alternative solvent.

Response: We concur with the commenter that each of the alternative solvents that are currently available have certain trade-offs or limitations relative to PCE. Depending on the system, these limitations may involve cost, cleaning ability, ease of use, applicability to certain fabrics, safety, or others. No single alternative offers all of the business advantages of PCE. Given these factors and the current degree of use of alternative solvents in the industry, we did not consider it appropriate to mandate the use of alternative solvents as part of the CAA section 112(d)(6) review, except in the context of co-residential area source settings as discussed below. For area sources, the 1993 NESHAP was based on the use of GACT. In our review of this standard under CAA section 112(d)(6), we considered PCE emission controls that are in widespread use by the industry. We concluded that, based on the current information before the agency, we are not prepared to require a ban of PCE at typical area sources (*i.e.*, area sources other than co-residential) under CAA section 112(d)(6). However, we interpret CAA section 112(d)(6) as allowing us to consider a broad range of factors in determining what changes to standards are ''necessary,'' after taking into account developments in practices, processes, and control technologies. This interpretation is consistent with those regarding other provisions of the CAA that direct us to find the ''best balance'' of emissions control, costs of control, safety, and other factors. Such factors may include whether sources' emissions present different degrees of risk. Due to the potential for high risks posed by co-residential area source dry cleaners, and in light of the availability of non-PCE dry cleaning technologies in the market, we determined that it is necessary under CAA section 112(d)(6) to treat this component of the area source sector differently than we are treating other area sources dry cleaners, whose emissions present significantly smaller risks.

3. Transfer Machines and Vented Machines

Comment: One industry association opposed the ban on transfer machines because such a ban would result in a significant economic impact to these

economically marginal businesses. To require the replacement of transfer machines in 90 days would result in the closure of each of these small plants.

Response: The economic impact analysis shows that there is an economic impact on owners of transfer machines from a ban on their operation, but not a significant one. The results of the analysis show impacts of compliance costs of just under two percent of sales. Given that these transfer machines are all at least 13 years old due to the ban on new transfer machines applied under the dry cleaning NESHAP, these machines are very likely close to or beyond their expected equipment life of 15 years. Thus, owners of these machines are likely to consider replacing them in the near future in any event without any additional regulatory driver.

Comment: Two dry cleaners owning transfer machines stated that transfer machines should not be prohibited because such a requirement would force them to close because they cannot afford a new machine. One of these commenters stated he used the same amount of PCE as dry cleaners using third generation machines. The other commenter requested that EPA phase out transfer machines over 10 to 15 years and that EPA examine each dry cleaner operating a transfer machine individually.

Response: EPA's cost and economic impact analyses for this rule shows that firms owning transfer machines will have to pay $35,600 to purchase a new dry cleaning machine with secondary controls (refrigerated condenser and carbon adsorber). The annualized compliance costs are estimated at just over one percent of the sales for an average dry cleaning firm. We believe these impacts are not significant overall, but we recognize that individual firms, especially small firms, may experience greater impacts than the average. To provide an adequate opportunity to raise capital and in response to comments, we are promulgating a compliance period of two years, rather than the 90 days that would have been allowed under the proposal.

Comment: Two State representatives, a vendor of dry cleaning equipment, and an environmental group recommended that EPA prohibit the use of vented machines because their emissions are considerably greater than closed-loop machines. One commenter added that, if a carbon adsorber for a vented machine does not get frequent maintenance, its emissions increase considerably. The two State representatives said that their states have already banned vented machines without encountering appreciable resistance from the dry cleaning industry. One commenter noted that according to EPA's cost estimates, dry cleaners replacing a vented machine with a fourth generation machine would reduce their net cost because of reduced usage of PCE. This commenter added that vented machines are at the end of their useful life.

Response: The final rule will not prohibit the use of vented machines. We have reviewed developments in processes and control technology and determined that an LDAR program will be required on a monthly basis with a leak detection instrument. These requirements satisfy the requirements of CAA section 112(d)(6). We did not find any control technologies that could be retrofitted at a reasonable cost on these machines. We concluded that forced replacement of these machines at typical area sources is not warranted given the costs and the relatively low levels of emission and risk reduction that would be achieved.

4. Co-Commercial Sources

Comment: One commenter, a State representative, strongly disagreed with the statement in the proposed rule indicating that the existing NESHAP level of control would result in an acceptable level of risk for area sources for co-commercial sources. The commenter presented a summary of results from complaint-based sampling of facilities in strip malls that demonstrate where PCE concentrations ranged from 8 to 50,400 micrograms per cubic meter (ug/m^3), including a day care facility with a mean concentration of 2,100 ug/m^3. Also, PCE concentrations during the first hour of operation are roughly four times the average because vapor accumulates in the drum of the machine overnight.

Response: While these measured concentration results are high (relative to what we would expect from the type of dry cleaning equipment likely to be in use at co-commercial sources), the fact that they were measured as the result of complaints may indicate that the reason behind the elevated levels may be lack of compliance with the 1993 NESHAP. This being the case, we cannot confidently conclude that these data as represent exposure levels that reflect compliance with the NESHAP. Therefore, we are choosing to not use them to evaluate the success or failure of the NESHAP level of control. In the future, studies of PCE exposures should be conducted to include a representative sampling of facilities and indicate the actual level of control being utilized and achieved by each facility in question.

Comment: Several commenters recommended additional controls should be required at co-commercial sources. A State representative recommended the following requirements for co-commercial sources:

1. Secondary carbon,
2. Vapor barriers,
3. Weekly leak inspections,
4. Annual third party inspections, and
5. Operator certification by an approved training program.

Without these measures, the revised NESHAP cannot achieve reductions in PCE levels comparable to those achieved by NYCRR Part 232.

Response: Additional information is needed to accurately estimate exposures and risks to individuals located next to co-commercial sources (including, for example, sources co-located with schools and day care centers). Without valid information that co-commercial sources pose greater risks than typical area sources, we are not prepared to determine that the cost of additional controls for co-commercial sources is justified under CAA section 112(d)(6).

In their remarks, some commenters quoted relatively high exposure concentrations that are attributed to co-commercial sources. However, only one study was referenced with the comments. This study has not been peer reviewed and has not had the opportunity for public comment. The study was completed on one co-commercial facility and without documentation of the study, we cannot analyze the methods of data collection, the type of facilities sampled, the dry cleaning systems used, or the conditions under which the data were collected. Accordingly, we do not know if these reported measurements are valid or, if so, whether these exposures are representative of all co-commercial facilities or only particular configurations. In absence of these data, we have no technical basis for requiring additional control on these facilities. Until more research is available on PCE exposures at co-commercial sources, we have determined to subject co-commercial sources to the same control requirements as typical area sources that are not collocated in the same buildings with residences.

5. Economic Impacts

Comment: Two trade associations stated that EPA has significantly underestimated median revenue of dry cleaners. According to the 2002 Economic Census, 87 percent of all dry cleaning establishments had less revenue than the median revenue used by EPA. Further, one third of all dry cleaners are so small that they have no

payment to report and are not reflected in census data.

Response: EPA's economic analysis of the impacts to affected dry cleaners is based on comparing the estimated annualized compliance costs to the estimated revenues for the parent firm. This estimate is contingent on the accuracy of the compliance costs and the revenue estimate for the firm. The Agency chose to use the industry revenue average for 1997 instead of the data from the 2002 Census because it was readily available to the model EPA chose to employ for generating the economic impact results at the time of the analysis. The value used by EPA from the Census reflects the average revenue per firm and applying this value is consistent with revenue estimates used in economic impact analyses that accompanied recent agency rulemakings. This approach is consistent with how EPA has estimated economic impacts in a variety of recent rulemakings for residual risk and other standards. A review of average revenue for firms in the dry cleaning industry from the 2002 Economic Census showed that this average revenue was 10 percent higher than the value from the 1997 Economic Census. Hence, our economic impact estimates will be lower using average revenues per firm from the 2002 Census as compared to the revenues used in the current economic impact analysis.

The commenter's point about the lack of revenue data from many dry cleaners that do not report payroll is a useful point. Having such a lack of data means some caution in applying Census revenue data for these firms is appropriate. However, collecting revenue data from these firms or estimating their revenues by some other means is highly problematic and impossible to incorporate in the current economic impact analysis. The commenter's assertions of the ''over saturation of the industry with too many plants'' and that many ''plants'' are having difficulty paying bills are ones for which no data is provided. The Agency's current estimate of the number of dry cleaning facilities is about 34,000. This estimate is extremely close to the estimate of 33,863 provided by the Agency in its ''Dry Cleaning Sector Notebook Project'' report published in September 1995, which was before full implementation of the dry cleaning NESHAP took place. In addition, low profit margins are typical for dry cleaning operations; the ''Dry Cleaning Sector Notebooks Project'' published by the Agency over 10 years ago mentions that ''Commercial dry cleaning is not a high profit business, and many dry cleaners are barely able to stay in business.'' The fact that the number of facilities in this industry are about the same over a ten year periods leads to skepticism as to whether the industry was oversaturated at the current time and whether firms in the industry are having more difficulty staying in business now than in the past.

F. Co-Residential Sources

Comment: We received several hundred comments on the two proposed options for co-residential sources. Comments from the industry and one mass-mailing campaign supported the technology-based option for co-residential sources similar to the technology requirements of New York's Part 232 regulations. Comments from States, environmental groups, and another mass-mailing campaign supported the ban of PCE at co-residential facilities with either an immediate ban or a phase-out over time. These commenters wanted dry cleaners to switch to alternative dry cleaning solvents. Some commenters supported the eventual phase-out of PCE and the interim imposition of technology requirements like New York's Part 232 regulations for all existing co-residential machines.

Response: Current technology controls to reduce PCE emissions from co-residential dry cleaning units—such as those embodied in the NY Part 232 requirements—have been generally effective in reducing exposures. Nevertheless, empirical evidence indicates that in certain cases PCE exposures may remain relatively high. We believe that further reductions are warranted to reduce potential exposure levels, but at the same time we believe that more stringent requirements should in part be based on considerations of cost, technical feasibility, and the availability of alternative technologies. Therefore, we are requiring existing sources to discontinue the use of PCE machines no later than December 21, 2020. In addition, our consideration of the relevant factors leads us to prohibit additional PCE-using machines from being installed.

We recognize that the industry has made great strides in technology that reduces PCE emissions since the 1993 NESHAP was established. If the development of future technologies produces one that is demonstrated to adequately reduce PCE emissions and related exposures to residents of apartments co-located in buildings with dry cleaners, we would consider revisiting the necessity of the ban and phase-out of PCE in co-residential settings. Such a review could, for example, occur in the next round of our review of the developments in control technologies, processes and practices under section 112(d)(6) for this NESHAP.

Some commenters suggest an immediate elimination of PCE in co-residential settings and others suggested phasing out PCE use over the natural life of the equipment. An immediate ban would impose significant adverse impacts on owners and operators of existing sources, as would a ban falling within the three-year compliance window we have traditionally allowed for existing sources. For these small businesses, which have substantial investments in their current equipment, we have concluded that it is appropriate to allow them sufficient time to recover the investment over the useful life of the equipment and raise the needed capital to fund alternative solvent systems.

The economic life of a PCE dry cleaning system is typically 15 years. One State commenter suggested that to set a phase-out of existing sources based on the purchase date of each machine would be impracticable and a burden for States to implement. This commenter suggested picking a single date by which all current systems would need to be converted. Considering these factors, the final rule establishes a date 15 years from the date of the proposed rule, after which time all existing PCE systems at co-residential sources are prohibited. We selected this date since it corresponds to the date when we first publicly proposed the potential requirements for PCE dry cleaners in co-residential settings. This amount of time is necessary in order to phase out PCE use in co-residential settings without causing unacceptable adverse economic impacts, which would be the result if we imposed a 3-year compliance deadline.

In addition, although it is unlikely that any additional co-residential PCE-using sources came on-line between the date of publication of the proposed rule and the date the Administrator signed the final rule (July 13, 2006), in this rulemaking we are treating such sources that commenced construction between December 21, 2005, and July 13, 2006 (if any exist), slightly differently than the way we are treating either existing sources discussed above or other new sources (which are required to comply with the PCE ban immediately upon startup or the effective date of the final rule, whichever is later). This is because the requirements we have adopted in the final rule for new co-residential sources are more stringent than one of the two options we proposed. Under CAA section 112(i)(2)(A)–(B), these

uniquely situated new sources will also be required to eliminate PCE use, but not until three years after the effective date of the final rule. In the interim, they are required to comply with the second option we proposed for new co-residential sources and use refrigerated condensers and secondary carbon adsorbers, with equipment housed inside a vapor barrier with general ventilation to the outside air, as required by NYSDEC title 6 NYCRR Part 232 rules. These facilities will also have to conduct weekly leak inspections using a leak detection device such as a halogenated hydrocarbon detector. To require these sources, which may have installed equipment compliant with New York controls in reliance on our co-proposal of that option, to dismantle their PCE equipment immediately could impose severe economic hardship for these sources, contrary to the efforts we have taken in the rest of the rulemaking to avoid causing significant adverse impacts on small businesses.

We anticipate that most existing systems will be relocated to nonresidential buildings or converted to alternative solvents prior to this date, given the range of ages of current co-residential sources. In the meantime, existing co-residential sources must also meet the additional control requirements in the final rule revisions for other area sources (i.e., eliminate transfer machines and use enhanced LDAR). We have decided not to impose additional control requirements on existing co-residential sources pending the phase-out of PCE use, such as the NYCRR Part 232 controls contained in our second proposed option addressing co-residential sources. While the NYCRR Part 232 controls are currently the most stringent technological controls required in the U.S., there is uncertainty about the precise effect of the NYCRR Part 232 controls on risk. Industry commenters claim that the high risks are not representative, and that dry cleaning systems using this technology do not pose high risks. Others point out that high risks measured in New York buildings have been assessed as being caused by poor control equipment design, malfunctions of control equipment, poor ventilation designs, operator error, and other unregulated activities. We do not consider it necessary or appropriate to impose the costs of the NYCRR Part 232 controls in the interim before PCE use at co-residential sources is eliminated entirely. Moreover, our economic analysis indicates that imposing the New York requirements on existing sources elsewhere in the country, pending the PCE phase out, would cause a significant adverse economic impact on small businesses.

The health risks from co-residential sources that we are concerned about are from chronic exposures, not acute. Thus, while short-term exposures from some sources will not be immediately reduced, this is not expected to result in adverse health effects. Further, although the full benefit of the ban (complete removal of sources and their associated risks from residential buildings) would not be realized until year 15, we expect that most sources would not wait until the 15th year to retire their equipment since many of these sources are nearing the end of their useful lives. Thus, over the next 15 years, the final rule will systematically reduce exposures and risks from current levels as old equipment is retired and existing co-residential shops are either relocated or converted to alternative solvents, ultimately resulting in the elimination of these chronic health risks.

About 80 percent of the co-residential sources already have installed controls similar to NYCRR Part 232 controls. Imposing additional capital costs on the approximately 250 remaining co-residential sources is not reasonable given the significant costs of the controls and the fact that even they would be prohibited upon machine replacement or the arrival of the sunset date. For many of these shops, the remaining useful life of the machine would not allow full amortization of the capital investment before the system would have to be replaced. In addition, it is not clear how much additional risk protection would be achieved by the controls and what would be the significance of the emissions reduction, which would be realized only over the remaining useful life of each machine. For shops with PCE equipment that would be replaced within a few years, the health benefits would be limited and the capital costs would not be well spent. Therefore, temporarily imposing this control technology is not necessary under section 112(d)(6).

1. Risk Assessment Data

Comment: Industry commenters claimed that the New York City data that EPA used to assess co-residential exposures were biased and these measured exposures are not representative of typical exposure. The sources of bias noted by the commenter were that: Residences sampled were selected based on complaints; sampled facilities may not have been in full compliance with NYCRR Part 232 rules; some samples taken soon after compliance with Part 232 and PCE would not have had time to dissipate to routine levels characteristic of the controls installed.

Response: The NYC study, as described in McDermott (2005), states that ''indoor air perc levels in most apartments in dry cleaner buildings sampled were below, or only slightly above, the NYSDOH residential air guideline of 100 μg/m^3. Higher levels were found in dry cleaner buildings located in low-income, minority neighborhoods and in buildings elsewhere that had been the subject of a residential complaint. Since successful completion of the NYC Perc Project required that as many apartments as possible with elevated PCE levels be identified, the strategy for identifying buildings for inclusion was modified so that buildings located in minority or low-income ZIP code areas and those that had been the subject of complaint were prioritized.'' The article goes on to state on that the sample ''obtained is not truly a random sample of all dry cleaners in the study area. However, socioeconomic characteristics of the census block groups where sampled buildings are located reflect socioeconomic characteristics of their larger ZIP Code area, are equivalent to census block groups where buildings that were not sampled are located, and are correlated with sampled household self-reported socioeconomic characteristics. Thus, conclusions drawn with respect to sampled building neighborhood characteristics and indoor air PCE level are likely to be applicable to other residential buildings matching NYC Perc Project building inclusion criteria (*e.g.*, dry cleaner using PCE on-site; not other sources of VOC).''

While the study authors believe that their results are likely generalizable to co-residential dry cleaners that meet similar criteria with respect to complaints and socioeconomic characteristics, the results cannot be generalized to all co-residential dry cleaners in NYC or across the country. We are not currently able to estimate the extent to which this study provides estimates that are biased. Nevertheless, these empirical results provide a representation of exposure levels that exist in New York City (where the vast majority of co-residential dry cleaners are located) and adequately serve as one basis for this rulemaking.

Our risk assessment has focused on the exposures associated with dry cleaning facilities that are in compliance with the New York Part 232 requirements. We examined the McDermott data, NYSDOH data, and public comments. To identify the compliant facilities, EPA ensured that

the date by which the sample was taken was after the date in which the facility began operating a fourth generation dry cleaning machine and had installed a vapor barrier. While the sampling dates are well documented, the compliance records for certain dry cleaning facilities are somewhat ambiguous; this is due to some limitations in the compliance records provided by NYSDOH. These records are comprised of initial notification letters that facilities have submitted to the NYSDEC as well as third-party inspection reports. EPA used a combination of these data to assess whether a particular facility was in or out of compliance with NYCRR Part 232. The result of this evaluation was a finding that 25 of the 65 sampled apartments were in the 9 buildings with potentially noncompliant dry cleaning systems, while 40 of the apartments were in the 14 buildings with compliant dry cleaning systems, and these were the values used to assess the risks associated with well-controlled dry cleaners. Nevertheless, we were unable to definitively determine the compliance status of one dry cleaner that was associated with high exposure level, as noted in the risk characterization memorandum in the docket. We believe that despite the uncertainty about this particular dry cleaner, our decision for the requirements for co-residential dry cleaners is warranted because it does not hinge on the compliance status of this particular facility.

2. Part 232 Technology Requirements

Comment: Some commenters opposed the use of Title 6 NYCRR Part 232 Technology Requirements for the final rule requirements, because these controls have not been effective in reducing exposure in residences. In addition this option would do nothing to reduce current risks in New York, where the majority of co-residential facilities are located. These commenters supported a ban of PCE because this is the only way to protect the public with an ample margin of safety. These commenters suggested that a phase-out of PCE should be accompanied by a sunset provision for existing machines or else co-residential dry cleaners would have the incentive not to replace their existing equipment. Rather, dry cleaners would continue to use their old, high-emitting equipment well beyond the normal economic life, resulting in continued high exposures to residences.

Response: We have concluded that, based on available data, the NYCRR Part 232 controls have not been demonstrated to be effective in preventing significant exposures to PCE in certain cases.

After reviewing technical developments in the industry, available public health risk information, and the comments received, we have concluded that the option that best satisfies the requirements of CAA section 112(d)(6) for existing co-residential area sources is to phase out the use of PCE. In addition to the potential for co-residential dry cleaners to cause high individual cancer risks (as fully discussed in the proposed rule), we believe that the cancer incidence estimates for these sources also justifies the decision. Estimates of cancer incidence are helpful in characterizing cancer risks, because such estimates account for the full range of exposures that have been captured by the monitoring and provide a metric of the aggregate health impact taking into account the number of people exposed to varying levels of risk. Our estimate of annual cancer incidence for the approximately 1300 co-residential sources currently in operation is in the range of 0.2 to 2 cases per year, which is on par with the estimated annual incidence of 0.4 to 4 cases per year for the approximately 27,000 other area source cleaners. The near-parity of these two estimates, notwithstanding the much smaller number of co-residential vis-à-vis other sources, suggests that co-residential sources pose a disproportionate cancer incidence to their residents. Further, this estimate of total cancer incidence for the co-residential sources is at the high-end of cancer incidence estimates that we have generated for other source categories reviewed by the residual risk program to date.

As we have previously noted, these cancer incidence estimates carry significant uncertainties since they are sensitive to assumptions regarding the number of individuals exposed and the level of exposure borne by residents of un-monitored apartments. However, when viewed in the context of the other risk information and the availability of alternative dry cleaning processes, we believe that the incidence estimates provide additional support for a requirement for new installations at co-residential facilities to adopt a non-PCE solvent.

We have determined that a phase out that takes place too quickly would impose significant adverse impacts on dry cleaners. For these small businesses, which have substantial investments in their current equipment, it is appropriate to allow them sufficient time to recover the investment over the useful life of the equipment and raise the needed capital to fund alternative solvent systems. The final rule establishes a date 15 years from the date of the proposed rule, after which time all PCE systems at co-residential sources are prohibited. We anticipate that most systems will be relocated to nonresidential buildings or converted to alternative solvents prior to this date.

3. Economic Impact of PCE Phase-Out

Comment: Industry commenters opposed the phase-out of new PCE installations because it would cause a significant effect on a substantial number of small businesses. The commenters said that the EPA underestimated the costs of this option because the EPA analysis overestimated dry cleaner revenues, underestimated the cost of hydrocarbon equipment, underestimated the cost of meeting fire codes, and used a 7 percent interest rate, which is unrealistically low. In addition, the commenters maintained that any type of ban on PCE would send a misleading signal that PCE is unsafe and would cause landlords to not renew leases of dry cleaners. This severe economic impact was not accounted for in EPA's economic analysis.

Response: The estimates of impacts provided in the Agency's economic analysis for the rule are in terms of annualized compliance cost per revenues for parent firms. It is not in terms of compliance cost per profits as asserted by the commenter. The commenter states that the impact will be a ''substantial'' increase in costs and a decrease in profit margin far in excess of the five percent impact on year-to-year profits accepted as a benchmark. The benchmark of at least five percent impact on year-to-year profits as a benchmark for significant impacts is, however, not a benchmark that the Agency has recognized as such in the recent past. The cost-to-sales calculation provided in the economic impact analysis has been an accepted approach for indicating the potential economic impacts to small and other businesses as part of the process to determine the degree of small business impacts associated with a proposed rule.

We chose to use the industry revenue average for 1997 instead of the data from Census for 2002 because it was readily available to the model we chose to employ for generating the economic impact results at the time of the analysis. The value we used from the Census does reflect the average revenue per firm and applying this value is consistent with revenue estimates used in economic impact analyses that accompanied recent Agency rulemakings. A review of average revenue for firms in the dry cleaning

industry from the 2002 Economic Census showed that this average revenue was 10 percent higher than the value from the 1997 Economic Census. Hence, our economic impact estimates will be lower using average revenues per firm from the 2002 Census as compared to the values used in the current economic impact analysis.

It should be noted that use of the average revenue-per-firm estimate suggested by the commenter of $204,000 in the Agency's analysis would lead to higher estimated impacts to small businesses than calculated by EPA but would not lead to any impacts above three percent of sales, a benchmark among others often considered as significant in characterizing small business impacts.

The incremental cost between a PCE and a hydrocarbon machine is a reasonable estimate of the cost of eliminating PCE at a facility because, on balance, the rule revisions will not affect the economic life of a machine. We assume that at the end of the machine's 15-year economic life, the machine has no salvage value. Instead of purchasing a PCE machine, the owner incurs the incremental cost of purchasing a hydrocarbon machine. Some sources may be required by their landlord to retire their PCE machine before the end of its useful life; EPA acknowledges that such premature retirements may create a separate additional burden on owners. Other sources may choose to maintain their machine beyond its normal economic life. Because predicting these effects would be very difficult, we assume that these effects do not change our assumption of a 15 year economic life for these machines. A number of commenters agreed with our estimate of 15 years for the economic life of these machines.

Our cost estimate is a reasonable appraisal of costs. Our estimate that 50 percent of facilities outside New York that install hydrocarbon machines would need a sprinkler system is similar to the commenter's estimate of 66 percent. The chart of fire code geographic applicability provided by the commenter is not a sure indicator of whether a facility would need a sprinkler system because machine vendors are often able to obtain a case-by-case variance if they can demonstrate fire protection features integral to the machine. Regarding the cost per facility outside of New York City, the cost in the docket item cited by the commenter was from a machine vendor. We used a lower estimate provided by a sprinkler contractor. Sprinkler system costs for plants in New York City are particularly difficult to estimate because of the fact that actual costs are unavailable because few if any systems have been built because of their high cost. In addition, by the time PCE machines in co-residential facilities need to be replaced, between now and the sunset date in 2020, it is possible that a less combustible solvent will be available, and sprinkler systems not required for plants that can no longer use PCE.

The use of 7 percent in annualizing costs is consistent with the guidance of OMB Circular A–94. Besides the quote from Circular A–4 listed by the commenter in footnote 56 on page 30, the Circular also recommends that 7 percent be used for annualizing the costs of regulatory analyses. As mentioned in Circular A–4, ''As a default position, OMB Circular A–94 states that a real discount rate of 7 percent should be used as a base-case for regulatory analysis. The 7 percent rate is an estimate of the average before-tax rate of return to private capital in the U.S. economy. It is a broad measure that reflects the returns to real estate and small business capital as well as corporate capital. It approximates the opportunity cost of capital, and it is the appropriate discount rate whenever the main effect of a regulation is to displace or alter the use of capital in the private sector. OMB revised Circular A–94 in 1992 after extensive internal review and public comment. In a recent analysis, OMB found that the average rate of return to capital remains near the 7 percent rate estimated in 1992. Circular A–94 also recommends using other discount rates to show the sensitivity of the estimates to the discount rate assumption.'' In addition to a 7 percent discount rate, we have also analyzed costs using a 3 percent discount rate, consistent with the requirements of Circular A–4.

4. Alternative Solvents

Comment: Some commenters opposed the use of alternative solvents because of the potential negative impacts. These potential impacts include uncertainty about the toxicity of cyclic siloxanes; increased volatile organic compound (VOC) emissions from hydrocarbons; safety hazard of carbon dioxide (CO_2); large quantities of wastewater from wet cleaners; and the fire hazard of hydrocarbons and cyclic siloxanes (D5).

Response: We recognize that each of the alternative processes has potential drawbacks. However, with the variety of choices of alternative systems that are currently available, dry cleaners can find a system that can work for their individual circumstances. The potential concerns brought up by the commenters are addressed below.

A dry cleaner that switches solvents from PCE to a hydrocarbon solvent would increase emissions of VOC, because hydrocarbon solvents are classified as a VOC and PCE is not. Increased VOC emissions could result in an increase in atmospheric ozone at some locations, depending on the mix of ozone precursors in the ambient air locally. Any new hydrocarbon machines would be subject to the new source performance standard (NSPS) for petroleum dry cleaners (40 CFR 60, subpart JJJ). The NSPS limits VOC emissions by requiring application of the best demonstrated control technology. The VOC emissions of a hydrocarbon machine at an average-sized facility are approximately 0.2 tons per year, which is a relatively small quantity for non-HAP VOC. Given the high risks posed by PCE in co-residential settings, we have concluded that the public health benefit of using alternative solvents, even if some of the alternatives are ozone precursors, supports elimination of PCE use in co-residential area sources (considering developments in practices, processes, and control technologies). In cases where VOC emissions from hydrocarbon machines would contribute significantly to ozone formation, the responsible air quality planning agency can require additional emission controls for VOC, as appropriate. Regarding HAP emissions, although benzene was once a significant component of Stoddard solvent alternatives it is now present only in trace amounts. We are unaware that any of the other solvents currently used in dry cleaning contain any of the CAA listed HAP.

EPA is not currently in a position to characterize the potential risks to human health or the environment associated with the use of decamethylcyclopentasiloxane (D5), an odorless, colorless siloxane fluid, as a dry cleaning solvent. In 2003, EPA received from Dow Corning the preliminary results of a two-year chronic toxicity and carcinogenicity study on D5 using rats. Preliminary results suggest that female rats exposed to the highest concentration of D5 exhibited a statistically significant increase of uterine tumors. The final results of the two-year study confirmed the significant increase in uterine tumors following exposure at the highest concentration of D5, while no significant increase in tumors was observed at lower doses. EPA is in the process of evaluating studies received on the mode of action to help determine whether a potential carcinogenic hazard

is associated with D5. Subsequent action may include external peer review of data and a determination whether it is appropriate to conduct a risk assessment for D5. EPA has developed a fact sheet describing its current state of knowledge on D5 that is available on the Garment and Textile Web site and that can be used by industry to guide decisions regarding the use of D5 in dry cleaning.

Hydrocarbon solvents and cyclic siloxanes can present a fire hazard because of their combustibility. However, hydrocarbon solvent dry cleaning machines have a long history of safety, as do cyclic siloxanes. We know of no fires in this country from the use of cyclic siloxanes or the synthetic hydrocarbon solvents currently in use. Dry cleaning machines that use these solvents are designed with special safety features, such as fireproof electrical connections, nitrogen blanketing, temperature controls to prevent explosion, and others.

For CO_2 systems, the commenters were referring to possible hazards due to the high pressure at which these systems operate. However, we are unaware of any safety-related accidents regarding CO_2 systems. The systems currently in use are designed to withstand the high pressures required. The pressures at which these machines operate are not extreme compared to many other processes, and the engineering to operate safely at these pressures is well understood.

Wet cleaning systems are widely used in the industry either to reduce PCE consumption or as a replacement for PCE dry cleaning. While wet cleaning generates wastewater, we are not aware of any health hazards from this waste. We expect that waste generated by wet cleaning systems will be significantly less hazardous than waste from PCE systems they replace.

G. Technical Corrections to the 1993 Dry Cleaning NESHAP

Based on comments received, we have made some technical corrections to the NESHAP in addition to those proposed. Many of these changes are needed to update the rule to reflect advances in PCE dry cleaning technology. Other changes harmonize the revisions with the existing NESHAP. The most significant technical changes are listed below. None of these changes affect the stringency of the rule or increase regulatory burden.

1. Additional Information Requested in the Notice of Compliance Status Report

We have added a requirement to indicate in the notice of compliance report if the dry cleaning facility is a major source or is located in a building with a residence or a business. This one-time requirement will impose no additional cost to the industry since the notice of compliance report is already required to be submitted.

2. Alternative Monitoring Requirement

We revised the monitoring requirement for refrigerated condensers to specify that owners and operators must monitor the high and low pressure of the refrigeration system, rather than the exit temperature, in cases where the system is equipped with pressure gauges. The pressure readings of the refrigeration system are the preferred monitoring parameters since these parameters are the most reliable indicators that the condenser is functioning properly during the drying phase, which represents maximum load conditions.

Virtually all machines have instrumentation for measuring the high and low pressures of the refrigeration system and vendor specifications for the pressure ranges that indicate proper operation of the condenser. However, for refrigeration systems that are not equipped with pressure gauges, the rule requires owners and operators to monitor the temperature of the gas-vapor outlet stream.

V. Impacts

A. Major Sources

The national capital cost of the final rule for major sources is $30,000, with an annual cost savings of about $250,000. The capital costs for individual facilities would range from $0 to $3,300 with a median cost of $3,300. Annualized costs would range from a cost savings of $84,000,000 per year to a cost of $1,319 per year. Most facilities would recognize a cost savings primarily from implementing the enhanced LDAR program. Leak detection and repair is a pollution prevention approach where reduced emissions translate into less PCE consumption and reduced operating costs because facilities would need to purchase less PCE. The highest maximum individual cancer risk are estimated to be reduced from a range of 50-in-1 million (using OPPTS potency values) to 400-in-1 million (using CalEPA potency values) down to a range of 20-in-1 million (using OPPTS potency values) to 200-in-1 million (using CalEPA potency values).

B. Area Sources

The final rule will reduce PCE emissions by an estimated 5,700 tons per year and will result in a net cost savings.

The capital costs to implement these requirements are $12 million. The enhanced LDAR program would cost about $5 million for an estimated 20,000 facilities to purchase a halogenated hydrocarbon detector at a cost of $250 each. About 200 facilities would be required to replace their existing transfer machines with dry-to-dry machines at a cost of about $36,000 each for a total industry cost of $7.5 million.

Annually, we estimate a cost savings to the industry of about $2.7 million per year. This cost savings would be realized because both replacement of transfer machines and enhanced LDAR will reduce annual PCE consumption. The reduction in annual PCE consumption at the 200 businesses that would replace transfer machines is more than sufficient to offset the annualized cost of the new equipment. In particular, most of the transfer machines are beyond the end of their economic life and it would be economically beneficial for the facilities to replace the transfer machines with dry-to-dry machines. Thus, we conclude the economic impacts to the affected businesses and facilities are negligible.

C. Co-Residential Sources

By the fifteenth year, the final rule will reduce PCE emissions from co-residential sources by an additional 317 tons/year. Cancer risks from all co-residential sources will be eliminated by the fifteenth year.

The national capital costs for new co-residential sources are $63.4 million, and the annualized costs are about $7.0 million in the fifteenth year. These cost estimates reflect the incremental capital and operating cost for 1,300 co-residential facilities to replace their PCE machines with machines using hydrocarbon solvent. The incremental cost was estimated as the difference between the costs of a new PCE machine meeting the NESHAP and a new machine using hydrocarbon solvents. The operating cost includes the cost of installing fire protection sprinklers in jurisdictions that are estimated to require sprinklers for hydrocarbon machines. The cost will be lower at facilities that already have sprinkler systems in place, that choose a less costly alternative garment cleaning option utilizing non-combustible solvents, or that choose to convert their facility to a drop shop and conduct PCE dry cleaning operations offsite.

An alternative calculation of the costs to co-residential sources using a net present value methodology shows that these costs are $3.5 million per year at

a 7 percent interest rate and $3.9 million per year at a 3 percent interest rate. These cost estimates are derived from the summing of the present value of the costs from the co-residential phase-out during the period over which the phase-out occurs, amortized over 15 years. This estimate provides a measure of the costs of the co-residential phase-out over the time period in which the phase-out takes place rather than an estimate of the costs for the fifteenth year.

VI. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), EPA must determine whether the regulatory action is ''significant'' and, therefore, subject to OMB review and the requirements of the Executive Order. The Executive Order defines ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more, or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

(4) Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

Pursuant to the terms of Executive Order 12866, OMB has determined that it considers this final rule a ''significant regulatory action'' within the meaning of the Executive Order. The EPA has submitted this action to OMB for review. Changes made in response to OMB suggestions or recommendations will be documented in the public record.

B. Paperwork Reduction Act

The information collection requirements in the final rule have been submitted for approval to the OMB under the Paperwork Reduction Act, 44 U.S.C. 3501, *et seq.* The Information Collection Request (ICR) document prepared by EPA has been assigned EPA ICR number 1415.06 and OMB Control Number 2060–0234.

The 2005 revisions to the Dry Cleaning NESHAP contain recordkeeping and reporting requirements beyond the recordkeeping and reporting requirements that were promulgated on September 22, 1993. Owners or operators will continue to keep records and submit required reports to EPA or the delegated State regulatory authority. Notifications, reports, and records are essential in determining compliance and are required, in general, of all sources subject to the 1993 Dry Cleaning NESHAP. Owners or operators subject to the 1993 Dry Cleaning NESHAP continue to maintain records and retain them for at least five years following the date of such measurements, reports, and records. Information collection requirements that were promulgated on September 22, 1993 in the Dry Cleaning NESHAP prior to the 2005 proposed amendments, as well the NESHAP General Provisions (40 CFR part 63, subpart A), which are mandatory for all owners or operators subject to national emission standards, are documented in EPA ICR No. 1415.05.

The information collection requirements described here are only those notification, recordkeeping, and reporting requirements that are contained in the 2005 revisions to the Dry Cleaning NESHAP. To comply with the 2005 revisions to the 1993 Dry Cleaning NESHAP, owners or operators of dry cleaning facilities read instructions to determine how they are affected. All sources will begin an enhanced LDAR program that requires a handheld portable monitor. Major source facilities will purchase a PCE gas analyzer and area sources will purchase a halogenated hydrocarbon leak detector. Owners and operators will incur the capital/startup cost of purchasing the monitors, plus ongoing annual operation and maintenance costs. The total capital/startup cost for this ICR is $5,049,000. Annual operation and maintenance cost are $552,825.

Owners and operators of major and area sources conduct enhanced leak detection and repair and keep monthly records of enhanced leak detection and repair events.

Approximately 28,000 existing area sources and 12 existing major sources are subject to the rule and are subject to the 1993 Dry Cleaning NESHAP. We estimate that an average of 2,330 new area sources per year will become subject to the regulation in the next three years, but that the overall number of facilities will remain constant as the new owners will take over old existing facilities. No new major sources are expected. The estimated annual labor cost for major and area sources to comply with the 2005 rule is approximately $3.9 million.

The recordkeeping and reporting requirements are specifically authorized by CAA section 114 (42 U.S.C. 7414). All information submitted to us pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to our policies set forth in 40 CFR part 2, subpart B.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For the purposes of assessing the impacts of this final rule on small entities, small entity is defined as: (1) A small business based on the following Small Business Administration (SBA) size standards, which are based on annual sales receipts: NAICS 812310—Coin-Operated Laundries and Dry Cleaners—$6.0 million; NAICS 812320—Dry Cleaning and Laundry Services (Except Coin-Operated)—$4.0 million; NAICS 812332—Industrial Launderers—$12.0 million; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a

population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field. Under these definitions, over 99 percent of commercial dry cleaning firms are small. For more information, refer to *http://www.sba.gov/size/sizetable2002.html.* The economic impacts of the regulatory alternatives were analyzed based on consumption of PCE, but are described in terms of comparing the compliance costs to dry cleaning revenues at affected firms. In addition, we used average revenues for firms in the dry cleaning industry instead of median revenues. This was because the Census data source that we utilized did not report medium revenues for firms by industry. For more detail, see the current Economic Impact Analysis in the public docket.

After considering the economic impacts of this final rule on small entities, I certify that the final rule will not have a significant economic impact on a substantial number of small entities. This certification is based on the economic impact of the final rule to affected small entities in the entire PCE dry cleaning source category and considers the economic impact associated with the options for co-residential facilities. Over 98 percent of the approximately 20,000 small entities directly regulated by the final rule, including both major and area sources, are expected to have costs of less than one percent of sales. The cost impacts for all regulated small entities range from cost savings to less than 1.9 percent of sales. The small entities directly regulated by the final rule are dry cleaning businesses within the NAICS codes 812310, 812320, and 812332. We have determined that all of the major sources affected by the final rule are owned by businesses within NAICS 812332. The final rule is expected to affect 11 ultimate parent businesses that will be regulated as major sources. Six of the parent businesses are small according to the SBA small business size standard. None of the six firms has an annualized cost of more than one percent of sales associated with meeting the requirements for major sources.

We have determined that virtually all of the affected small businesses that own area source dry cleaners are in NAICS 812320. Small businesses complying with the final area source requirements are expected to have the following impacts. Ninety-four percent of the approximately 20,000 small entities owning area sources directly regulated by the final rule, are expected to have costs of less than 0.9 percent of sales. The one-time cost of $250 for purchasing a halogenated hydrocarbon detector is less than 0.10 percent of the average annual revenues for dry cleaning businesses in NAICS 812320, and there are minimal annualized costs associated with a detector's use. Of the nearly 200 small businesses that have to replace their transfer machines (or one percent of the total number of affected small entities), most of these businesses are expected to experience an annual cost savings and the others are expected to have compliance costs of less than 1.2 percent of sales. Of the remaining 1,000 affected small businesses (or 3.5 percent of the total number of affected small entities), all of which are owners of co-residential facilities, the compliance costs based on the first option for co-residential area sources range from 0.9 to 1.9 percent of sales.

Cost impacts associated with the final decision for major sources are presented in section V.A of this preamble. These impacts are also presented for area sources in section V.B, and for co-residential sources in section V.C. These impacts are detailed in the BID in the public docket as memoranda five through seven. For more information on the small entity economic impacts associated with the final decisions for dry cleaners affected by the final rule, please refer to the Economic Impact Analysis in the public docket.

Although the final rule will not have a significant economic impact on a substantial number of small entities, we nonetheless tried to reduce the impact of the rule on small entities. When developing the final standards, we took special steps to ensure that the burdens imposed on small entities were minimal. We conducted several meetings with industry trade associations to discuss regulatory options and the corresponding burden on industry, such as recordkeeping and reporting. In response to comments, we revised the compliance period for major and area sources from 90 days to two years. Additionally, we added a provision to the rule that allows containers for separator water to be uncovered while the containers are in use.

Following publication of the final rule, copies of the **Federal Register** notice and, in some cases, background documents, will be publicly available to all industries, organizations, and trade associations that have had input during the regulation development, as well as State and local agencies.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures to State, local, and tribal governments, in the aggregate, or to the private sector, of $100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

We have determined that the final rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or to the private sector in any 1 year. Thus, the final rule is not subject to the requirements of sections 202 and 205 of the UMRA.

EPA has determined that the final rule contains no regulatory requirements that might significantly or uniquely affect small governments because it contains no requirements that apply to such governments or impose obligations upon them. Therefore, the final rule is not subject to section 203 of the UMRA.

E. Executive Order 13132: Federalism

Executive Order 13132, entitled ''Federalism,'' (64 FR 43255, August 10, 1999) requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.''

The final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. None of the affected dry cleaning facilities are owned or operated by State or local governments. Thus, Executive Order 13132 does not apply to the proposed rule.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Executive Order 13175 (65 FR 67249, November 9, 2000) requires EPA to develop an accountable process to ensure ''meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.'' The final rule does not have tribal implications as specified in Executive Order 13175. It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes. No tribal governments own dry cleaning facilities subject to the final standards for dry cleaning facilities. Thus, Executive Order 13175 does not apply to the final rule.

G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be ''economically significant'' as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

While these final rule amendments are not subject to the Executive Order because they are not economically significant as defined in Executive Order 12866, the Agency believes this action represents reasonable further efforts to mitigate risks to the general public, including effects on children. This conclusion is based on our assessment of the imposed technological controls that would reduce the PCE impacts on human health associated with exposures to dry cleaning operations.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

The final rule is not a ''significant energy action'' as defined in Executive Order 13211 (66 FR 28355, May 22, 2001) because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

The final rule will have a negligible impact on energy consumption because less than one percent of the industry will have to install additional emission control equipment to comply. The cost of energy distribution should not be affected by the final rule at all since the standards do not affect energy distribution facilities. We also expect that there would be no impact on the import of foreign energy supplies, and no other adverse outcomes are expected to occur with regards to energy supplies. Further, we have concluded that the final rule is not likely to have any significant adverse energy effects.

I. National Technology Transfer Advancement Act

Section 12(d)of the National Technology Transfer and Advancement Act (NTTAA) of 1995 (Pub. L. 104–113, 12(d) (15 U.S.C. 272 note), directs EPA to use voluntary consensus standards (VCS) in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. VCS are technical standards (*e.g.*, materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by VCS bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable VCS.

The final revisions to the 1993 NESHAP for PCE dry cleaners do not include requirements for technical standards beyond what the NESHAP requires. Therefore, the requirements of the NTTAA do not apply to this action.

J. Congressional Review Act

The Congressional Review Act, 5 U.S.C. 801 et seq., as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The EPA will submit a report containing the final rule amendment and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the final rule amendment in the **Federal Register**. The final rule amendment is not a ''major rule'' as defined by 5 U.S.C. 804(2). This final rule is effective on July 27, 2006.

List of Subjects in 40 CFR Part 63

Environmental Protection, Air pollution control, Hazardous substances, Reporting and recordkeeping requirements.

Dated: July 13, 2006.

Stephen L. Johnson,

Administrator.

■ For reasons stated in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is amended as follows:

PART 63—[AMENDED]

■ 1. The authority citation for part 63 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart M—[Amended]

■ 2. Section 63.320 is amended as follows:
■ a. By revising paragraph (b).
■ b. By revising paragraph (c).
■ c. By revising paragraph (d).
■ d. By revising paragraph (e).

§ 63.320 Applicability.

* * * * *

(b) The compliance date for a new dry cleaning system depends on the date that construction or reconstruction commences.

(1) Each dry cleaning system that commences construction or reconstruction on or after December 9, 1991 and before December 21, 2005, shall be in compliance with the provisions of this subpart except § 63.322(o) beginning on September 22,

1993 or immediately upon startup, whichever is later, except for dry cleaning systems complying with section 112(i)(2) of the Clean Air Act; and shall be in compliance with the provisions of § 63.322(o) beginning on July 28, 2008, except as provided by § 63.6(b)(4), as applicable.

(2)(i) Each dry cleaning system that commences construction or reconstruction on or after December 21, 2005 shall be in compliance with the provisions of this subpart, except § 63.322(o), immediately upon startup; and shall be in compliance with the provisions of § 63.322(o) beginning on July 27, 2006 or immediately upon startup, whichever is later.

(ii) Each dry cleaning system that commences construction or reconstruction on or after December 21, 2005, but before July 13, 2006, and is located in a building with a residence, shall be in compliance with the provisions of this subpart, except § 63.322(o), immediately upon startup; shall be in compliance with the provisions of § 63.322(o)(5)(ii) beginning on July 27, 2006; and shall be in compliance with the provisions of § 63.322(o)(5)(i) beginning on July 27, 2009.

(3) Each dry cleaning system that commences construction or reconstruction on or after July 27, 2006, shall be in compliance with the provisions of this subpart, including § 63.322(o), immediately upon startup.

(c) Each dry cleaning system that commenced construction or reconstruction before December 9, 1991, and each new transfer machine system and its ancillary equipment that commenced construction or reconstruction on or after December 9, 1991 and before September 22, 1993, shall comply with §§ 63.322(c), (d), (i), (j), (k), (l), and (m); 63.323(d); and 63.324(a), (b), (d)(1), (d)(2), (d)(3), (d)(4), and (e) beginning on December 20, 1993, and shall comply with other provisions of this subpart except § 63.322(o) by September 23, 1996; and shall comply with § 63.322(o) by July 28, 2008.

(d) Each existing dry-to-dry machine and its ancillary equipment located in a dry cleaning facility that includes only dry-to-dry machines, and each existing transfer machine system and its ancillary equipment, and each new transfer machine system and its ancillary equipment installed between December 9, 1991 and September 22, 1993, as well as each existing dry-to-dry machine and its ancillary equipment, located in a dry cleaning facility that includes both transfer machine system(s) and dry-to-dry machine(s) is exempt from §§ 63.322, 63.323, and 63.324, except §§ 63.322(c), (d), (i), (j), (k), (l), (m), (o)(1), and (o)(4); 63.323(d); and 63.324(a), (b), (d)(1), (d)(2), (d)(3), (d)(4), and (e) if the total PCE consumption of the dry cleaning facility is less than 530 liters (140 gallons) per year. Consumption is determined according to § 63.323(d).

(e) Each existing transfer machine system and its ancillary equipment, and each new transfer machine system and its ancillary equipment installed between December 9, 1991 and September 22, 1993, located in a dry cleaning facility that includes only transfer machine system(s), is exempt from §§ 63.322, 63.323, and 63.324, except §§ 63.322(c), (d), (i), (j), (k), (l), (m), (o)(1), and (o)(4), 63.323(d), and 63.324(a), (b), (d)(1), (d)(2), (d)(3), (d)(4), and (e) if the PCE consumption of the dry cleaning facility is less than 760 liters (200 gallons) per year. Consumption is determined according to § 63.323(d).

* * * * *

■ 3. Section 63.321 is amended by revising the definition of Filter, and adding in alphabetical order definitions for Halogenated hydrocarbon detector, PCE gas analyzer, Residence, Vapor barrier enclosure, and Vapor leak to read as follows:

§ 63.321 Definitions.

* * * * *

Filter means a porous device through which PCE is passed to remove contaminants in suspension. Examples include, but are not limited to, lint filter, button trap, cartridge filter, tubular filter, regenerative filter, prefilter, polishing filter, and spin disc filter.

Halogenated hydrocarbon detector means a portable device capable of detecting vapor concentrations of PCE of 25 parts per million by volume and indicating a concentration of 25 parts per million by volume or greater by emitting an audible or visual signal that varies as the concentration changes.

* * * * *

PCE gas analyzer means a flame ionization detector, photoionization detector, or infrared analyzer capable of detecting vapor concentrations of PCE of 25 parts per million by volume.

* * * * *

Residence means any dwelling or housing in which people reside excluding short-term housing that is occupied by the same person for a period of less than 180 days (such as a hotel room).

* * * * *

Vapor barrier enclosure means a room that encloses a dry cleaning system and is constructed of vapor barrier material that is impermeable to perchloroethylene. The enclosure shall be equipped with a ventilation system that exhausts outside the building and is completely separate from the ventilation system for any other area of the building. The exhaust system shall be designed and operated to maintain negative pressure and a ventilation rate of at least one air change per five minutes. The vapor barrier enclosure shall be constructed of glass, plexiglass, polyvinyl chloride, PVC sheet 22 mil thick (0.022 in.), sheet metal, metal foil face composite board, or other materials that are impermeable to perchloroethylene vapor. The enclosure shall be constructed so that all joints and seams are sealed except for inlet make-up air and exhaust openings and the entry door.

Vapor leak means a PCE vapor concentration exceeding 25 parts per million by volume (50 parts per million by volume as methane) as indicated by a halogenated hydrocarbon detector or PCE gas analyzer.

* * * * *

■ 4. Section 63.322 is amended as follows:

■ a. By revising paragraph (e)(3).
■ b. By revising paragraph (j).
■ c. By revising paragraph (k) introductory text.
■ d. By revising paragraph (k)(11).
■ e. By revising paragraph (m).
■ f. By adding paragraph (o).

§ 63.322 Standards.

* * * * *

(e) * * *

(3) Shall prevent air drawn into the dry cleaning machine when the door of the machine is open from passing through the refrigerated condenser.

* * * * *

(j) The owner or operator of an affected facility shall store all PCE and wastes that contain PCE in solvent tanks or solvent containers with no perceptible leaks. The exception to this requirement is that containers for separator water may be uncovered, as necessary, for proper operation of the machine and still.

(k) The owner or operator of a dry cleaning system shall inspect the system weekly for perceptible leaks while the dry cleaning system is operating. Inspection with a halogenated hydrocarbon detector or PCE gas analyzer also fulfills the requirement for inspection for perceptible leaks. The following components shall be inspected:

* * * * *

(11) All Filter housings.

* * * * *

(m) The owner or operator of a dry cleaning system shall repair all leaks detected under paragraph (k) or (o)(1) of this section within 24 hours. If repair parts must be ordered, either a written or verbal order for those parts shall be initiated within 2 working days of detecting such a leak. Such repair parts shall be installed within 5 working days after receipt.

* * * * *

(o) Additional requirements:

(1) The owner or operator of a dry cleaning system shall inspect the components listed in paragraph (k) of this section for vapor leaks monthly while the component is in operation.

(i) Area sources shall conduct the inspections using a halogenated hydrocarbon detector or PCE gas analyzer that is operated according to the manufacturer's instructions. The operator shall place the probe inlet at the surface of each component interface where leakage could occur and move it slowly along the interface periphery.

(ii) Major sources shall conduct the inspections using a PCE gas analyzer operated according to EPA Method 21.

(iii) Any inspection conducted according to this paragraph shall satisfy the requirements to conduct an inspection for perceptible leaks under § 63.322(k) or (l) of this subpart.

(2) The owner or operator of each dry cleaning system installed after December 21, 2005, at an area source shall route the air-PCE gas-vapor stream contained within each dry cleaning machine through a refrigerated condenser and pass the air-PCE gas-vapor stream from inside the dry cleaning machine drum through a non-vented carbon adsorber or equivalent control device immediately before the door of the dry cleaning machine is opened. The carbon adsorber must be desorbed in accordance with manufacturer's instructions.

(3) The owner or operator of any dry cleaning system shall eliminate any emission of PCE during the transfer of articles between the washer and the dryer(s) or reclaimer(s).

(4) The owner or operator shall eliminate any emission of PCE from any dry cleaning system that is installed (including relocation of a used machine) after December 21, 2005, and that is located in a building with a residence.

(5)(i) After December 21, 2020, the owner or operator shall eliminate any emission of PCE from any dry cleaning system that is located in a building with a residence.

(ii) Sources demonstrating compliance under Section 63.320(b)(2)(ii) shall comply with paragraph (o)(5)(ii)(A) through (C), in addition to the other applicable requirements of this section:

(A) Operate the dry cleaning system inside a vapor barrier enclosure. The exhaust system for the enclosure shall be operated at all times that the dry cleaning system is in operation and during maintenance. The entry door to the enclosure may be open only when a person is entering or exiting the enclosure.

(B) Route the air-perchloroethylene gas-vapor stream contained within each dry cleaning machine through a refrigerated condenser and pass the air-perchloroethylene gas-vapor stream from inside the dry cleaning drum through a carbon adsorber or equivalent control device immediately before the door of the dry cleaning machine is opened. The carbon adsorber must be desorbed in accordance with manufacturer's instructions.

(C) Inspect the machine components listed in paragraph (k) of this section for vapor leaks weekly while the component is in operation. These inspections shall be conducted using a halogenated hydrocarbon detector or PCE gas analyzer that is operated according to the manufacturer's instructions. The operator shall place the probe inlet at the surface of each component interface where leakage could occur and move it slowly along the interface periphery.

■ 5. Section 63.323 is amended as follows:

■ a. By revising paragraph (a)(1).

■ b. By revising paragraphs (b) introductory text, (b)(1), and (b)(2).

■ c. By revising paragraph (c).

§ 63.323 Test methods and monitoring.

(a) * * *

(1) The owner or operator shall monitor the following parameters, as applicable, on a weekly basis:

(i) The refrigeration system high pressure and low pressure during the drying phase to determine if they are in the range specified in the manufacturer's operating instructions.

(ii) If the machine is not equipped with refrigeration system pressure gauges, the temperature of the air-perchloroethylene gas-vapor stream on the outlet side of the refrigerated condenser on a dry-to-dry machine, dryer, or reclaimer with a temperature sensor to determine if it is equal to or less than 7.2 °C (45 °F) before the end of the cool-down or drying cycle while the gas-vapor stream is flowing through the condenser. The temperature sensor shall be used according to the manufacturer's instructions and shall be designed to measure a temperature of 7.2 °C (45 °F) to an accuracy of ±1.1 °C (±2 °F).

* * * * *

(b) When a carbon adsorber is used to comply with § 63.322(a)(2) or exhaust is passed through a carbon adsorber immediately upon machine door opening to comply with § 63.322(b)(3) or § 63.322(o)(2), the owner or operator shall measure the concentration of PCE in the exhaust of the carbon adsorber weekly with a colorimetric detector tube or PCE gas analyzer. The measurement shall be taken while the dry cleaning machine is venting to that carbon adsorber at the end of the last dry cleaning cycle prior to desorption of that carbon adsorber or removal of the activated carbon to determine that the PCE concentration in the exhaust is equal to or less than 100 parts per million by volume. The owner or operator shall:

(1) Use a colorimetric detector tube or PCE gas analyzer designed to measure a concentration of 100 parts per million by volume of PCE in air to an accuracy of 25 parts per million by volume; and

(2) Use the colorimetric detector tube or PCE gas analyzer according to the manufacturer's instructions; and

* * * * *

(c) If the air-PCE gas vapor stream is passed through a carbon adsorber prior to machine door opening to comply with § 63.322(b)(3) or § 63.322(o)(2), the owner or operator of an affected facility shall measure the concentration of PCE in the dry cleaning machine drum at the end of the dry cleaning cycle weekly with a colorimetric detector tube or PCE gas analyzer to determine that the PCE concentration is equal to or less than 300 parts per million by volume. The owner or operator shall:

(1) Use a colorimetric detector tube or PCE gas analyzer designed to measure a concentration of 300 parts per million by volume of PCE in air to an accuracy of ±75 parts per million by volume; and

(2) Use the colorimetric detector tube or PCE gas analyzer according to the manufacturer's instructions; and

(3) Conduct the weekly monitoring by inserting the colorimetric detector or PCE gas analyzer tube into the open space above the articles at the rear of the dry cleaning machine drum immediately upon opening the dry cleaning machine door.

* * * * *

■ 6. Section 63.324 is amended as follows:

■ a. By revising paragraphs (d)(3), (d)(5), and (d)(6).

■ b. By adding paragraph (f).

§ 63.324 Reporting and recordkeeping requirements.

* * * * *

(d) * * *

(3) The dates when the dry cleaning system components are inspected for leaks, as specified in § 63.322(k), (l), or (o)(1), and the name or location of dry cleaning system components where leaks are detected;

* * * * *

(5) The date and temperature sensor monitoring results, as specified in § 63.323 if a refrigerated condenser is used to comply with § 63.322(a), (b), or (o); and

(6) The date and monitoring results, as specified in § 63.323, if a carbon adsorber is used to comply with § 63.322(a)(2), (b)(3), or (o)(2).

* * * * *

(f) Each owner or operator of a dry cleaning facility shall submit to the Administrator or delegated State authority by registered mail on or before July 28, 2008 a notification of compliance status providing the following information and signed by a responsible official who shall certify its accuracy:

(1) The name and address of the owner or operator;

(2) The address (that is, physical location) of the dry cleaning facility;

(3) If they are located in a building with a residence(s), even if the residence is vacant at the time of this notification;

(4) If they are located in a building with no other tenants, leased space, or owner occupants;

(5) Whether they are a major or area source;

(6) The yearly PCE solvent consumption based upon the yearly solvent consumption calculated according to § 63.323(d);

(7) Whether or not they are in compliance with each applicable requirement of § 63.322; and

(8) All information contained in the statement is accurate and true.

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